



B O A R D O F S T U D I E S
NEW SOUTH WALES

SCHOOL CERTIFICATE REVIEW

DISCUSSION PAPER

June 2011

Contents

- EXECUTIVE SUMMARY 1
- PART 1 – INTRODUCTION 3
- PART 2 – BACKGROUND 5
 - 2.1 The School Certificate..... 5
 - 2.2 Terms of Reference 5
 - 2.3 Review Process..... 6
 - 2.4 Legislative Basis of the School Certificate..... 6
 - 2.5 Brief History of the School Certificate 7
 - 2.6 School Certificate Components 9
- PART 3 – CONTEXT OF THE REVIEW 11
 - 3.1 Increase in the school leaving age 11
 - 3.2 NAPLAN (National Assessment Program – Literacy and Numeracy)..... 11
 - 3.3 The Australian curriculum 11
 - 3.4 Developments in examination technology 12
 - 3.5 Developments in on-demand testing 12
 - 3.6 School Retention Rates 13
 - 3.7 The Bradley Review of Higher Education 15
 - 3.8 School Reporting in other States..... 15
- PART 4 – DISCUSSION OF KEY ISSUES 17
 - 4.1 Purposes of the School Certificate 17
 - 4.2 The School Certificate Tests 21
 - 4.3 School-based assessment and grading 24
 - 4.4 The School Certificate credential..... 24
- PART 5 – FUTURE DIRECTIONS 27
 - 5.1 A Cumulative Comprehensive Credential..... 27
 - 5.2 External Tests 27
 - 5.3 School-based Assessment 28
 - 5.4 Literacy and Numeracy Tests 28
 - 5.5 Reporting a Broader Range of Achievements..... 29
- APPENDIX – Organisations consulted during Phase 1 30
- REFERENCES 31

Executive Summary

This Discussion Paper is the outcome of the first phase of the School Certificate review, which was conducted by the Board of Studies during Terms 3 and 4, 2010. It has been prepared to inform the next stage of the consultation process, and includes a set of broad principles to focus public discussion.

The School Certificate is a credential awarded by the Board of Studies to eligible students after the first four years of their secondary education. First issued in 1965, the School Certificate has been a valued feature of the New South Wales school system for several generations, and has been modified from time to time to meet changing needs and community expectations.

In June 2009, the New South Wales Government legislated to raise the minimum school leaving age from 15 to 17. This change, together with a number of other factors, made it apparent that the School Certificate would need to meet new and emerging purposes. In mid-2010 the then Minister for Education asked the Board to commence this review.

The first phase of the review has involved meetings with representatives of more than twenty key education stakeholder groups. These meetings canvassed issues relating to the current form and operation of the School Certificate and suggestions for change. From these discussions a general consensus has emerged regarding broad directions for the future. At its May 2011 meeting, the Board of Studies approved these directions as the basis for development of further detail and consultation.

The introduction to this Discussion Paper sets the review in a national and international context. For the benefit of a wide audience, Part 2 of the paper provides background information regarding the School Certificate, its history and the current review. Part 3 then gives a brief overview of factors relevant to the review, such as: the increased school leaving age; NAPLAN testing; the Australian curriculum; school retention rates; and developments in school reporting in other jurisdictions.

Part 4 of the Paper is a synthesis of the views expressed by key education interest group representatives. It discusses the diverse and changing purposes of the School Certificate for students, employers, parents, schools and other stakeholders. This is followed by an analysis of issues relating to the current School Certificate testing arrangements, focussing in particular on the nature of the existing tests and their timing. Suggested changes to strengthen school-based assessment and broaden the scope of reporting on the credential are also canvassed here.

Part 5 sets out some broad future directions for modernising the School Certificate which have emerged from the first phase of consultation, in terms of five key principles:

1. That a credential be available to students from the end of Year 10 as a cumulative comprehensive record of achievement, periodically updated to record achievement of students leaving school prior to the end of Year 12.
2. Replace the current external tests with broader assessments.
3. A stronger role for school-based assessment as the basis for reporting student achievement on the new credential, supported by external moderation to ensure the reliability of the credential.
4. Online tests in core literacy and numeracy skills be made available.
5. The credential be expanded to allow schools to voluntarily but authoritatively recognise a wider range of student achievements with standard frameworks, including with extra subject-based activities, such as sport, music, languages and community work.

