

School Curriculum for the 21st Century

A Rough Guide to a National Curriculum

Prepared for the Curriculum Standing Committee of National Education Professional Associations

by
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Preamble

Collaborative federalism that seeks to develop a curriculum for the 21st Century and establishes a series of commitments designed to make schooling more engaging, rewarding and equitable should be supported.

However, if within this broader collaborative agenda a National Curriculum is conceived as being an amalgam or rationalization of States' and Territories' curriculum statements into a single national statement it seems to me to be of modest importance. Rather the focus should be on developing a common curriculum that will enable all students to develop a broad general knowledge of their world. My starting point is that the fundamental goal of schooling should be to ensure that all students have acquired a broad general knowledge that enables them to understand their own society (e.g. its history, institutions, economy and values), engage with society's issues, be enriched by society's cultural life and be open to the wider world. And the achievement of this goal should be the purpose of the National Curriculum.

Why is the reconciliation and rationalisation of State and Territory curriculum approach less helpful? Firstly, most states have fairly similar descriptions of what students should learn at the different stages of schooling, although the 'subject' names may not always convey this, and a 'tidying up' of relatively superficial differences in the structure and vocabulary of curriculum statements seems a fairly innocuous activity. Secondly, we are talking about a curriculum document that by its very nature can only describe in relatively broad terms the learning to be promoted over thirteen years of schooling. It therefore is likely to have a very limited impact on the quality of students' schooling experiences and the levels of attainment they achieve.

Of all the factors that could be changed in order to improve the attainment levels of students, the choice to devote time and resources to convert State and Territory curriculum statements into a National Curriculum statement would seem to be a pretty insignificant reform strategy.

Of course, the drive for a National Curriculum becomes less benign if as a result of the redrafting process there are requirements to teach and assess content that redefines or goes beyond what the States and Territories have hitherto considered to be essential learning. It is also less benign if the national statement is framed in such a way that its adoption will bring about substantial changes in the learning that students experience in the classroom, in the way that school timetables are structured and the way that learning is assessed and certified.

Although I consider the development of a national curriculum to be symbolically significant, unless it becomes more than an exercise in reconciling the relatively minor variations in curriculum statements between the States and Territories to produce a common national statement, and unless it has traction within the classroom, it is unlikely to significantly enhance or worsen a student's experience of schooling. So, to be an activity that is more than an exercise in avoiding unnecessary duplication, the National Curriculum also needs to be more than a reconciliation of the curriculum statements of our States and Territories.

Consequently, the discussion that follows largely ignores the current state of play in relation to the development of a National Curriculum and provides some initial thinking about the kind of National Curriculum statement that could improve a student's learning experience. It borrows from developments that are already evident in various State and Territory curriculum statements and should be perpetuated in any National Curriculum statement and adds other aspects that might seem to be at odds with most current curriculum statements and thinking. It is premised on the view the National Curriculum must encourage and enable virtually every student to stay engaged with learning so that they can complete secondary schooling and gain a recognized certificate. And finally, it is not 'polished' thinking but rather a rough guide to what a National Curriculum should seek to achieve and focuses discussion on a few matters that have generally escaped the spotlight.

Key propositions

The key propositions advanced in this paper are as follows:

- A National Curriculum conceived as a reconciliation of current State and Territory differences, whilst generating significant efficiency benefits, will be of marginal value in improving student learning.
- A National Curriculum should be concerned with the common learning undertaken by all students.
- The National Curriculum should not consume all of a school's learning time.
- The National Curriculum's impact should be largely confined to the compulsory years.
- National Subjects (and common credentialing requirements) should be developed for the senior years.
- A National Curriculum and National Subjects are distinct concepts.
- National Curriculum subject content should support inter-disciplinary study and promote 'big picture' general knowledge.
- The National Curriculum should be taught in ways that enable students to appreciate the distinct contribution that each of the disciplines/subjects makes to enriching their understanding of society.
- The National Curriculum should promote global perspectives, incorporate the development of 'soft skills' and include second language learning that is confined to only a few common second languages.
- Assessments of the National Curriculum should be intra- and cross-disciplinary, more concerned with reasoning than with recall and be concerned with what students can do as well as with what they know.

