



## What is driving curriculum reform in Australia?

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### Abstract

Education provides a unique scope of opportunity for improving the life experiences of individuals. Access to these opportunities can powerfully impact on the life experiences of individuals and the types of societies in which we live.

In this paper I consider a number of social, political, cultural and educational developments that are driving curriculum reform in Australia. I suggest that these drivers are context related, and that while their influence is varied, they all to some extent impact on the operating context of education, and thus contribute to the way in which curriculum is developed.

The challenge for curriculum reform is to take stock of the current operating context and establish a strategic vision for learning in a way that ensures that educational access and outcomes for all students are maximised, and enables all students to develop their full character as active Australian citizens and play a role in shaping the future of Australia.

### Introduction

Today, more than ever before, we are citizens of a global arena that to some extent influences the destiny of every individual.<sup>1</sup> Our societies embody a dynamism the extent of which takes us beyond what we have known before. The operating context for education in Australia is increasingly characterised by

accelerating changes in the global economy, technologies, the needs of young people, the increased visibility of diverse social groups, and a need to remain competitive both nationally and internationally. The vibrancy, conflict and pace that characterises change and growth are often hard to apprehend and even more difficult to predict. Within this operating context, education faces considerable challenges in successfully overcoming the conflicting tensions of human activity<sup>2</sup> in order to ensure that all young Australians enjoy the right to 'a fair go' - equality of access to opportunities in education and throughout their lives.

In some ways education systems are akin to ecosystems. An education system relies on a network of interactions between and among teachers, students, parents and community members. These interactions will be influenced by local, national and international social, economic, political and cultural drivers. Education systems are dynamic and complex and must achieve resolutions that successfully account for the influences of these drivers to operate effectively. Furthermore, the introduction of new factors which are unmanaged and disrupt the balance can have detrimental effects on the functioning of the entire system.

The system is always subject to the tensions that arise from the dynamic interaction of individuals and populations within communities. According to *The*

*Delors Report* this is because, among many other things, education systems must 'show regard for individual and group differences while upholding the principle of homogeneity implicit in the need to observe common rules'<sup>3</sup>. Such tensions are evident in debates about:

- the purpose of schools and curriculums – to meet the needs of the individual or society and, in particular, the economy;
- the extent to which curriculum is a negotiated process;
- who is included in the design, development and delivery of curriculum;
- the structural organising principles selected to arrange curriculum; and
- how educational success is measured.

Education reform must successfully navigate these tensions in order to deliver high-quality curriculum that represents the appropriate mix for any designated operating context. Successful navigation should ensure that like a healthy ecosystem, a system of education functions in equilibrium and is characterised, but not damaged, by debate between and among the different elements that compose it.

Not only is reform in education driven by a diverse array of social, cultural economic and political factors, education itself can be a critical strategic driver for improving these very same factors. High-quality education provides increased opportunities which contribute to improving social mobility and diminishing inequity – fundamental actions in order to '[provide] people with the foundation from which to build a life of their choosing'.<sup>4</sup>

The Delors Report suggests that the highest aim of education should be to 'give everyone the means of playing an informed and active part as a citizen,'<sup>5</sup> in a turbulent and changing world. Further,

the report holds that this is something 'that cannot be fully achieved except within the framework of democratic societies'.<sup>6</sup> The responsibility of education is paramount. Not only is education a critical strategic lever for improving social mobility, but in order to preserve this mobility it must provide ways to develop the social and cultural understanding of a global world necessary to engender the humanism critical to democracy. Curriculum is one of the elements of education which has responsibility for enabling this understanding and for setting in place processes whereby students can become active and responsible citizens who can interpret this world.

Reform is propelled by multiple and varied drivers whose influence and purpose is context related. Curriculum reform is one of the challenges facing us as educators. What drives curriculum reform today will not necessarily be the same as what drives curriculum reform in ten years time. As we step forward into the new millennium advances in technology, economic prosperity, pressures for equality, cultural diversity, globalisation and changing student needs present as key considerations in the area of curriculum. The degree of influence of these drivers will change with social context and there is no recipe or algorithm which describes how best to integrate the influences of drivers into curriculum. The challenge for curriculum reform is to take stock of the current operating context and establish a strategic vision for learning in a way that ensures that educational access and outcomes for all students are maximised.

### **Defining Curriculum**

As professionals operating within the education field, as parents, as community members or as students, we know that the concept of curriculum has many different meanings, and it is sometimes difficult to

understand the exact nature of what is being referred to when the term is used.

Traditionally the word curriculum has been thought of as a collective term, an aggregate that most commonly describes and/or defines the content of a course or program of study. In particular the term often refers to the scope and sequence of the knowledge and skills expected to be attained as a result of engaging in a course or program of study.

This common understanding of the term curriculum has been criticised for largely limiting curriculum to the formal content of written 'courses of study' and curriculum planning to questions about the selection and organisation of knowledge.<sup>7</sup>

While knowledge is a key component of curriculum, this description has been considered to be a restrictive way of considering curriculum, and many educationalists have tended to use the term in a far broader sense. For example, Kelly defines curriculum as 'the totality of the experiences which the pupil has as a result of the provision made'.<sup>8</sup>

For the purpose of this paper, this broad view of curriculum is given clarification through adopting the definition of curriculum to be, 'all learning planned, guided and implemented by the school'.<sup>9</sup> Curriculum does not stand alone but has a history from which it evolves and a context in which it operates. Curriculum presents as an educational strategic plan for learning, a prioritisation of knowledge, skills, understandings and personal values, and goes well beyond issues of content, structure and design. While quality curriculum is essential to maximising student outcomes, ultimately its effectiveness will depend on the quality of teaching.

### **Curriculum Development: Whose Responsibility?**

In Australia, constitutional responsibility for education provision lies with the States and Territories. Curriculum has always been state-based with some similarity between jurisdictions, as well as some key differences.<sup>10</sup> The differences have been articulated and defended by individual jurisdictions and clearly illustrate their desire to preserve authority over curriculum development.

