Chapter 4

Curriculum

4.1 Curriculum has been the focus of most discussions about school reform over the past 20 years. There appear to be distinct waves of enthusiasm for curriculum 'reform' (as it is always termed) as educationists work toward redefining what they consider to be the essential learning for a new age. Governments at both state and Commonwealth levels have sought to intervene at particular points, either because they are captured by the reformers, or because they discern popular discontent with prevailing curriculum and teaching practice. In broad terms, the movement toward the national adoption of learning statements and profiles which occupied the time of all jurisdictions in the early to mid 1990s was initiated by the Commonwealth, but the process of change was largely managed by state officials.

4.2 Currently, in the middle of the first decade of the 21st century, the initiative remains with the Commonwealth. The committee notes that while arguments between the states and Commonwealth proceed over details, it appears that governments at both levels are noticing similar things in the 'what, why and how' of teaching and learning in schools they believe should be improved. In the committee's view, the Commonwealth-state arguments about education centre on the extension or defence of the constitutionally defined education 'patch', as in who should have responsibility for what. There appears to be no essential differences of opinion about the direction of a renewed curriculum change. The argument is over the process of collaboration in the pursuit of change.

4.3 The education community understands the political dimension to curriculum change, which is why this inquiry has not provoked any strong views about a national curriculum. There is general agreement in principle that there should be one. The argument is over how far it should extend in regard to content and assessment. Some submissions claim an embryonic national curriculum already exists. Other submissions suggested that while uniformity in curriculum will never eventuate there will be incremental change in the direction of uniformity. The committee does not accept this sanguine view, and argues that improvements in learning outcomes may only be achieved through deliberate and difficult actions which will be unpopular in some states and among some education interest groups.

4.4 In this report there is considerable overlap between observations about curriculum and teaching practice. Thus, some references to science teaching in Chapter 3 include curriculum references which are not repeated here. In this chapter the committee highlights some of the concerns voiced by educationists and parents in regard to what they see as serious deficiencies in curriculum.

The curriculum challenge

4.5 The committee understands the pressures on systems and schools to develop curricula and syllabuses which serve a number of purposes. As stated earlier, the committee believes that the purpose of schooling is to develop the minds of students, over 10 to 12 years of school life, with the associated ability to think for themselves, make informed decisions, and use knowledge and skills in productive and fulfilling ways. This requires the acquisition of knowledge of what is referred to as 'the basics' as well as what a number of submissions refer to as 'deep learning'. And despite the stronger contemporary emphasis on work readiness skills, or perhaps as an adjunct to it, values and attitudes associated with quality learning are also essential. These are commonplace views, seemingly easy for schools to aspire to in many different ways, but are not easy to realise.

4.6 A utilitarian approach to curriculum basics is evident in submissions to the committee. The Queensland College of Teachers submitted that as change is a constant factor in the modern world, education and teachers must prepare students to embrace a diverse and uncertain future.

> Central to a consideration of the future needs of students is acknowledgement of a society faced with rapid social, economic, technological and cultural change. Globalisation, the explosion in the use of ICT, diverse family structures and changing workforce patterns, including a growing tendency towards ‘portfolio’ careers, are impacting on society and the way we prepare young people to be effective citizens. They denote a society where the ability to acquire and apply knowledge, rather than just knowledge itself, is valued.[1]

4.7 Parents too have, in the main, a utilitarian attitude to the school curriculum. For most parents, the philosophical basis for curriculum is a less important matter than knowledge that is useful either for further professional study or technical and job-readiness skills. Parents wish to see evidence of progress.

Outcomes-based education

4.8 The committee noted that some educators at system level, and some academics in the field of education, are intensely irritated by the persistence of this issue, perhaps understandably, because it has provided an opportunity for media commentary on education matters quite unrelated to outcomes-based learning. No-one objects to discussing outcomes in relation to teaching and learning: it is only that there is a lot more to teaching and learning theory than that.

4.9 The committee discusses outcomes-based learning theory in this report because it has been mentioned frequently in submissions. Witnesses have described its characteristics and effects, often in disparaging terms, while others have let it be

1 Queensland College of Teachers, *Submission 53,* p. 3.

known that they are devotees of constructivist theories which guide their teaching practice.

4.10 As noted in Chapter 1, outcomes-based education formed the basis of the eight Key Learning Areas (KLAs) identified during the first attempt at establishing a national curriculum in the early 1990s. It places much emphasis on competencies, but in the process of developing statements and profiles in what were quite intense debates, subject or discipline content was overlooked. New South Wales, in particular, objected to this. The legacy of that phase of curriculum change lasted until very recently in Western Australia, when it finally crashed amidst public and political controversy.

4.11 Outcomes-based education is based on constructivist theory, which in turn is based on the idea that learners actively process and construct new ideas or concepts based on knowledge already acquired. The committee understands that the implementation of outcomes-based learning has been made especially difficult by the lack of emphasis on content and the concentration on the attainment of outcomes, the achievement of which are very difficult to assess. One indicator of the effects of outcomes-based learning on state and territory curricula in the 1990s was the jettisoning of syllabuses and formal testing.