What should be preserved?

Over the last decade there have been three developments in the way that curriculum statements are written that are worth preserving. These developments are the enunciation of:

- the characteristics of various stages of learning and their corresponding curriculum orientations
- the dimensions of personal and social development learning that should be part of the structured curriculum experienced by all students
- learning outcomes (i.e. what should students know, be able to do and value) and standards to be achieved in relation to knowledge and skill outcomes.

Where to start?

"There is a danger that the next divide will be between those who have a global outlook and an international language and those who do not."

Generally curriculum developers start out by considering questions such as what are the key forces that are most likely to exert an influence on the life chances of young Australians over the next 20-30 years and then considering the sort of learning that schools can provide to enable school graduates to shape and respond to these forces. This 'futures scanning' is not new territory but it bears some repeating.

It seems generally agreed that the world that is ahead for school leavers will have the following features:

- globalization of economies – economic power centred on China, India and Japan
- reliance on international markets – entrepreneurs and workers will need to have a global outlook and international competence
- increased concern about environmental degradation, water and energy shortages, global warming, pandemics (e.g. AIDS and Avian Flu) – the globalisation of environmental concerns will require international cooperation for global solutions and citizens with a sound knowledge of local and international environmental issues and an openness to changing consumer and other habits in the interests of global sustainability
- insecurity of nations and competing power blocs – citizens will need to be able to engage with national and international issues of security, understand the need to build alliances, understand the factors that generate conflict and mistrust between nations
- internationalization of employment – accelerated international migration, increased opportunities for working overseas and a greater use of multinational work teams will require citizens with heightened cultural awareness and sophisticated inter-personal skills
- a science and technology edge will be important for gaining an economic edge – an interest in innovation and in science and technology will need to be nurtured in schools
- the knowledge economy will be the generator of most wealth and jobs – the capacity to identify problems, to work in multidisciplinary teams to identify solutions, to manage complex and multidimensional tasks, to synthesise ideas and to communicate effectively will be needed.

Others have developed more expansive lists¹, but these seem a pretty good starting point for framing a discussion of what a curriculum in the Twenty-first Century should achieve for all students.

What sort of skills and knowledge do all students need?

“For students to compete in a global economy, they need to produce, analyze and communicate knowledge, not just learn it”².

Each of the states and territories have set out in their ‘essential curriculum’ statements their views about the knowledge, skills and attitudes that schools need to nurture. Many of these statements acknowledge that traditional subjects or key learning areas need to be supplemented by learning that develops ‘soft skills’ and the capacity to keep learning. Some of the propositions below reflect perspectives currently covered in the curriculum statements of most States and Territories, but others are not typically represented in curriculum statements.

At the most general level by the time they leave school all students need:

- to be able to receive, retrieve and express increasingly complex ideas and information in visual and spoken form. This requires them to be highly competent in assembling, manipulating and interpreting numbers and in listening, reading, writing, viewing and speaking. And in presenting information in a variety of forms using a variety of media. **Why?** Because creativity, imagination, adaptability, social competence, problem identification and problem-solving, and the capacity for informed decision-making depends upon a good facility in language and in reading and interpreting number-based information and in presenting ideas and findings.

¹ For example, see the [Framework for 21st Century Learning](http://www.21stcenturyskills.org) (www.21stcenturyskills.org) and [enGauge 21st Century Skills](http://www.ncrel.org/engauge) (www.ncrel.org/engauge)

² Centre for Quality Teaching (2007) Teaching and Learning Conditions Improve High School Reform Efforts, North Carolina, page 1.