The Board of Studies is seeking feedback on these proposals, as it works to enhance the School Certificate for a new generation of young people in New South Wales.

PART 1 – Introduction

Both here and abroad, secondary school systems continue to undergo an historical transformation. Primarily established to serve a minority as an educational transition to higher education, upper secondary schooling is now embracing the great majority of the population, with lifelong learning becoming a condition for successful employment and life.

The drivers of this transformation are familiar and well documented: the rise of youth unemployment in the 70s and 80s; technical change and its impact on structural occupation and employment; globalisation and the emergence of a knowledge-based society. While the policy response has varied, developed economies have looked to education to maintain their status and the employment capacities of their citizens.

Practically all OECD countries now aim to get more or less the whole age cohort through secondary education or its equivalent. In Australia this is reflected in both ambitious Commonwealth targets and more significantly the raising of the school leaving age in all states. In 2009 the Council of Australian Governments set targets of achieving 90 per cent Year 12 or equivalent attainment rates for all young people by 2015. From 2010 NSW legislation requires students to continue their schooling until aged 17, unless they meet the alternative criteria of undertaking approved education or training or participation in paid work for at least 25 hours per week.

Among educators there is a general support for these aims and the underlying commitment to guarantee real opportunities for all young people to continue learning of their choice after completing compulsory education. There is also acknowledgement that enrolling the whole cohort in senior secondary school and enhancing the learning achievements of young people who have a great variety of abilities and interests is an immense challenge. There is substantial evidence that better access and higher participation rates in secondary education alone will not solve the problems, and indeed may create new ones.

Education authorities and individual school communities are responding with a range of curriculum, assessment and administrative innovations that seek to broaden access to their senior qualifications and create credible pathways for this more diverse student group. This has led many to rethink the traditional organisational structures of schooling. In general, the trend is to place greater emphasis on continuity within the whole education system rather than on different levels and categories. A rigidly divided system is seen more as an impediment than an incentive for age cohorts to complete their schooling.

Most critically for this review, there is increasing pressure on the distinction between what the OECD describes as an initial phase – usually associated with exposure to a common curriculum – and a transition phase encompassing education related to further study, and also that which leads to work. In Australia, the Queensland Government's Senior Phase education reforms have arguably advanced furthest along these lines having formally included Year 10 as the foundational year of a three year Senior Learning Phase.

Despite the trend toward blurring of the boundaries between different levels of schooling, lower secondary schooling in most jurisdictions, including NSW, still prioritises a fairly broad set of subjects and competencies. The universal provision of schooling with these purposes is often understood in terms of a learning entitlement: that all young people shall have access to the educational minimum considered necessarily to participate as fully as one's potential allows. Rigorous quality-assurance processes are needed to guarantee public confidence in the delivery of this entitlement to all students.

The focus on Year 10 acknowledges that what has happened up to that point often determines, to a large extent, how the next phase of education will look. While this critical transition currently works well for many students, for many of those who leave, school in this phase may be characterised by failure and disillusionment. Despite significant advances with vocational education provision and other learning options, progression paths may remain confused, and the decision to remain at school can often simply be a decision not to leave. A challenge for educators is to ensure that the impact of changes to the school leaving age is not simply an increase in the number of students who experience senior studies in this way.

The broad secondary education undertaken by New South Wales school students should lay the foundation for young people to engage in life-long learning and make well-founded decisions about their education, training and employment.

Although the majority of OECD countries follow a fairly selective admissions policy for entry to higher education, this is gradually changing. The Federal Government's adoption of the Bradley Review of Australian Higher Education can be seen in the context of this trend. The Report identified the need to stimulate a greater percentage of the age cohort to enter higher education and for universities to expand admissions criteria for those in vocational education and training.