4.12 Education researcher and commentator Dr Kevin Donnelly stated the problem of outcomes-based education without a syllabus ('road map') as it affects standards:

> In an outcomes based approach, as we adopted it in Australia, teachers are not given that road map, they are given an OBE document, a framework or an outline that concentrates on what students should know at the end in outcomes that they should be able to demonstrate or achieve. The way a lot of those outcomes have been written is very generic and vague, and there might be hundreds of them. For example, in primary school, if a teacher is teaching four or five subjects they might have to deal with hundreds and hundreds of outcomes statements with even more indicators. They have to then map back and write a syllabus to implement in the classroom. So they are coming at it from two different angles.[2]

4.13 Constructivist approaches to teaching extend through both primary and secondary years. The committee heard most of the criticism to outcomes-based education from the perspective of secondary school teaching and learning. But the committee also notes the connection between constructivism in this context and the whole-of-language approach to teaching children to read. As the report of the National Inquiry into the Teaching of Literacy stated:

> Essentially, the whole-language approach to teaching and learning reflects a constructivist philosophy of learning in which children are viewed as inherently active, self-regulating learners who construct knowledge for themselves, with little or no explicit decoding instruction. However, there is

2 Dr Kevin Donnelly, *Committee Hansard,* Melbourne, 25 June 2007, p. 31.

> a strong body of evidence that whole-language approaches are not in the best interests of children experiencing learning difficulties and especially those experiencing reading difficulties. Similarly, for children from disadvantaged backgrounds who often do not have rich phonological knowledge and phonemic awareness upon which to base new learning, being taught under constructivist modes has the effect of compounding their disadvantage once they begin school. This is particularly the case for children from non-English speaking backgrounds, including Indigenous children where English may be their second or third language.[3]

4.14 The committee notes that constructivist thinking is still alive and well. The committee received evidence from the Middle Years of Schooling Association (MYSA) which gives quite explicit support to teaching practices associated with outcomes-based education. MYSA submitted that middle school teachers had more success in teaching the core knowledge and skills when using a constructivist approach to teaching. The type of learning experiences and the opportunity for students to become independent learners are significant contributing factors to students being 'successful' in senior secondary and further education, although the Association admitted that measurement of this success was difficult to quantify.[4]

4.15 The committee noted that MYSA equated knowledge with 'quantity' as distinct from the more process-driven 'access and application realm...which is preferred and which assists students to achieve higher standards'. MYSA values process over knowledge, presumably on the basis that process enables knowledge to be 'googled' in a trice.[5]

4.16 The committee takes the view that a large proportion of students will require direction in order to succeed, and they are happier and more secure in a structured learning environment where their group-work and individual learning can be more accurately monitored and assessed. It notes the critical weight of opinion against a doctrinaire view of outcomes-based leaning, which is explained here:

> Australian operational views of constructivism…confuse a theory of knowing with a theory of teaching. We confuse the need for the child to construct her own knowledge with a form of pedagogy which sees it as the child's responsibility to achieve that. We focus on the action of the student in the construction of knowledge rather than the action of the teacher in engaging with the child's current misconceptions and structuring experiences to challenge those misconceptions...The constructivist theory of knowing has been used to justify a non-interventionist theory of pedagogy, whereas it is a fair interpretation to argue that constructivism requires vigorous interventionist teaching: how, after all, is a student with

3 DEST, *Teaching Reading*, Report of the National Inquiry into the Teaching of Literacy, p. 28.

4 Middle Years of Schooling Association, *Submission 10*, p. 4.

5 Ibid.

> misconceptions supposed to challenge them unaided? How does she even know they are misconceptions?[6]

4.17 Bruce Wilson argues that a view of teaching is needed which emphasises the role of the teacher is to intervene vigorously and systematically on the basis of excellent knowledge of a subject and being conscious of student conceptions and misconceptions in that field. The purpose of the intervention is to ensure that the child's construction of knowledge leads her to a more correct understanding of the domain.

4.18 The committee notes one final point. Outcomes-based education neglected content, although the syllabus documents were full of very explicit outcomes. It was up to schools and teachers to build the content foundation beneath the superstructure of outcomes. This was especially difficult for teachers with a shaky grasp of their subject discipline. As one Australian Council for Educational Research (ACER) researcher told the committee:

> It sounds pretty trite, but when I was teaching—I was a teacher in Victorian country high schools in the mid-seventies—basically we were allowed to teach pretty much what we wanted to. There was a real counterreaction to what had been seen as an oppressive centralised curriculum regime. But it went too far the other way. I was not, as a young teacher, really equipped to develop curriculum myself or to design appropriate methodologies for teaching.[7]

4.19 The task of teachers in the construction of teaching material has been made much more difficult in recent years with the scaling back of regional or district teaching support centres, where formerly, curriculum specialists were appointed to assist schools and their staff in such matters. The committee notes, as a side issue only, that much of the curriculum reform since the 1990s has been driven by state governments 'rationalising' crucial non-school appointments as a cost saving measure. It could not have come at a worse time.

The syllabus or standards approach

4.20 With the generally unsatisfactory experience of outcomes-based education, there has been a general return to reliance on a syllabus approach to curriculum design and teaching practice. The committee understands this to involve a focus on content related to specific year levels and curriculum descriptors that are concise, measurable and based on traditional academic disciplines. As is noted elsewhere this is 'business as usual' in New South Wales and Victoria. The radical changes in Western Australia are described in Chapter 5. The submission from the Tasmanian Department of

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6 Bruce Wilson, *Unlocking potential*. Paper given at the 2005 ANZSOG conference, University of Sydney, quoted in *Teaching Reading – National Inquiry into the Teaching of Literacy*, DEST, December 2005, p. 29.