- personal and inter-person skills to be able to sustain a healthy lifestyle and build positive relations with others, to establish a values framework that embraces a concern for others and to understand and reflect on their personal motives and behaviours and if need be change these to sustain personal wellbeing and support the wellbeing of others. **Why?** Because poorly developed skills in these areas affects self esteem, happiness and the capacity to participate in a rich social, community and work life. Well developed skills in these areas open up relationship opportunities, enhance job prospects, builds respect and trust and self-esteem.
- an understanding of human society – In order to understand society students need a basic knowledge of psychology and philosophy to help them understand what it means to be human and they need to engage with questions such as: Where have we come from? What innovations changed civilisations? What accounts for economic differences, religious differences, political differences, differences in traditions and values? What are the 'big isms' that inform peoples' mindsets and understandings? How do our minds work? **Why?** Because political, economic and religious theories and beliefs are key shapers of our world and young people need to know this and understand how differences in these domains play out in a society in terms of values, social behaviour and civic institutions.
- an understanding of science and technology and in particular a knowledge of the history and philosophy of science, of key figures in the development of scientific understanding and of how science and technology contribute to and impact on the world. **Why?** An understanding of the place of science and technology in society is necessary for an understanding of our world as the big ideas of science have significantly shaped our understanding of nature, space, and our past and possible future.
- to be familiar with cultural activities and artifacts, to know who have been significant contributors to cultural life in its various forms and to be supported to become producers, supporters and consumers of cultural life. **Why?** Because everyone should be equipped to participate in, appreciate and benefit from the cultural and artistic life of societies.
- to be global in outlook, to see themselves as a citizen of the world, to be culturally aware and sensitive and to be proficient in a second language. **Why?** Because the global workplace requires citizens with heightened cultural awareness, second language skills and sophisticated inter-personal skills
- to be environmentally aware and ecologically responsible – in one sense this is a subset of the impact of the actions that nations take in response to economic and political beliefs and pressures and of the need to understand science and technology and their possible contributions to destroying and salvaging our planet. **Why?** Because the continuation of the planet depends upon how nature's resources are used, the environment deserves to be singled out as an essential area for study and action.

What are the implications of the above list?

“School, finally, isn’t about disciplines and subjects, but about what they were originally meant to do—help the young make more sense of life, more sense of experience, more sense of an unknowable future.”³

Currently learning is largely structured around disciplines and much of what a curriculum statement for the 21st Century could describe as essential learning could be captured in the traditional disciplines of mathematics, science, English, Languages, history, geography and economics. Knowledge of ‘the body and the mind’ and of what is needed to keep them healthy would also need to be in the curriculum mix as would knowledge of digital technology and its devices and their applications. However, to achieve the knowledge and skills alluded to above, the content that has been traditionally taught within the disciplines in schools would need to be significantly changed.

The content usually associated with school subjects in the disciplines is out of step with the kind of learning that is needed for all students to start to understand and make sense of ‘the world’ and feel capable of contributing to how the future will evolve. National collaboration should be about producing a common general curriculum designed to have all students leaving school with a broad general knowledge. But as schools will also need to provide specialized learning in the senior years in order to satisfy university entrance and course pre-requisite requirements, by implication a National Curriculum would not consume all of the teaching time. Indeed, it might be useful to distinguish between a National Curriculum and National Subjects as the definition used here for a National Curriculum is the common learning that is undertaken by all students and that results in them acquiring a broad general knowledge and requisite social skills and values. National Subjects could be subjects with nationally agreed specialist content that are taken by different student cohorts (e.g. a National Physics subject taken by senior science students) and are similar to current senior courses of study designed for students with higher education aspirations.

In one sense the propositions above are out of step with the view that the learning of curriculum content is a mile wide and an inch deep and that the solution to this is to narrow the focus and have ‘deep learning’ in specialist areas. Whilst it might be politically astute to talk about developing ‘deep’ knowledge, for who wants to support the development of ‘shallow’ knowledge, the priority for me is the development of a general knowledge that helps to explain society, gives students a sense of humanity’s achievements and failures, gives them a sense of their place in history, gives them an appreciation of the arts, gives them an understanding of other peoples and cultures and a sense of how the world works. The contention here is that all students need in-depth learning of ‘big picture’ content. Specialist and increasingly complex and abstract learning in say mathematics and science is desirable and should be available to those interested but goes beyond being essential learning for all students.

And when it comes to teaching, a timetable almost exclusively structured on the disciplines would most likely inhibit rather than assist students to gain an understanding of the inter-relatedness of factors that have and are shaping our world. Blocks of time need to be available for ‘in depth’ research tasks, syndicate work, extended projects and the preparation and delivery of student presentations, about ‘big topics’ (i.e. important and complex topics) that will require students to draw on knowledge from several discipline areas.