### **Curriculum Consistency**

The establishment of the Whitlam Government's Commonwealth Schools Commission in 1973 provided the first real impetus for education collaboration.<sup>11</sup> In the late 1980s and early 1990s, particularly under the leadership of John Dawkins, there was a strong drive towards collaboration between the Commonwealth and all the States and Territories in order to establish a national commitment to shaping and implementing policy in relation to schools.

This was demonstrated by the development of curriculum *Statements* and *Profiles* for each of the eight learning areas (English, Studies of Society and Environment, Mathematics, Science, Technology, The Arts, Health and Physical Education, Languages Other Than English). The national *Statements* provided frameworks for the purpose of curriculum development to assist in the improvement of teaching and learning, and to provide a common language for reporting student achievement.<sup>12</sup> The national *Profiles*, flowing from these *Statements*, showed the typical progression expected in students achieving these learning outcomes.

These *Statements* and *Profiles* provided for the first time in Australia a common taxonomy and structure for curriculum across each education jurisdiction,<sup>13</sup> and

while the adoption or rejection of these *Statements* and *Profiles* was entirely a matter for the States, most States and Territories adopted variants of the structure and language of these *Statements* and *Profiles*.

The first statement of *Common and Agreed National Goals for Schooling in Australia* was articulated in the *Hobart Declaration on Schooling* (1989).<sup>14</sup> The declaration contained ten agreed goals to assist schools and school systems in developing specific objectives and strategies for curriculum and assessment. The vision contained in these goals was 'to equip young people to participate fully, as active and informed citizens, in the social, cultural and economic life of the nation'.<sup>15</sup>

In 1999 Commonwealth, State and Territory Ministers endorsed a new set of national goals for schooling in the 21st century, agreeing to *The Adelaide Declaration on National Goals for Schooling in the Twenty-First Century*. This educational manifesto charges schools, in partnership with parents and the community, with the responsibility of developing students into Australian citizens who are life-long learners and who possess the 'necessary knowledge, understanding, skills and values for a productive and rewarding life in an educated, just and open society'.<sup>16</sup>

*The Adelaide Declaration* saw agreement by State and Territory Ministers that in relation to literacy and numeracy when students leave school they should have 'attained the skills of numeracy and English literacy; such that, every student should be numerate, able to read, write, spell and communicate at an appropriate level'.<sup>17</sup>

To reach this goal, agreed national benchmarks in literacy and numeracy, which articulate the nationally agreed minimum acceptable standards for

students, have been developed to compare student achievement in these years. Information to enable reporting against benchmarks is generated by equating existing State and Territory assessment instruments and calculating the proportion of students achieving above a designated point on each jurisdiction's achievement scale.

At the July 2003 Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) meeting, Ministers directed the Australian Education Systems Officials Committee (AESOC) to manage a national project on behalf of State and Territory Education Ministers to deliver consistent curriculum outcomes in all schools across Australia, in the four domains of English, Mathematics, Science, and Civics and Citizenship at each of the four points in schooling (Years 3, 5, 7 and 9). Work is complete for English and soon to be underway in each of the other domains. The product of this work will be a set of nationally agreed curriculum outcomes in each specified domain. The national challenge is what happens next?

### Curriculum Reform

The history of Australian education has seen many debates centred on determining the best approaches to curriculum development in order to maximise student outcomes: inputs, outputs and outcomes; content and process; criterion and norm referenced assessment; and traditional and post-modern approaches make up just a few of the forms of curriculum contestation.

While current curriculum debates demonstrate that there is not universal agreement on the nature of all the problems in education, the focus of complaints and remedies is nearly always linked to curriculum.<sup>18</sup> Global agreement on curriculum stops there, and the direction and manner in which this

reform should proceed is hotly contested. Curriculum debates in Australia are indicative of this.

It is recognised that in some aspects of education, world's best practice can be found in many schools in Australia. Australian teachers are among the most innovative in any education system, Australian students are among the very best in the world and, internationally, Australian education enjoys a reputation for resilience and resourcefulness<sup>19</sup> - all indicators that we must be getting something right. The success of the best Australian students is confirmed in the most recent publication of the Organisation for Economic Cooperation and Development's (OECD's) Programme for International Student Assessment (PISA) results.

While there is evidence of success, Australian education systems are still regularly criticised for an alleged failure to provide rigorous curriculums. At times this criticism is formed and sometimes driven by the frenzy of the tabloid media who seek to sensationalise rather than offer a balanced and informative view. However, the current educational landscape does display some signs of distress which indicate the need for educational reform. These signs include the shift of students between different educational sectors, the widening gap between high-performing and low-performing students, a failure to meet expectations in the national goals of schooling, the deteriorating infrastructure of school buildings, and assertions of a chronic future failure in numbers of teachers for our schools as the baby boomer generation of teachers moves into retirement.<sup>20</sup>

Furthermore, it is estimated that from each year of students going through school, 35,000 Australian students will not complete their secondary schooling and

will subsequently obtain no further formal education or training qualification.<sup>21</sup> This means that early school leavers often miss out on the widely recognised and considerable benefits of education. The social and economic cost of this gap is experienced by individuals and society as a whole.

The introduction of vocational education and training in schools and, more recently, school-based apprenticeships are critical initiatives aimed at increasing participation in education and training. However, the number of early school leavers indicates that curriculum needs to go further in order to ensure that it is relevant and applicable to the entire cohort. Therefore, rather than encouraging students to leave school early to enter into an alternative form of employment, curriculum should provide students with a greater diversity of pathways to ensure that their interests are served and they are able to experience the life-long benefits of the later years of education.

Curriculum has the responsibility to ensure that students are able to experience the benefits of education and become equipped with the skills and knowledge to participate and contribute to a changing world.

The way in which inadequate educational outcomes are addressed becomes the topic for curriculum reform and gives rise to the consideration of important questions. What is driving curriculum reform? In which direction/s is it being pushed by the major drivers? At what destination/s should we be seeking to arrive? What choices and input are we making to ensure that this destination is realised?