The Federal Government has also set a national target that, by 2020, 20 per cent of higher education enrolments at undergraduate level will be from low socio-economic status backgrounds. This means that universities will increasingly be seeking richer information on student achievements in order to broaden their selection criteria. While the early expectations will focus on individual universities' recruitment initiatives, the broad task of engaging all young people in the system will need to take place before the final years of high school.

The issues facing post-compulsory schooling are critical and diverse. Increasing the cohort of students completing Year 12 or its equivalent by around 20 per cent during the next decade is an enormous task, demanding much more than schools enhancing already assiduous efforts to provide every student with meaningful, relevant, adapted and interesting education. It will require a multi-faceted response addressing the adequacy of alternative pathways provision, pedagogy, school organisation and structure, and resourcing, and the nature of curriculum and assessment at all levels of schooling.

These challenges are clearly much larger than whether or not the School Certificate should be abolished, revised, or retained. Nonetheless, a convergence of stakeholder opinion on key questions and an appraisal of the broader policy context have provided some clear stimulus for redefining its purpose and suggesting some immediate practical changes.

PART 2 – Background

2.1 The School Certificate

The NSW School Certificate is a credential currently awarded to eligible students after four years of secondary schooling (Years 7–10). Eligible students must attend a school registered and accredited by the Board of Studies, satisfactorily complete the mandatory curriculum requirements of the Board, make a serious attempt at the School Certificate tests and attend school until the final day of Year 10. The School Certificate assessment program combines school-based assessment of the NSW curriculum during Year 10 with mandatory statewide School Certificate tests of foundation knowledge and skills at the end of Year 10.

The *Education Act 1990* provides the legislative base for the School Certificate (see section 2.4 below). However, in contrast to the definition supplied in the Act, in common parlance the term ‘School Certificate’ is often used more broadly and loosely. For example, ‘doing their School Certificate’ is a way of indicating where a student is in their schooling, rather than ‘Stage 5’ or ‘Year 10’. Sometimes the term is used to refer to the award documents themselves and often the term is used to refer just to the tests sat as part of the requirements for the School Certificate. The distinctions between these meanings and the legislative meaning of the School Certificate are important to recognise in analysing public commentary.

2.2 Terms of Reference

In mid-2010, the then Minister for Education and Training asked the Board of Studies to commence a review the School Certificate.

The Terms of Reference for the Review stated that:

The NSW Government is committed to a modern School Certificate credential that meaningfully recognises completion of the mandatory NSW school curriculum and years of schooling for all school leavers. The revised School Certificate arrangements will also ensure that all students who leave school before completing Year 12 and the Higher School Certificate receive a formal credential that is relevant, modern and that more richly captures what they have achieved at school in relation to the mandatory NSW curriculum as well as other worthwhile studies, experiences and contributions within and outside of school.

The NSW government is asking the Board of Studies to ensure that the School Certificate provides the most meaningful information to students, their families, future employers and trainers.

The Terms of Reference require the Board to consider the purposes of the School Certificate and to develop possible amendments to the School Certificate structure and processes. Specifically, the Board will examine options for:

- the nature, form and timing of the assessments contributing to the School Certificate
- changes to the scope, content, structure, delivery and timing of School Certificate testing in the context of NAPLAN testing in Year 9 and the raising of the school leaving age
- alleviating the organisational and administrative pressures that are placed on schools in the implementation of the School Certificate, including with regard to timing and the changing relationship to further study
- additional student activities that could be recognised as part of the credential, for example school or community service, including with regard to languages, community service and vocational education
- form, content and timing of the issuance of the School Certificate credential

2.3 Review Process

The Board decided to conduct the review in two phases: the first phase during Terms 3 and 4 of 2010 and culminating in this paper, and the second phase during 2011.

Phase 1 has involved consultation meetings with over twenty key stakeholder groups (as listed in Appendix 1), including school systems/sectors, principals' organisations, teacher unions, parent bodies, employers and university personnel. The purpose of this phase was to elaborate the Terms of Reference, clarify the major issues and develop proposals for wider consultation.

Phase 2 of the review process involves the release of this Discussion Paper for public consultation. It will provide the opportunity to involve the wider education community: schools, teachers, parents, students, employers and other interested parties, in commenting on the proposed future directions.