7 Dr Phillip McKenzie, Australian Council for Educational Research, *Committee Hansard*, Melbourne, 25 June 2007, p. 42.

Education gives a brief indication that 'curriculum area descriptions' (syllabuses) are currently being developed which include course content and assessment guidelines.[8] The submission from the South Australia Department of Education and Children's Services is, however, uninformative on matters of curriculum detail.

4.21 The committee noted the work that has been done in Queensland on the new Queensland Curriculum, Assessment and Reporting Framework. This is a comprehensive Years 1-10 statement of essential learnings on core knowledge and skills, and containing five point scale standards and assessment guidelines.[9] At its Brisbane hearings the committee heard evidence that the old outcomes-based syllabuses were 'far too generic and vague', and there was a need to replace them with syllabuses that gave students several opportunities to learn the things that were important, that is, deeper learning rather than a superficial coverage.[10]

4.22 The committee notes that a syllabus approach to curriculum makes system-wide curriculum support easier and school or department based efforts toward collaborative materials preparation much more feasible. Significantly, the countries that outperform Australia in the Trends in International Mathematics and Science Study (TIMSS) assessments (such as Singapore, Japan, the Republic of Korea, and Hong Kong) have syllabus based approaches to curriculum documentation.[11]

Deep learning

4.23 The committee heard a great deal about 'deep learning' during public hearings. Research into human learning has revealed the importance of deep understanding of concepts and principles. Knowledge of facts and procedures is crucial, but deep understanding allows knowledge to be organised and conclusions to be reached about what knowledge is relevant to a problem. ACER told the committee that:

> School curricula need to promote the development of students' higher-order skills and deep understanding of subject matter. That is, the development of basic skills is an essential but not sufficient objective of a national curriculum. For example, the ability to read and understand a newspaper opinion column depends first on basic skills in recognising and decoding words. But a deeper understanding requires skills of critical analysis: an ability to 'read between the lines'; an understanding of the nature of opinion; and an understanding of the connections and motivations of the writer(s).[12]

8 Department of Education, Tasmania, *Submission 35*, p. 6.

9 Queensland, Department of Education, Training and the Arts, *Submission 54*, pp 7-9.

10 Ms Lesley Englert, *Committee Hansard*, Brisbane, 5 June 2007, p. 80.

11 Queensland, Department of Education, Training and the Arts, *Submission 54*, pp 12 & 15-19.

12 Australian Council for Educational Research, *Submission 38*, p. 3.

4.24 Recognition of the importance of deep learning was reflected in a number of submissions to the committee. Vincent Feeney of the Association of Principals of Catholic Secondary Schools in Australia told the committee:

> We often talk about rich learning or rich knowledge. We talk about students arriving at their own knowledge. People sometimes look at the internet and say, 'There's so much knowledge out there.' That is not knowledge; that is information. In the 21st century we have to train young people with the skills to turn that information into knowledge. Being gen Y, they want to turn it into their own knowledge and their own understanding. Because adaptability is going to be a great 21st-century skill, I think we need to have a different balance between content and skills.[13]

4.25 Bruce Wilson supported the development of 'deep understanding', or higher-order skills, and argued against curriculum frameworks that do not clearly and practically identify desired student outcomes; that specify very little core curriculum and only advise specified content; and that are structured around the conceptually inadequate and practically difficult key learning areas.

4.26 As a means of promoting higher-order skills, Bruce Wilson proposed two reform measures. First, dispensing with the KLAs and moving beyond outcomes, which would involve identifying and prioritising subjects for various stages of schooling (for example, English and mathematics as the only core curriculum for the first three years of schooling). Second, limiting the number of student achievement standards and including characteristics of depth of learning and mandatory content.[14]

4.27 The committee was quite attracted to the first proposition. Dr Kevin Donnelly had described debate in the United States as focussing upon the concern that much of the existing curriculum is a 'mile wide and an inch deep'. This appeared to be Mr Bruce Wilson's concurrent criticism, and one which had appeared at various intervals throughout the inquiry:

> Instead of covering so much ground, the alternative is to focus on core areas, such as literacy and numeracy in the early years, and to ensure that foundation learning occurs before broadening what students encounter.[15]

4.28 Professor Bill Louden submitted that notwithstanding its simplicity, this really was a solution:

> The older you get, the more important it is that you have skilful teaching at breadth. The younger you are, the more important it is that—if you are in

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13 Mr Vincent Feeney, Association of Principals of Catholic Secondary Schools in Australia, *Committee Hansard*, Melbourne, 25 June 2007, p. 71.

14 Bruce Wilson, *How we got the curriculum wrong*, Paper presented at Queensland Secondary Principals' Association (QSPA) Conference 2003, 4-6 June, Gold Coast, p. 5.

15 Dr Kevin Donnelly, *Submission 9*, p. 23. Also, Professor Michael O'Neill, University of Notre Dame Australia, *Committee Hansard*, Perth, 2 July 2007, p. 35; Professor Gregory Robson, Edith Cowan University, *Committee Hansard*, Perth, 2 July 2007, pp 41 & 45.