Haywood, among many others of course, suggests that, 'the problem of effective education across societies is

multidimensional'.<sup>22</sup> The indicators of need for curriculum reform highlight this comment. Given the multidimensional and constantly shifting world in which we live, however, this is to be expected. The challenge is to meet these multidimensional problems with varied responses and solutions that are delivered through sustainable<sup>23</sup> and transformative<sup>24</sup> curriculum, and that will meet the demands of a rapidly changing and developing global society.<sup>25</sup>

In responding to meet the changing needs of the current context, or anticipating the future operating context, curriculum needs to undergo a constant process of reformation. This process is influenced by current as well as predicted drivers of reform, and must find shape amidst a variety of social and political tensions produced as a result of fundamental differences in philosophies of education.

### **A Changing World: Major Developmental Changes in Education**

Education is an integral part of a diversified social network which includes a range of philosophies and developments in politics, technology, economics, culture and religion. These philosophies and developments affect the placement of education within the social network and the context in which it operates.

As society develops and changes so too does the body of knowledge valued by it. The curriculum has the capacity to be a significant mirror of changing beliefs and opinions.<sup>26</sup> Hence, as our world increases the pace at which it modifies, we often see the reflection of this modification in the reform of curriculum. It may be argued that by the time curriculum is developed and documented it is in fact outdated. The challenge for curriculum reform then is to ensure that curriculum is flexible enough so that it is credible in the present society and provides a sufficient foundation for

the future education and employment needs of students. One way to address curriculum currency is to focus on building a framework that identifies the significant elements of learning and enables the teaching profession to be innovative within the framework.

Indicative of the increase in pace of local and global change is that approaches to education at school are often changing and new decisions are made about what is considered to be good and appropriate curriculum in order to secure the most productive outcomes for individuals, societies and nations.

It is the choices that are made both in anticipation of, and in response to changing societies that influence the quality of curriculum, and the level of educational achievement by Australian students.

### **Social and Economic Trends Driving Curriculum Reform**

Changing social and economic trends require organisations and people to be responsive to changes in local, national and global contexts. Schools must be a part of this response if they are to remain relevant and meet community needs.<sup>27</sup> Curriculum reform has to be able to reflect these trends in order to ensure its currency and quality.

### **Globalisation**

Globalisation is a feature of the world we now live in. Australia, like some other nations, is undergoing constant transformation. Advances in information and communication technologies and in transport systems have brought about rapid change and diverse challenges. These require societies to realise new ways of organising, working and living together, and understanding and interpreting the world.

Globalisation allows for local production processes to occur in the global arena and reductions in barriers to trade in services. The changing nature of production and the workforce will influence demand for different skills. Curriculum must respond to these changes by providing students with the opportunities to develop the appropriate skills while in their school years and beyond.

Globalisation has created a greater need for Australians to understand other people, their cultures and circumstances. While the benefits of globalisation are often widely touted, there is a sense that for some people in our world globalisation has not necessarily been a good thing. This is evident in instances where

governments/organisations/countries have felt and demonstrated the need to resist the forces of globalisation in order to address and protect the needs of local communities. Students across Australia must consider the implications and social issues that are generated through globalisation, and curriculum must enable not only the distribution of knowledge about globalisation, but also the means by which to critically evaluate the diverse effect it has on different places in the world.

The most basic statement about what education should be is found in Article 26 of the Universal Declaration of Human Rights, which states that:

*Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace.*<sup>28</sup>

This definition highlights the international nature of education, and its

ability and purpose to transcend physical boundaries and deliver global outcomes - both of which are of fundamental importance particularly given the global nature of our educational communities today. Given the global context in which education increasingly exists, it is imperative that curriculum remains relevant, responsible, adaptive and responsive to the international arena, while at the same time not losing sight of the immediate local operating context.

### **The Nature of Knowledge and the Knowledge Economy**

Nobel Laureate Herbert Simon reaffirms that the meaning of 'knowing' has shifted from being able to remember and repeat information to being able to find and use it.<sup>29</sup> The rapid growth in knowledge - improved access to knowledge and use of existing knowledge to generate new knowledge - has resulted in changes to the way people work and to our understanding of the nature and value of knowledge. These changes have significant implications for the purpose and practice of education which must be reflected in planning the delivery of curriculum in schools.

Information and knowledge are growing at a faster rate than ever before in the history of humankind. More than ever before the sheer volume of human knowledge makes its total coverage by education impossible. This change is often referred to as the knowledge explosion, and has rapidly transported us to the time of the knowledge economy/society.

Hargreaves argues that knowledge societies process information and knowledge in ways that maximise learning, stimulate ingenuity and invention and develop the capacity to initiate and cope with change.<sup>30</sup> While Hargreaves makes the important point that in order to survive and prosper in the knowledge economy, knowledge society

schools have to create the qualities of the knowledge economy, or expect their people and nations to be left behind.<sup>31</sup> It is just as important that notions of value, discernment, critique and wisdom also always be at the heart of quality education.

With the increased accessibility of knowledge Hedley Beare, suggests that we should expect the city of the knowledge-driven society to be radically different from what we have known before, and that the implications for schooling are profound. Most significantly, the way in which curriculum is conceived is 'undergoing metamorphosis, away from a linear, one-best-way approach to knowledge, involving much greater search and dynamism in learning'.<sup>32</sup>

While curriculum provision in States and Territories may differ, it is legitimate to ask whether the curriculum being developed is currently meeting the needs of all students. This is not to be particularly critical of the existing curriculum, but rather to raise the complexity of the issue of how to select from and within the abundance of knowledge now available.

An abundance of knowledge gives rise to increased choice in the content of curriculum, with the resulting challenge of how to make the best choices in order to determine the most effective and appropriate content. The implication of which knowledge is chosen to become school curriculum can have profound social consequences. Hence decisions made about knowledge must involve critique and intelligent and appropriate response to advances in knowledge, as well as enable the same sense of questioning and examination of knowledge, to exist as a fundamental part of any curriculum.