Whilst recognizing that problem solving does not happen in a knowledge vacuum and that problem solving in the sciences differs to that in history, big picture understanding is undermined if learning from the disciplines results in students acquiring disconnected facts, theories and skills. In theory, disciplines provide learners with distinct ways of knowing that contribute to their understanding of the world. Unfortunately school subjects derived from the disciplines are experienced by students as disconnected bits of knowledge

³ Brady, M. (2006) Why Thinking ‘Outside the Box’ Is Not So Easy, Education Week, August 30.

to be learnt for their own sake. This is because the selection of subject topics is strongly influenced by what has been in the school subject in the past and now needs updating. In this new attempt at a National Curriculum decisions about the selection of subject content should seek to maximize the subject's contribution to students' achieving the 'essential learning' broadly described above and to complement perspectives being promoted in the content of other discipline based subjects. Otherwise what is taught will be experienced as relatively arbitrary and disconnected facts to be learned for their own sake rather than being experienced as coherent and interconnected perspectives that contribute to filling in the jigsaw of a broader understanding.

A focus on 'soft' or generic skills is present in most curriculum statements produced in the last few years. Unfortunately attempts to develop soft skills such as the ability to synthesise ideas and information to arrive at new conclusions, to generate fresh and original ideas, to identify problems and problem solve, to work in teams, to manage complex projects, to be empathetic and tolerant and so forth are generally undercut when assessment regimes largely test the recall and manipulation of facts and the ability to mimic procedures associated with a particular discipline.

However in the work situation and in higher learning, young people will be expected to get along with others, work productively with others, draw inferences, interpret situations and information, reconcile conflicting advice and opinions, identify problems and contribute to problem resolution, reflect on their circumstances, engage in thoughtful discussion, locate and absorb new ideas and knowledge, develop proposals and make presentations, provide feedback on performance and ideas, and so on. They will be expected to have a strong work ethic, to be well organized, independent and flexible learners/workers, to be able to back up their beliefs with evidence and to be reliable, loyal and ethical. These expectations should not come as a shock to school graduates and their schooling should prepare them to meet these expectations.

The goal of significantly increasing the numbers of students with a second language facility will require a significant change in the way language learning is delivered across Australia. Most systems have failed abysmally to produce large cohorts of proficient second language users. Resources are inadequate, qualified teachers of LOTE are scarce, opportunities to use second languages are limited, a culture of valuing a second language does not exist. Untangling what are the causes and what are the symptoms of this failure to ignite students' interest in second language learning is complex. One thing that stands out though is that Australia is one of the few countries where over forty languages are being taught in schools. Most counties offer and/or require the development of competence in one common second language (usually English) or two (English and the official language) where there is a large population with a mother tongue that is different to the country's official language.

In order to experience some success at promoting the widespread acquisition of a second language, we need to confine second language learning to a small set of instructional languages (e.g. 2 Asian and 2 European only) so that same second language communities of students can be established in a locality (a community of learners is necessary so students can practice their skills by talking to each other), so that the training of language teachers can be targeted and so resources are concentrated on a narrow field of languages enabling instructional materials to become ubiquitous and of high quality. Secondly, conversation should be identified as the lead skill to be developed by second language teachers.

Finally, assessment regimes will also need to be revised. In the senior years open-book exams and the use of multiple resources which need to be analysed and responded to by students should become more commonplace assessment modes. Lower down the school, assessment by exhibition⁴ should be given

⁴ As illustrated in Assessment by Exhibition: Student Exhibition Teachers' Kit ACT Department of Education, Youth and Family Services, 2002

more prominence. Similarly, as students become more immersed in learning with technologies (whilst we are still at a very primitive stage in this regard, we may not be in five to ten years time), this will need to be reflected in course design, in the kinds of learning tasks that are set and in the way that knowledge and skills are assessed. Pen and paper assessments of learning based around 'digital' knowledge and skills cannot and should not be sustained for much longer. As has already happened in some states, student reports will need to include statements of achievement standards in 'soft skills' areas and/or 'compliance' statements related to satisfactory participation in such things as service work, a work placement and community or team-based work.