> P[rep] it is all about literacy, if you are in year 3 it is about literacy and numeracy. If you are in year 5 it is about science, if you are in year 7 it is about science and social studies and literacy. There is a build-up. There is depth and there is breadth.[16]

4.29 In Western Australia, the Department of Education and Training is commencing an implementation program:

> A couple of months ago...we made a decision, with the minister, to have a close look at the curriculum emphases in the phases of schooling. We have instructed our schools that, in the early years, they need to be spending at least 50 per cent of their instructional time on literacy and numeracy as the key foundation or the building blocks for the future. We have already made that move…We recognise that, building up through the years, science becomes a key emphasis area in the middle years and beyond, expanding to the fuller range of learning areas.[17]

4.30 The committee commends this positive move. It would assist in un-cluttering the curriculum and enable better use of schools' limited resources. It would allow students more time to learn complex concepts and skills, and to develop conceptual understandings and acquire factual knowledge. The committee will be interested in the outcome of Western Australia's experiment.

Course content and teaching issues

4.31 The committee undertook no survey of current school curricula, a technical exercise beyond the scope of the inquiry. This section takes account of views and commentary made in submissions and other sources concerning current curriculum issues.

Primary school curriculum issues

4.32 There are around 7 000 primary schools across the states and territories, with an enrolment of nearly 2 million students. The primary curriculum across the country is divided into KLAs, or broad subject categories, thought to be essential for a broad education. The overall curriculum framework is the responsibility of state and territory education departments. Various documents underpin these with the content detail differing across jurisdictions.

4.33 There are three main organisers of the curriculum at primary school level. The first is literacy and numeracy, which have pre-eminent importance in schools. Second, other subjects like social studies, art, music and physical education, and possibly a foreign language introduction course. Finally, primary schools are also expected to deliver learning in a third 'mandated' or value content area, which consists of

16 Professor Bill Louden, *Submission 73*, p. 8.

17 Ms Sharyn O'Neill, Department of Education and Training, Western Australia, *Committee Hansard*, Perth, 2 July 2007, p. 80.

education in specific areas of living skills, such as bike education, water safety, and sex education. Topics in this area of the curriculum are sometimes mandated as a consequence of pressures being exerted by community interest groups.[18]

4.34 The public generally believes that if primary schools are not equipping students with basic skills and abilities, they are failing in their fundamental responsibility. The committee was told that, generally, the primary school curriculum is satisfactory in preparing primary school students for secondary school. It was noted that children with learning difficulties in primary school often transition to secondary school without resolving these difficulties. This impedes progress and high achievement in secondary school. Secondary school has a specific additional consideration for students as they become adolescents and fall within the middle years. The committee notes the weight of evidence about the crucial importance of primary education, and the fact that a poor start in literacy and numeracy skills makes it difficult, if not impossible, for a high proportion of students to make up lost ground.

4.35 Contrary to learning expectations, primary principals point to considerable evidence over the past 20 years of a decline, rather than an enhancement, in the importance of primary schools as a foundation of life-long learning.[19]

4.36 A recently published report commissioned by DEST is a response to pressure being felt among primary principals and teachers resulting from the higher incidence of students with learning and behavioural difficulties. There is clearly a high incidence of these problems concentrated in a relatively small number of schools. In such schools there is a resources shortfall. It is also recognised that expert consultancy is limited or unavailable. The DEST study used the benchmark of whether primary schools generally met the test of the National Goals for Schooling in the Twenty-First Century.

4.37 The report notes that the resources need is spread unevenly and can only be addressed by a targeted funding strategy. It called for more transparent processes in this allocation, including at the school level. Schools finding it difficult to cope with the full range of KLAs would need to focus teaching and assessment on fewer core outcomes. The tone of the report suggests the unlikelihood of significantly increased funding. Nonetheless, in no state or system was there any evidence that, in general, primary schools had sufficient resources to meet the National Goals of Schooling.[20]

4.38 Finally, the committee encourages a more general move to institute a system whereby specialist teachers take a leadership responsibility for a particular KLA. This responsibility would include teaching content and method advice and mentoring. In any reasonable sized primary school there are teachers with a particular interest or skill in mathematics, literacy, music or social science. The committee heard that this

18 Australian Primary Principals' Association, *Submission 43*, p. 8.

19 Ibid, p. 6.

20 DEST, *The Sufficiency of Resources for Australian Primary Schools*, 28 June 2007, p. 107.

arrangement is current in some schools. It would also boost the interest of students in particular disciplines in preparation for high school, as specialist teachers can advise on ways to accelerate learning in particular subjects. The Australian Geography Teachers' Association has also claimed that having a subject leader in each discipline at primary school level would enable teachers to more effectively develop integrated units of work. This would assist in managing the cluttered curriculum.[21]

The 'cluttered curriculum'

4.39 Everyone the committee spoke to agreed that the school curriculum was cluttered with a huge range of obligatory teaching and learning prescriptives. The problem appears to be far worse in primary schools. As the committee was told:

> What has happened over the years is that we have taken on a heck of a lot of societal concerns. Someone was saying to me in the Catholic sector that there were 68 extra areas that they were now looking at regarding sex education, literacy, financial literacy, dog safety, road safety and a whole variety of programs that I think once were mainly the parents' responsibility. The pendulum has swung way too far now and schools are picking that up. Interest groups and governments have worked out that primary schools are obviously a very good avenue to reach every child in the nation if you have a key message, and they are important messages. We do not deny that dog safety and road safety are absolutely critical, but of course when they come in nothing goes out. When you look at our key learning areas and if you look at the time being spent, over half the week to go on two areas with just the KLAs and then you have got half a week for the rest. So it is absolutely impossible. Schools are saying that primary schools are now like working in a pressure cooker.[22]

4.40 The submission from Lutheran Education Australia made a similar comment on the unrealistic expectations placed on primary schools:

> [Teachers'] work is often made more difficult by a barrage of new requirements and initiatives. The expectation that teachers can incorporate each new initiative, no matter how worthwhile, into the curriculum without the additional expectations impacting on the time available for learning in other areas, and the maintenance of high standards, is not a reasonable one! The overall impact of all these initiatives is a curriculum that is fragmented and cluttered.[23]

4.41 One of the 'unrealistic expectations' is the extension of the concept of loco parentus in secondary schools as well as primary schools, whereby teachers are now required by regulation to be:

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21 Australian Geography Teachers' Association, *Submission 25*, p. 2.