As it is impossible for students to learn everything, it is necessary that students learn a core of knowledge that will provide the common understandings and language needed to be able to work with others in a variety of contexts, and develop the research and thinking skills to find and use information when it is required. In the ACT, this thinking is reflected in the Curriculum for ACT P-10, Principles and Framework (Phase 1)<sup>33</sup>, which determines essential learnings to be learnt by all students.

In order for our students to thrive in the knowledge society, I suggest that three areas of emphasis must be made explicit in curriculum. These are to:

- provide students with the core knowledge - what is essential to 'know';
- enable the students to develop the intellectual tools, the learning strategies, and the critical faculties required for deep and life-long learning; and
- ensure that students understand how to apply and critique knowledge and skills.

Expectations of the knowledge economy and changing views about the nature of knowledge must be integrated into these goals for curriculum to be relevant and successful for students of the 21st century.

### **Advances in Technology**

Advances in technologies in the past decade have led to significant change in curriculum, not only in what is taught but also in how it is assessed. The expansion of knowledge and the influence of information technologies offer the world an opportunity to be fundamentally different from the past, and alternative ways in which to design, develop and deliver curriculum and measure its effectiveness.

Today interactive technologies enable students to enjoy the experience of acting as citizens in a borderless world, acquiring local and global knowledge and experience without leaving the classroom. As with all knowledge, the knowledge acquired through technology must be critiqued and reflected on.

Accessibility to computers has led to significant change in Australian schools, with technology enabling the development of closer links between schools, homes, communities, industries, and the VET and tertiary sectors.<sup>34</sup>

There has been a rapid progression from teaching students how to use computers to using them as powerful tools in everyday teaching and learning. This has implications for not only the way in which students learn, but also for the method of instruction. The implications for 'learning' are played out in determining appropriate curriculum models. The adoption, development and growing emphasis on 'e-learning' and the development of banks of learning objects signal an expansion of curriculum possibilities. In order to ensure that pedagogy is enhanced by technology it is important that teachers are provided with the opportunity to develop the relevant technological skills. Furthermore it is imperative that teachers are included in the process of integrating technology into the curriculum and that their professional knowledge and wisdom is prioritised and valued in doing so.

Advances in technology have contributed to the increase in alternative approaches to education. Today, students are able to access subjects/courses through a variety of technological means, including computers and video-conferencing, without attending traditional schools. While these developments may contribute to increased accessibility to education, they may also create a further educational

divide between those who have access and those who do not. Such developments may also create concern for the maintenance of quality curriculum, the nature of which may be jeopardised by substituting the personalised interaction experienced by students in a classroom for technology-delivered curriculum.

As further technological developments continue to accelerate the use of interactive technologies in learning, ongoing curriculum challenges will include how best to:

- integrate and respond to technology in the curriculum;
- ensure that students are equipped to make choices about the appropriate technology and methods to use in particular contexts;
- ensure that teachers are able to deliver effective pedagogy that incorporates technology and ensures that teachers and students remain connected;
- develop each student's capacity to evaluate the validity and relevance of information; and
- ensure that advances in technology do not leave an individual student and/or a particular cohort of students behind.

### **Diversity**

In Australia's increasingly visibly diverse society, education has an important role in bridging differences and promoting mutual respect, tolerance and understanding between people of different races, cultures, religions, gender, and sexuality and secular society. Furthermore, as part of a global society, Australia's role and responsibility in doing this is equally true in an international context.

It is imperative that students learn to understand, respect and value diversity. However, this is not always an easy task, as the challenges of living and operating

in a diverse society are often as complex and difficult as they are rich and rewarding.

Curriculum needs to provide a path for students to develop values and a way of life that is consistent with sharing the rights and responsibilities of citizenship with others of different backgrounds. This path must be a balanced one that embraces and celebrates diversity, while at the same time is able to acknowledge and respond to some of the often quite legitimate concerns that surround learning in educational environments that include diverse student bodies.

Furthermore, what is significantly different about education today is that that the cohort of students finishing Year 12 (or equivalent) has increased. Consequently, there is a greater demand on teachers to meet an increasingly diverse range of student learning needs.

In order to meet the changing needs and capacities of an increasingly diverse society, curriculum and those responsible for the development and delivery of it must have the capacity to respond to the local educational setting. There must be a common curriculum framework with the flexibility to respond to the diversity of student needs and student groups in differing local contexts within our education systems.

### **Developments in Teaching and Learning**

While we have always known that students differ in the set of experiences and knowledge they bring to the learning environment and that they learn in vastly different ways, education today is influenced by advances in research about teaching and learning.

### **Pedagogy**

High-quality teachers who have the knowledge, skills, experience and

professional value to be able to respond effectively to differences in the cohort make a significant and lasting contribution to young people's lives by enhancing their knowledge and their capacities.<sup>35</sup>

The purpose of refining pedagogy and developing new pedagogies is to improve student learning. The art of selecting the most appropriate teaching strategies to assist students achieve a specified learning outcome and to support different learners to further develop their knowledge or understandings is one of the distinguishing features of good teaching practice.

As the student body becomes increasingly visible in its heterogeneity, communities, clients and students demand a more personalised and tailored approach to education. The challenge for educators is to 'develop pedagogy that can accommodate these differences'.<sup>36</sup>

Examples of strategies specifically designed to target pedagogical practice can be seen in a growing number of state-based initiatives. Most jurisdictions, if not all, have addressed issues relating to pedagogy through school improvement initiatives that target school leaders, and the production of resource materials and research action which explicitly focus on a quality teaching agenda.<sup>37</sup>

### **Effective Teachers**

John Hattie's recent rigorous and exhaustive research has provided profound and powerful evidence to support what we have always known: 'excellence in teaching is the single most powerful influence on achievement'.<sup>38</sup> If our education systems are to be high-investment and high-capacity then it is imperative that highly skilled teachers are able to 'generate creativity and ingenuity among their pupils, by experiencing creativity and flexibility in themselves in

how they are treated and develop as knowledge society professionals'.<sup>39</sup>

The knowledge, skills, experience and professional value of teachers must be recognised and prioritised in curriculum development, if the learning and achievements of students are to be enhanced. In identifying the variables that impact on student learning, John Hattie confirms that within schools, teachers account for about 30% of the variance in student achievements<sup>40</sup>, the major source of within-school variance. This evidence provides a compelling argument to ensure that a commensurate level of investment is targeted at continuing development of the teaching profession.

In order to develop effective curriculum, teachers must be curriculum leaders. Ensuring that teachers are central to the reformation of curriculum will enable the development of pedagogy that provides the most prosperous conditions for learning and the highest quality learning outcomes for all students. To achieve this centrality, curriculum must be the product of effective negotiation and teachers must be empowered with a leading role in negotiation processes. Furthermore, such negotiation should provide space to contest knowledge as well as recognise and respond to the wisdom, discernment and distinguishing expertise of the teaching profession.

Curriculum should not only be the result of processes of design and construction, it should also be the outcomes of multiple and diverse conversations. These conversations should be wide enough to include those with the capacity to contribute and add value, such as top scientists, distinguished leaders within the humanities, artists, innovative business people, industry leaders, parents, community members and students. These conversations should involve interactions between teachers and

those with specialised knowledge and insights in order that curriculum is reflective of the most ground-breaking and current knowledge and experience.

If teachers are central to the process of curriculum development, then they must be equipped with the skills and capacities to engage with the issues and act on judgements. They must have sufficient autonomy to enable this to occur. According to Reid, there is much evidence to indicate that in many countries they have not, and that the effect this subsequently has on curriculum and high-quality educational outcomes, is damaging.<sup>41</sup>

The ACT Department of Education and Training discussion paper, *Teachers: the key to success*<sup>42</sup>, provides eight principles of learning. These include that:

- learning builds on existing knowledge, understanding and skills;
- deep learning and connectedness is achieved when learning is organised around major concepts, principles and significant real world issues, within and across disciplines;
- learning is facilitated when students actively monitor their own learning and consciously develop ways of organising and applying knowledge within and across contexts (metacognition);
- learning needs to take place in a context of high expectation and challenge;
- learning is strengthened when students are provided with explicit expectations and feedback;
- learners learn in different ways at a different rates;
- socio-cultural effects shape learners' understandings and the way they learn; and
- learning is a social and collaborative function as well as an individual one.

Understanding, integration and response to these principles in curriculum are necessary to produce effective conditions for learning and have multiple implications for teaching. For teachers to enable effective conditions for learning, they must have the necessary freedom and flexibility to exercise professional judgement about how best to achieve further development of students within their care. This must occur within a properly instituted framework of accountability.

While deep subject knowledge is essential, effective teaching is more than about knowledge. It is a process that links pedagogy to the needs and prior understanding of the learner, the knowledge and skills to be learnt and the values to be acquired, and makes valid and reliable assessment decisions about learning. While curriculum is necessary it is not sufficient if it exists in absence of quality teachers.

If, as part of curriculum reform, we are to prioritise effective teaching, which I argue we must do if curriculum reform is to succeed, it is imperative that teachers are respected for their knowledge, skills, experience and professional value. Furthermore, teachers should be provided with the opportunity to find creative solutions – the most relevant and innovative responses to particular contextual issues that are bounded by place, circumstance and time. They should be held in high regard as educators enabling life-long educational pathways for our students, and imbued with the autonomy needed to make decisions to best suit the learning environments in which they are situated. Whereas once it was thought necessary to ‘teacher-proof’ curriculum<sup>43</sup>, it is imperative that curriculum is a process that prioritises teacher input.

### Equity in curriculum

There is growing evidence that the rich are getting richer and the poor are getting poorer. We are experiencing record levels of personal wealth at the top of the economic scale and yet we are also experiencing a steady increase in the problems of poverty.<sup>44</sup> In a democratic society that prides itself on egalitarianism and ‘a fair go’ for all, there is surely a compelling need for equity of access and opportunity to education. One of the biggest challenges ‘facing everyone involved in the business of education reform is how new reforms can bridge the gaps between the least successful and the most successful in the system’.<sup>45</sup>

While Australian students attain high results by international standards, of great concern is that international testing as evidenced in the Programme for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS) also indicates that disparities among students are wider in Australia than in most other nations.

Faced with such disparity, there has been an increased focus on the ‘new equity’ in education, which has come to mean the proportional representation by designated ‘equity groups’ in predetermined curriculum outcomes.<sup>46</sup>

Traditional approaches to equity have often led to the expectation of differential outcomes for different students – a misguided view about the need to ‘dumb down’ the curriculum to fit the perceived (in)capabilities of individual students or particular student groups. A crucial dimension to equity is that we do not come to expect and accept differential outcomes for students, which leads to the perpetuation and exacerbation of inequalities. Rather we must ensure ‘that the conditions necessary for student success exist in all schools’<sup>47</sup> and for all students.

As Linda Darling-Hammond states:

*A curriculum that enables all students to learn must allow for different starting points and pathways to learning so that students are not left behind; allow for different strategies and approaches that meet varying learning styles and needs; allow for the reality that different areas of study are differentially relevant (and will be differently pursued) in various communities because of geographic, economic, topological, and cultural considerations; and allow for the prospect that students' demonstration of their knowledge will be grounded in these contextual differences.<sup>48</sup>*

Education, among other things, creates opportunities for a higher standard of living, increased social cohesion, broadened choice and active participation in society. If curriculum is to contribute to building a community with these qualities then reformers must ensure that 'equity groups' are not further marginalised by the imprudent expectation that traditional marginalisation will continue to manifest itself in the form of lowered levels of educational achievement in the present.