22 Ms Leonie Trimper, *Committee Hansard,* Sydney, 17 May 2007, p. 18.

23 Lutheran Education Australia, *Submission 41*, p. 2.

> active, and in some cases proactive, caregivers for school-age children. These tasks are often complex and demanding. In one local school this very week these tasks included not only evacuating students during a school fire, but controlling students who were keen to take video images with their mobile telephones to forward to media outlets; administration arrangements with the exclusion of a number of students; the correct procedures for injecting students experiencing life-threatening allergic responses; and efforts to coordinate a regional response to student behaviour and engagement.[24]

4.42 The committee sees no easy solution for schools being saddled with surrogate parental responsibilities. As will be noted elsewhere in this report, however, there are tasks in a school which can be done by para-professional and support staff. This is not a well-known concept in Australia but is being extended in some European countries.

4.43 In Britain the government investigated restructuring the teaching profession and reforming the school workforce to assist teachers with their workloads. At the heart of its proposal was an increase in support staff combined with a reduction in bureaucracy.[25] A subsequent independent audit of the program found that these two measures had benefited teachers by freeing up their time and allowing them to focus to a greater extent upon improving the quality of teaching and learning. In many primary schools, teaching assistants undertake administrative chores, and some were able to assist with the teaching of the curriculum. Some problems were noted in less affluent areas where the recruitment of suitable teacher's assistants was more difficult. This could also be the case for rural or remote schools in Australia. Another initiative of note was the common practice in secondary schools of employing external staff, normally on short term contracts, to invigilate external examinations instead of the teachers. The British experience shows that there are effective and simple methods for assisting teachers with the delivery of curriculum and some of these methods could usefully be employed in Australian schools where the cluttered curriculum is said to significantly effect the teaching of the KLAs. The teaching of key learning areas must be the first imperative.

4.44 'Uncluttering' the curriculum is to re-order learning priorities to meet primary learning objectives. As the committee was told, not all KLAs are being addressed in primary school. Some are treated in a cursory manner, and some are completely disregarded. Only a few schools have an introduction to a foreign language program. If there is no specialist music teacher the school will get by with some singing. There may be no science taught in the absence of a teacher who knows anything about it. This raises an equity issue which is in some ways the corollary to the overcrowded curriculum problem. In the recent DEST commissioned paper referred to above, the equity issue which relates to the daily work of the school is put in stark relief:

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24 Dr Glenn Finger et al, *Submission 46*, p. 3.

25 Department for Education and Skills, *Time for Standards: Reforming the School Workforce*¸ October 2002.

> It is not simply a resource insufficiency problem, however. Most schools do not have enough time in the school week to provide the level of curriculum breadth and depth now expected of all primary schools. This can create a pressure cooker environment when expectations of what teachers should be doing exceed the time available. The primary school day now operates on a businesslike basis and there is little opportunity for exuberance, celebration, and fun –features missed by contemporary primary school principals and teachers. Primary principals commented that their schools were becoming more like high schools and saw this as detrimental to their mission.[26]

4.45 The committee was told of the practice in France of matters of social responsibility and community concerns being taught after school by relevant community groups.

> …my understanding is that teachers come in in the morning and part of the early afternoon is spent on literacy and numeracy, et cetera, and then another group come in and teach instrumental music and they do the physical education at that time so that the day is expanded.[27]

4.46 The problem could be addressed through an integrated curriculum with relaxed individual subject outcomes and more parent directed learning, especially in the area of student welfare. This would allow for more teaching time in literacy and numeracy. Teachers from Cardiff Primary School wrote that:

> …parents must bear some responsibility of their child's education within the family unit. Parent directed learning, with assistance in homework, set assignment work, leadership development and behavioural discipline, is seen as a valuable tool in preparing students for further education. Rather than simply decreasing time spent investing in child welfare during school hours, refocusing these responsibilities to the family unit…will create more face-to-face teaching time for areas such as literacy and numeracy to be increased.[28]

4.47 The committee believes that primary schools could take a far more imaginative approach in regard to the organisation of the teaching day. System authorities have responsibilities in regard to budgeting for employment of part-time teacher assistants. Local community members with suitable skills could volunteer in the range of tasks currently burdening teachers, including administrative tasks. A 'public service' culture which has taken hold in school systems is incompatible with putting learning first and being grounded in local community needs.

4.48 As this report was in the final draft stages, the committee noted that the Australian Primary Principals' Association had released its draft Primary School Charter, which declared areas of learning which are traditionally their responsibility

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26 DEST, *The Sufficiency of Resources for Australian Primary Schools*, 28 June 2007, p. 102.