To be equitable, the process of curriculum development needs to be one that integrates the input of students, teachers and communities, and is a conversation that nurtures widespread representation and negotiation. If we are to maximise the quality of student learning outcomes we must focus on providing equitable access and opportunity to education in order to achieve the best possible outcomes for all students. Curriculum development should also bear in mind the other goals of *The Adelaide Declaration*: the need to develop fully the talents and capacities of all students and that schooling should be socially just.<sup>49</sup>

The challenge for curriculum reformers is to be brave in addressing inequalities in

education and as Fullan suggests, committed to 'raising the bar and closing the gap of student achievement'.<sup>50</sup> Across Australia there is a particular need to vigorously pursue the best possible outcomes for Indigenous students.

### **The Use of Data to Inform Teaching and Learning**

Many educationalists suggest that assessment that contributes to and reflects what is valued in a reformed, future orientated school curriculum, and by society more generally<sup>51</sup> is an essential feature of successful curriculum reform.

The past decade has seen a high level of engagement and commitment by schools to the collection, analysis and interpretation of information about students to inform teaching and learning. The adoption of criterion-referenced assessment and reporting has played a significant role in presenting and describing information about student learning achievements and areas for further development.

With the increased willingness of educational bodies to use data as a means to inform teaching and learning, it is important that the secrets of assessment are shared. Teachers and students must have conversations involving a common language that provide the opportunity and impetus to discuss how goals are set, how performance is measured, and how performance can be improved.

Alan Luke argues that effective education reform requires alignment of the three key message systems that exist in education - curriculum, pedagogy and assessment. Unless these systems are fully aligned, reform efforts will be hard to sell to practitioners on the one hand, and will be dysfunctional on the other.<sup>52</sup> Luke's argument for alignment is a powerful one.

If Australia is to achieve equitable, far-reaching high-quality educational standards for all students, just as curriculum is reformed, so too must be the forms of assessment with which it is coupled. A key principle in aligning assessment and curriculum is that the assessment strategy selected must be appropriate to what it purports to measure or describe. The strategy needs to encompass a diagnostic capacity to inform further teacher and learning.

In recent years there has been a large focus on measuring Australian achievements in the global arena. TIMSS and PISA have provided a comparison of the performance of Australian students with those all over the world. Results from these studies provide valuable insight into the relative global positioning of Australian education standards and achievements. These studies also indicate concerns specific to our local and national context, and, in particular, indicate an urgent need to improve educational outcomes for Indigenous students.

### **Approaches to 'Learning': Debating the 'Model' (of) Curriculum**

In this paper I have provided discussion on some of the drivers of curriculum reform. These drivers exist deeply submerged in the context of the curriculum debate – which curriculum is best? (Of course, this is not necessarily the same as which curriculum is winning the race.)

In a paper given to the Curriculum Corporation Conference in 2000, Dianne Kerr proposed four elements of curriculum to be used as 'world-class' benchmarks for education.

- 1) The goals for education are explicitly stated.
- 2) The groupings or categories of the intended curriculum are agreed to be

essential for all students, future-oriented, inclusive and capable of being taught effectively by existing teachers;

- 3) the intended curriculum emphasises what all students are to learn. These learnings are:
  - a) focused on what is agreed to be essential (rather than trying to cover everything);
  - b) specific;
  - c) manageable for both teachers and students in the time available;
  - d) focused on conceptual development (rather than long lists of content);
  - e) sequenced on the basis of evidence (rather than tradition);
  - f) supported by shared teacher understanding of what performance 'at the expected outcome or standard' looks like; and
  - g) assessable.
- 4) The intended curriculum is the focus of systemic testing and reporting, and of programs of teacher education and development. What is actually learnt (the attained curriculum) is the focus of teacher accountability and school accountability/improvement.<sup>53</sup>

In addition to these elements, world-class benchmarks for education must also duly consider the individual differences of students.

Approaches to curriculum development across Australia have achieved differentially in relation to these benchmarks. There are qualities of curriculum that are essential to maximise student outcomes. Obviously, curriculum should be learner centred. It should identify and promote essential learnings and their application (where relevant). It must enable the student to progress beyond superficial knowledge to what is sometimes called deep learning. It must

recognise that knowledge is often contestable. It needs to meet the needs, interests and capacities of students. It must offer a foundation for later learning and employment. It has to have a symbiotic relationship with pedagogy and the assessment of student learning. It is important that these qualities are valued and prioritised in order that all areas of Australian education become and remain world-class.

### Conclusion

Education must take account of the transformation that society undergoes. Curriculum should be an enabling mechanism that nurtures adjustment to change, and simultaneously provides a roadmap of expectation. As the pace and diversity of local and global change increases, education will continue to face an abundance of challenges. The responses to these challenges will undoubtedly influence the type of society in which we live.

While we may learn from the history of education, replicating the past will not necessarily position us well for the future, nor will hollow futuristic rhetoric provide the solutions. As Paul Brock suggests, 'while we must conserve what is of timeless value in education and schooling, we must also transform much of what now passes for education and schooling'.<sup>54</sup> The curriculum exploration must be a deliberate and purposeful one that provides a creative and intelligent response to society, for both here and now and into the future. We have a great opportunity and indeed an imperative to deliver curriculum that, while meeting the needs and stretching the capacities of our students in the here and now, will also provide them with the knowledge, skills, understanding and values to help them thrive in their post-school life in the 21st century. In order to do this, the decisions that we make must be brave, ingenious, and powerful. They must be

decisions embedded within the ideal of creating fair, just and harmonious local and international communities, and characterised by solutions that maximise life outcomes for all students.

There are many tensions and drivers that influence curriculum reform. In anticipation of, and response to these there are some aspects of curriculum that are fundamental to its quality, effectiveness and success, these include:

- While there must be a common core of essential knowledge, this core should not stifle the regeneration of curriculum, but rather respond intelligently, flexibly, creatively and bravely to social change.
- Curriculum must enable students to develop the higher-level process skills necessary to participate in a changing and dynamic environment and contribute to a civil society.
- Curriculum must be a negotiated process that encompasses broad and inclusive conversations.
- Curriculum must provide access to knowledge for all.
- Curriculum must provide students with the capacity to question, examine and critique knowledge and its application.
- Curriculum must take account of, and address appropriately, the needs, interests and knowledge relevant to the current, as well as future, operating context.
- Teachers must be able to exercise autonomy, creativity and professional judgement in operationalising curriculum while remaining accountable and consistent.
- The role of the teacher must be recognised as integral to the design, development and delivery of curriculum.

Most will agree that education provides a unique scope of opportunity for improving the life experiences of

individuals, and that access to these opportunities can powerfully impact on the life experiences of individuals and the types of societies in which we live. Curriculum is a fundamental aspect of education that contributes to the realisation or absence of these opportunities, but is also (and often significantly) shaped by the broader operating context in which it exists.

No two societies are identical. Hence, while we exist as part of the larger global world and need to have a quality of curriculum that will hold its own internationally, we are distinguished by living in an Australian society. Education must capture our uniqueness by recognising local contexts and values and striving for better outcomes for all Australian citizens. It must share responsibility for valuing and building our workforce capacity. It must recognise the richness of diversity, in particular our Indigenous people. It must be socially just. It must critique and question the ever-changing world. It must be available and accessible to all. It must develop students to be active, contributing and thriving individuals in their local and global worlds, and instil in them the capacity for life-long learning. It must meet the challenges of the here and now, while also preparing for the future. It must highlight Australia on the global scene as a place where education is highly valued. It must be such that all Australians are able to take pride in, and benefit from, our quality education systems.

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<sup>1</sup> *The Delors Report*, Report to UNESCO of the International Commission on Education for the Twenty-First Century (1998), *Learning: the*

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*treasure within*, Australia: UNESCO Publishing/The Australian National Commission for UNESCO, p.39.

<sup>2</sup> *ibid.* p.48.

<sup>3</sup> *ibid.* p.53.

<sup>4</sup> MacGregor, Duncan, Leigh, Andrew, Madden, David and Tynan, Peter (2004), *Imagining Australia: Ideas for our future*, NSW: Allen & Unwin, p.198.

<sup>5</sup> The Delors Report (1998), *op.cit.* p.54.

<sup>6</sup> *ibid.*, p.54.

<sup>7</sup> Reid, Alan (2005), *Rethinking National Curriculum Collaboration: Towards an Australian Curriculum*, Canberra: Commonwealth of Australia, p.11.

<sup>8</sup> Kelly, A. V. (1999), *The Curriculum: Theory and Practice*, London: Paul Chapman, p.7.

<sup>9</sup> ACT Department of Education and Training (2005), *Every Chance to Learn, Curriculum for ACT Schools P-10, Principles and Framework (Phase 1)*, Canberra: ACT Department of Education and Training, p.5.

<sup>10</sup> Marsh, C. and Stafford, K. (1988), *Curriculum: Practices and issues*, Sydney: McGraw-Hill Book Company.

<sup>11</sup> Reid, Alan (2005), *op cit.* p.17.

<sup>12</sup> The approach of the *Statements and Profiles* was to define the necessary skills and understandings needed by students, and leave the choice of content decision to those responsible for implementing curriculum at a system or school level. See Ministerial Council on Education, Employment, Training & Youth Affairs (1989), *The Hobart Declaration on the Goals of Schooling*, Carlton South: MCEETYA, and Ministerial Council on Education, Employment, Training & Youth Affairs (1999), *The Adelaide Declaration on National Goals for Schooling in the Twenty-First Century*, Carlton South: MCEETYA.

<sup>13</sup> Ministerial Council on Education, Employment, Training & Youth Affairs (1989), *ibid.*, p.10.

<sup>14</sup> Ministerial Council on Education, Employment, Training & Youth Affairs (1989), *ibid.*

<sup>15</sup> Ministerial Council on Education, Employment, Training & Youth Affairs (1999), *op. cit.*

<sup>16</sup> *ibid.*

<sup>17</sup> *ibid.*

<sup>18</sup> Haywood, H. Carl (2004), 'Thinking in, Around, and About The Curriculum: the role of cognitive education', *International Journal of Disability, Development and Education*, Vol.

51, No.3 September 2004, pp.231–232, Nashville: Carifax Publishing.

<sup>19</sup> Caldwell, Brian J. (2003), *A new vision for public schools in Australia*, paper presented at the 2003 Economic and Social Outlook Conference at the University of Melbourne Institute, 13–14 November 2003.

<sup>20</sup> *ibid.*

<sup>21</sup> National Centre for Social and Economic Modelling (1999), as part of the Dusseldorp Skills Forum, *The Cost to Australia of Early School-Leaving*, Canberra: University of Canberra, p.1.

<sup>22</sup> Haywood, H. Carl. (2004). *op cit.*, p.232.

<sup>23</sup> Michael Fullan defines sustainability as ‘the capacity of a system to engage in the complexities of continuous improvement consistent with deep values of human purpose’. See, Fullan, Michael (2004), *Leadership and Sustainability*, Ontario Institute for Studies in Education, University of Toronto. Available online at: <http://home.oise.utoronto.ca/~changeforces/pdf/Ukpre-reading.pdf>.

<sup>24</sup> According to Brian Caldwell, ‘Transformation is considered to be significant, systematic and sustained change that results in high levels of achievement for all students in all settings, thus contributing to the wellbeing of the individual and the nation.’ See, Caldwell, Brian (2004), *Tighten Your Seatbelts: It is time to go further and faster: Getting serious about school transformation in Australia*, paper for the Currie Lecture of the Australian Council for Educational Leaders, Canberra, 14 September 2004.

<sup>25</sup> According to Alan Reid, ‘Australian Society is in the throes of significant change. This change is a response to the huge shifts in cultural, political, economic and social life that are characteristic of a globalising world in post-industrial and post-modern times.’ See, Johnson, Bruce and Reid, Alan (1999), *Contesting the Curriculum*, Australia: Social Science Press, p.2.

<sup>26</sup> Williams, David, Johnson, Bruce and Peters, Judy with Cormack, Phil (1999), ‘Assessment: from the standardised to authentic approaches’, in Johnson, Bruce and Reid, Alan (eds) (1999), *op cit.*, p.159–160.