27 Ms Leonie Trimper, *Committee Hansard,* Sydney, 17 May 2007, p. 26.

28 Cardiff Primary School, *Submission 8*, p. 8.

should remain with them and be taught in schools only after essential core subjects had been adequately dealt with. The charter declares that priority will be given to the core curriculum: English, maths, science and history, with art, sport, music and languages having a supplementary place.[29]

The curriculum for social sciences and the humanities

4.49 As stated earlier in this report, the committee did not undertake any systematic investigation of state curricula**,** nor did it consider all disciplines within curricula. It took note only of curriculum issues that were in contention, especially in cases where there was public concern evident about the value or the quality standards of what was being taught. Quality issues were raised most frequently in relation to mathematics and the teaching of literacy, but there were also questions raised about the relative value of subjects taught under the umbrella of social science.

Studies of Society and Environment

4.50 Before the curriculum changes in the 1990's, history and geography were usually taught as separate subjects throughout the secondary years. Since then, with the adoption of the KLAs, these subjects have been subsumed—in Years 7 to 10—into a subject known in most states and territories as Studies of Society and Environment (SOSE). The nomenclature varies slightly between states. In New South Wales, history has retained its status as a separate subject, existing alongside SOSE.

4.51 SOSE was intended to demonstrate the value of an interdisciplinary approach to learning the social sciences, where contemporary themes could be explored in their geographical, historical and economic dimensions. Its supporters point out that such an approach is very common at university level. The committee questions whether it is too ambitious for Years 8-9 to embark on a case study with almost no basic knowledge of the disciplines to be integrated. Without a detailed content syllabus such an educational task in Years 7-9 would be almost impossible. The response to this objection would probably be that knowledge is sought and applied to the case studies as relevant, and this quest would be a pathway to understanding through discovery learning, a student-directed exercise in other words.

4.52 The committee noted that in relation to content and teaching approval, SOSE was a model of the constructivist curriculum. As the committee was told:

> That is really the basic philosophy, that all students are entitled to all of this knowledge about their society and their environment. Having a broad spectrum subject allows us to encompass any new, emerging fields such as that of sustainability, which I mentioned as the National Action Plan for Education for Sustainability, which encourages students to think in terms of the triple bottom line, the environmental, social and economic areas. That is

29 Justine Ferrari, 'Primary schools to focus on the basics', *The Australian*, 2 August 2007, p. 3. For a criticism of the Charter, see Michael Clyne, Susy Puszka and Leonie Brown, 'Why we must fear core values', *The Age*, 3 September 2007, p. 20.

> the sort of thing that we can take on board easily. We can take on board all the aspects of the civics statement of learning that has now been mandated. We can do that easily, but single disciplines cannot do it as easily.[30]

4.53 The committee remains unconvinced that this approach to learning about the history and current state of the world, or even Australia, is likely to lead to any memorable insights, discoveries or accumulations of significant knowledge. It notes the validity of comment from Joy Schultz, a highly experienced Queensland teacher and long-time office-holder in the Social Educators Association of Australia, on the need for extensive professional development of SOSE teachers. It also notes, however, that Ms Schultz identifies the main problem as being the unfamiliarity of older teachers with discovery learning methods. The committee is more concerned with the often inadequate knowledge base among newer teachers studying for the B.Ed. As Ms Schultz notes, there is a serious shortage of teachers in the system with specialist knowledge in the social sciences.[31]

4.54 At the MCEETYA meeting in Darwin in April 2007, it was agreed that SOSE would be disaggregated in the secondary school curriculum. The committee did not receive any indication that this decision was at all unpopular. According to witnesses before the committee, teachers with specific training would always be interested in curriculum which taps into their expertise, professional interests and training. The problem with SOSE was that teachers had no real commitment to that amalgam.

4.55 SOSE teachers expressed their disappointment with the MCEETYA decision, and the committee appreciates that this decision will take a long time to filter through school systems. New syllabuses will need to be written—a time consuming process in most jurisdictions—and there were doubts expressed about whether there were sufficient numbers of specialist teachers able to take on the resurgent enrolments in history and geography.

4.56 Will the demise of SOSE be a windfall for history and geography? History teachers were mildly complementary of SOSE. As one of them told the committee:

> I think the introduction of SOSE was certainly well intentioned. In terms of intellectual development, it was well reasoned. What we should be doing in schools is making links between disparate disciplines rather than creating barriers between them. But it is another example of an initiative which in theory sounded good but which in practice, for a range of reasons…did not materialise terribly well at the chalkface.[32]

4.57 One of these reasons has to do with timetabling and the shortage of qualified teachers. As another history teacher explained:

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30 Ms Joy Schultz, *Committee Hansard*, Brisbane, 5 June 2007, p. 103.

31 Ms Joy Schultz, *Submission 59*, p. 3.

32 Mr Rodney Knight, Victorian History Teachers' Association, *Committee Hansard*, Melbourne, 26 June 2007, p. 5.

> One of the problems has been that too often SOSE has been a residual subject. By that, I mean they do the timetable and then they have a PE teacher with two spare periods. What can that period teacher do? They can do two periods of SOSE, because any fool can teach SOSE—not that I am calling period teachers fools and I am glad I am protected by parliamentary privilege here. In my own experience as a head of department, SOSE sometimes became a dumping ground for other things that people did not want to do or which were deemed necessary—for example, driver education.[33]

4.58 The committee believes that despite the difficulties of disaggregating the SOSE curriculum, the profile of history needs to be raised. Also, that resources, including professional development, and provision for history and geography units, need to be embedded in the B.Ed courses in universities.

History

4.59 The compulsory study of history in Years 7-10 has been strongly promoted by a succession of Commonwealth education ministers. The committee notes that this has aroused controversy involving assumptions about what themes and content a 'Commonwealth-sanctioned' Australian history course might contain. It notes that there is no discernable opposition to compulsory history. In this regard the New South Wales curriculum has provided the exemplary model for curriculum policy, at a national level, as it has in the teaching of other disciplines. Victoria has also kept faith with history, where it is regarded as an 'essential learning'. In other jurisdictions the tradition of teaching history in Years 7-10 has long since died out, and its incorporation into SOSE has been almost total.

4.60 The committee was interested in the responses of history teachers to the proposed 200 hours of history teaching to be mandated in Years 8-10. It was pointed out by members of the Australian History Teachers' Association that finding 200 hours even over three years was going to be difficult and could only be achieved by dispensing with other, possibly worthier, parts of the curriculum. There was also some doubt that the 200 hours would deliver the desired outcomes, particularly with the inadequate supply of qualified teachers. The Association estimated that there is already a shortfall of 10 000 qualified history teachers.

4.61 There might be some unforeseen consequences. Based on New South Wales' experience, a decline might be expected in the number of Australian history senior students. Students undertaking ancient and medieval history, hugely popular subjects

33 Mr Nicholas Ewbank, Australian History Teachers' Association, *Committee Hansard,* Melbourne, 26 June 2007, p. 5.

in New South Wales, would be aggrieved if these courses were removed from the Years 8-10 curriculum in order to make way for Australian history.[34]

4.62 The committee strongly holds the view that Australian history should be taught as a stand alone core, and compulsory subject in years 9 and 10 to ensure that every student has the opportunity to learn their national history.

Geography

4.63 The committee was delighted to learn that geography is alive and well, and on the verge of resurgence despite an apparent decline in popularity. This decline is largely attributed to the expansion of the curriculum. The decline in enrolments has also had positive consequences. The nature of the candidature has changed in that much more able students are now choosing to study geography. At university level also, those studying geography are spread over a much broader range of units and specialities.

4.64 The Australian Geography Teachers' Association is alive to the desirability of having a prescriptive national framework that actually drives the teaching of geography in schools. It believes that teachers should be challenged by new knowledge and new pedagogies.[35] Geography, like history, has suffered from being subsumed within SOSE to the point where geographic concepts and knowledge are not being imparted, or explored by students. As part of SOSE there is no systematic support for the cumulative understanding of the discipline's concepts and the development of its skills. In other words, there is no encouragement for learning growth, or evidence of it. The committee understands this to be the basic weakness of outcomes-based education. The committee hopes, as do geography teachers, that the new umbrella category of disciplines, Humanities and Social Sciences, does not ultimately form a de facto SOSE.[36]

4.65 Geography teachers advised the committee that it is theoretically possible for primary school students to acquire basic geographical knowledge, understandings and skills within the KLA of SOSE, Science (which includes some aspects of physical geography) and mathematics (which includes some elements of mapping skills). This depends upon quality teaching using structured and sequenced units which create a foundation for later studies. At the secondary school level, however, the only way to provide continuity and progression is to teach the discipline of geography as a stand-

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34 Mr Nicholas Ewbank, Mr Rodney Knight and Mr Michael Spurr, Australian History Teachers' Association and Victorian History Teachers' Association, *Committee Hansard,* Melbourne, 26 June 2007, pp 4-5.

35 Dr Grant Kleeman, Australian Geography Teachers' Association, *Committee Hansard,* Sydney, 17 May 2007, p. 56.

36 Mr Nicholas Ewbank, Mr Rodney Knight and Mr Michael Spurr, Australian History Teachers' Association and Victorian History Teachers' Association, *Committee Hansard,* Melbourne, 26 June 2007, p. 4.

alone subject. Concepts need time to develop and must be systematically revisited to deepen understanding. Similarly, skills need to be revisited and practised in a variety of contexts. The committee noted that this evidence underlined the importance of learning growth.[37]

4.66 The committee heard an affirmation of learning objectives which would be recognised by SOSE teachers:

> One of the criticisms of SOSE has been that people pursue particular perspectives within that framework. What the traditional disciplines do is they encourage students to look at geographical phenomena and issues from a variety of perspectives with the expectation that the students will then formulate their own attitudes and opinions related to those issues rather than being inculcated with a particular perspective.[38]

4.67 The committee noted the enthusiasm of geography teachers to outdo SOSE in its cross-disciplinary capability. The Australian Geography Teachers' Association saw geography as developing knowledge, understandings and skills essential to managing some of the most important issues facing the country, such as water shortages, climate change urban growth, and demography. Geography links the natural and social sciences, and its holistic approach to the study of people and their environments contrasts with a more selective study of elements than occurs in other subjects.[39]

The mathematics curriculum

4.68 The committee heard more about the mathematics curriculum and mathematics teaching than about any other subject. It would not be an unfair generalisation to observe, on the basis of evidence the committee received, that the degree of rigour in mathematics teaching in a state or territory is an indication of overall educational quality.

4.69 There are serious concerns about mathematics curriculum and syllabus standards in some states. It appears on the basis of the evidence available that standards are declining in this subject, compared to other subjects, including English. The problems are at both the bottom of the school and the top: the failure to instil the required level of 'numeracy' in the primary school years; and the failure to encourage the required degree of rigour in a larger proportion of students in the senior secondary years.