<sup>27</sup> ACT Department of Education, Youth and Family Services (2004), *Every Chance to Learn: Curriculum Renewal Evaluation Report*, Australian Capital Territory, Canberra: Publishing Services, p.28.

<sup>28</sup> *Universal Declaration of Human Rights, 1948, Article 26*. Available online at: <http://www.un.org/Overview/rights.html>

<sup>29</sup> Hargreaves, Andy, *Teaching in the Knowledge Society*. (2002), from Technology Colleges Trust, Vision 2020 – Second International Online Conference, 12–26 October and 24 November–7 December 2002. Available online at: <http://www.cybertext.net.au/tct2002/default.htm>.

<sup>30</sup> *ibid.*

<sup>31</sup> Beare, Hedley (2002), *Towards a learning community*, from Technology Colleges Trust, Vision 2020 – Second International Online Conference, 12–26 October and 24 November–7 December 2002. Available online at: <http://www.cybertext.net.au/tct2002/default.htm>.

<sup>32</sup> Simon H. (1996), Quoted in Bransford, JD, Brown, AL and Cocking, RR. (eds) (2000), *How People Learn: Brain, Mind, Experience and School*, National Academy Press, Washington DC. Available online at: <http://www.nap.edu>.

<sup>33</sup> ACT Department of Education and Training (2005), *Every Chance to Learn*, Curriculum for ACT Schools P-10, Principles and Framework (Phase 1) 2005. Available online at: [www.det.act.gov.au](http://www.det.act.gov.au).

<sup>34</sup> Ministerial Council on Education Employment Training and Youth Affairs (2003), *Learning architecture framework: learning in an online world*, North Carlton: MCEETYA, p. 4.

<sup>35</sup> Committee for the Review of Teaching and Teacher Education (2003), *Australia's Teachers: Australia's Future. Advancing Innovation, Science, Technology and Mathematics*, Commonwealth of Australia, and Martin, Andrew J. (2003), *Improving the Educational Outcomes of Boys*, Australian Capital Territory, Canberra: Department of Education, Youth and Family Services, 2003, p.31.

<sup>36</sup> Martin, Andrew J. (2002), *op cit.*, p.31.

<sup>37</sup> The NSW Quality Teaching model is a framework for teachers and schools to focus discussion on the teaching and assessment practices that shape students' learning.

<sup>38</sup> Hattie, John (2003), *Teachers Make a Difference: What is the research evidence?* Paper given at the Australian Council for Education Research Annual Conference on: Building Teacher Quality.

<sup>39</sup> Hargreaves, Andy. *Teaching in the Knowledge Society*. (2002), *op cit.* p.2.

<sup>40</sup> Hattie, John (2003), *ibid.*

<sup>41</sup> Reid, Alan (1999), 'Controlling the curriculum work of teachers', in Johnson, Bruce and Reid, Alan (1999), *op cit.*, p.186.

<sup>42</sup> ACT Department of Education and Training, School Excellence Initiative, *Teachers: they key to student success*. A discussion paper for ACT government schools. Available online at: [www.det.act.gov.au](http://www.det.act.gov.au).

<sup>43</sup> Hughes, Phillip (1973), 'Determinants of Curriculum Design', in Phillip Hughes (ed) (1973), *The Teachers Role in Curriculum Design*, Sydney: Angus and Robertson Publishers, p.1.

<sup>44</sup> See for example Harding, A. (1997), *The suffering middle: Trends in income inequality in Australian 1982 to 1993-94*, Discussion paper no.22, National Centre for Social and Economic Modelling (NATSEM), University of Canberra, Canberra, and Saunders, P. (1995), *Unpacking inequality: Wage incomes, disposable incomes and living standards*, Discussion paper no.63, Social Policy Research Centre, University of New South Wales, Sydney, who report a significant increase in market income inequality in Australia during the 1980s and early 1990s.

<sup>45</sup> Leadbeater, Charles (2004), *Learning about personalisation: how can we put the learner at the heart of the education system?* Available online at: [www.standards.dfes.gov.uk/innovation-unit8/9](http://www.standards.dfes.gov.uk/innovation-unit8/9).

<sup>46</sup> Fitzclarence, L. & Kenway, J. (1993), 'Education and social justice in the postmodern age', in Lingard, B, Knight, J & Porter (eds) (1993), *Schooling reform in hard times*, London: Falmer Press.

<sup>47</sup> Willis, Sue and Johnston, Jayne (1996), *Is it possible to base systemic curriculum reform on principles of social justice?* Paper presented at ICME 8, the International Congress of Mathematics Education, Seville, Spain, 14-21 July 1996, p.4.

<sup>48</sup> Darling-Hammond, L. (1994). 'National standards assessments: will they improve education?', in *American Journal of Education*, Vol. 102, p.489.

<sup>49</sup> Ministerial Council on Education, Employment, Training & Youth Affairs (1999), *op cit.*

<sup>50</sup> Fullan, M. (2004), 'Leadership and Sustainability', Thousand Oaks, CA: Corwin Press, Toronto: Ontario Principals Council.

<sup>51</sup> Reid, Alan (1999), 'The national educational agenda and its curriculum effects', in Johnson, Bruce and Reid, Alan (1999), *op cit.* p.4.

<sup>52</sup> Luke, Allan (1999), 'Education 2010 and new times: Why equity and social justice still matter, but differently', paper presented to the Education Queensland Online Conference, 20 October 1999. Available online at: <http://education.qld.gov.au/corporate/newbasics/docs/onlineal.doc>.

<sup>53</sup> Kerr, Dianne (2000), *National Goals*. Paper given at the Curriculum Corporation Conference, Melbourne 2000, p.1.

<sup>54</sup> Paul Brock (2003), 'Education and Schooling: Looking Forward, Looking Back – and Hoping to Arrive', in Dinham, Steve, (ed) (2003), *Transforming education: engaging with complexity and diversity*, ACT: Australian College of Educators, p.78.