4.70 The Year 8 test data shows that for many students, failure begins in primary schools. There are claimed to be three contributing factors: the first is that the curriculum is deficient; the second is that many primary teachers lack the knowledge

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37 Australian Geography Teachers' Association, *Submission 25*, p. 2.

38 Dr Grant Kleeman, Australian Geography Teachers' Association, *Committee Hansard*, Sydney, 17 May 2007, p. 50.

39 Ibid.

of mathematics to teach it well; and the third is that, according to anecdotal evidence, too little time is spent in teaching mathematics.[40]

Views on standards

4.71 There appear to be two distinct views on weakness in the mathematics curriculum (even though it varies widely from state to state). One view, broadly speaking, is that the curriculum is too conservative and places too much emphasis on mundane tasks which weaken the enthusiasm of students. For these critics, mathematics must be relevant and useful for everyday circumstances of life. The emphasis should be on mathematics as 'numeracy'. The other view, broadly speaking is that mathematics is full of concepts to be mastered at a time when the minds of students are most receptive, and that there should be developed an 'automaticity' of understanding fundamentals of 'number-crunching' to allow for higher order understandings of more advanced concepts. Without that there is little prospect of growth in mathematical understanding.

4.72 The Australian Association of Mathematics Teachers argued that there needs to be a forward-looking approach to defining new 'basics' appropriate for the 21st century, not just those of the past that are the subject of current, ill-informed calls for a 'back to the basics' movement. One point of weakness described was that curricula are interpreted as lists of content to be taught as opposed to approaches that embed *working mathematically* meta-cognitive processes through research-based pedagogies.[41]

4.73 The committee was interested to hear a comment reported by the President of the Association of Principals of Catholic Secondary Schools in Australia, from one academic educationist 'that in his view 80 per cent of the present content of (the Victorian) year 10 maths syllabus could be done away with. I did not ask him, but I assume he meant that only 20 per cent has a degree of academic value'.[42]

4.74 The committee asked the Australian Mathematical Sciences Institute for its response. Professor Garth Gaudry replied:

> I think it is an exaggerated position, no matter which state's paper curriculum you look at. I do not think that is a sustainable position. I would say there is too much emphasis on rather trivial aspects, and I refer again to what is called 'chance and data and statistics'. I am not for one moment seeking to diminish the importance of those areas, but there is a very strong push from educationists to spend a lot of time playing around badly with

40 Ibid.

41 Zevenbergen, R. and Lerman, S. (2005) *Numeracy, Equity ICT: Final Report.* Brisbane: Centre for Learning Research, Griffith University, recently found that teachers make little use of ICTs to support learning. Also, Assoc. Professor Wayne Read, James Cook University, *Committee Hansard,* Brisbane, 6 June 2007, p. 13.

42 Mr Vincent Feeney, Association of Principals of Catholic Secondary Schools in Australia, *Committee Hansard,* Melbourne, 25 June 2007, p. 77.

> areas that are in principle quite difficult, even from kindergarten. It pops up in every syllabus and there is really not much to say. Suppose you start at year 6 and go through for a couple of years of secondary school. You are starting to repeat yourself because to go much further you require serious mathematical tools. I would make comments like that but certainly not the extreme comments.[43]

4.75 The Association of Mathematics Teachers submission emphasised the importance of applying mathematical knowledge and skill to general life experiences including the workplace. It argued that achievement standards at the Year 11 and 12 levels should include more than content, but also employability skills and the application of knowledge to 'real-life' contexts.[44] The priorities of the Association are summed up in its objection to the numeracy benchmark testing.

> From where we are sitting, for example, the national tests are not testing numeracy, they are actually testing a basic set of mathematics understandings, which perpetuates a myth that kids are numerate or not when actually they are just being tested on whether they have the potential to be numerate, based on their knowledge of certain mathematics.[45]

4.76 Also illustrative of the priorities of the Association was the view expressed to the committee that a balanced view of teaching mathematics for excellence is about students making decisions about how and when to use those skills and in different contexts. The committee finds it difficult to relate this to the need for algebra or simultaneous quadratic equations.

4.77 The committee had some difficulty in following the logic of the position presented to it by the Association. It accepts the concern of the Association that not all children are learning the 'basics', and that there are tensions between what might be required by universities in terms of mathematical preparation compared with what is required by employers. This dilemma is familiar to all teachers and systems. Yet the Association appears to waver between its support for teaching mathematical life-skills, what may be called 'numeracy', and catering for the needs of high achieving students who expect, as their parents do, that their learning progress will continue through school to the highest matriculation levels they can achieve.

4.78 What appears to be missing is an explicit affirmation from the Association of the value of teaching for intellectual growth. The committee agrees that the 'social context' of numeracy is all to the good at one level. But as students progress through the upper primary and early secondary years the enjoyment of learning maths will only become apparent when students can appreciate the measure of their own intellectual development.

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43 Professor Garth Gaudry, *Committee Hansard*, Melbourne, 26 June 2007, p. 29.

44 Ibid.

45 Dr Thelma Perso, Australian Association of Mathematics Teachers, *Committee Hansard*, Brisbane, 5 June 2007, p. 55.

Conclusion

4.79 The Commonwealth's requirement that all states and territories must have some standards based syllabuses ready for the start of the school year in 2009 has resulted in a flurry of activity in several states, particularly those which persisted with outcomes-based documents. The committee believes that this has been among the most worthwhile Commonwealth initiatives in school education.