The review will conclude with a series of recommendations for Board consideration and subsequent advice to the Minister.

2.4 Legislative Basis of the School Certificate

The School Certificate has its legal basis in the *Education Act 1990*. Section 94 of that Act details the requirements for the granting of the School Certificate:

94 School Certificate

- (1) *School Certificates are to be granted by the Board to students:*
 - (a) *who:*
 - (i) *have attended a government school, or*
 - (ii) *have attended a registered non-government school to which a current certificate of accreditation for presentation of candidates for the School Certificate applies, or*
 - (iii) *have attended a school outside New South Wales recognised by the Board, and*
 - (b) *who have participated, to the Board's satisfaction, in courses of study which have been determined under this Act as appropriate to be undertaken by candidates for the School Certificate, and*
 - (c) *who have been accepted by the Board as having satisfactorily completed those courses of study, and*
 - (d) *who have, to the Board's satisfaction, undertaken the requisite examinations or other forms of assessment, and*
 - (e) *who have complied with any requirements prescribed by the regulations or any requirements imposed by the Minister or the Board, and*
 - (f) *who have completed Year 10.*
- (2) *The requisite examination or other assessment may be conducted on a school-basis, but must include tests conducted on a State-wide basis in the following areas:*
 - (a) *English-literacy,*
 - (b) *Mathematics,*
 - (c) *Science,*
 - (d) *Australian History, Australian Geography and Civics and Citizenship,*
 - (e) *Computing Skills.*

[(3)–(4) are transition provisions only, and not reproduced here]

- (5) *The Board may refuse to grant a School Certificate to a student whose attendance or application at school has been of such an unsatisfactory character that the grant of the certificate would not, in the opinion of the Board, be justified.*

Section 11 of the Act sets out the curriculum requirements for School Certificate candidates as follows:

11 Curriculum for School Certificate candidates

- (1) *The curriculum during Year 7 to Year 10 for students who are candidates for the School Certificate must meet the following requirements:*
- (a) *courses of study in each of the 8 key learning areas for secondary education are to be provided for each student,*
 - (b) *courses of study in the key learning areas of English, Mathematics, Science and Human Society and its Environment are to be provided during each Year, but the courses of study in the other key learning areas need not be provided during each Year,*
 - (c) *courses of study in a key learning area are to be taught in accordance with a syllabus developed or endorsed by the Board and approved by the Minister.*
- (3) *This section does not limit any requirement imposed under section 94 (School Certificate).*

It is noted that some of the proposals in Part 5 of this paper will involve amendments to this legislation.

2.5 Brief History of the School Certificate

The first state-issued secondary school credentials in New South Wales were introduced by legislation in 1912. For the following half century, the junior secondary school credential was the Intermediate Certificate, based on a three-year course of study, with a further two years culminating in the Leaving Certificate.

In 1958, the Wyndham Committee (*Committee Appointed to Review Secondary Education in New South Wales*) recommended the replacement of the Intermediate Certificate with a School Certificate, and the extension of the junior secondary curriculum from three to four years. The School Certificate was introduced for the cohort of 1962, and first awarded in 1965. Public examinations were reintroduced for the School Certificate, in order to establish the status of the new credential in the minds of the public and to safeguard standards. (Similar examinations had been made optional for most candidates at the Intermediate Certificate from 1949.)

During the 1970s, modifications were made to the School Certificate on an almost annual basis, reflecting a trend towards devolution of curriculum control to schools, and a reduced reliance on external examinations. These changes, combined with rapidly rising retention rates, led to ongoing debate about secondary education, and a series of reports and enquiries, including a Select Committee of the Legislative Assembly on the School Certificate (McGowan Report 1981) and *Future Directions of Secondary Education in NSW* (the Swan – McKinnon Report 1984).

The Education and Public Instruction Act (1987) implemented many of the recommendations of the Swan-McKinnon Report, including the abolition of the School Certificate in favour of an ongoing Certificate of Secondary Education, which was to be a cumulative record of achievement issued to students whenever they chose to leave school. Planning for the first year of the new Certificate in 1988 was well underway, but a change of state Government intervened. The School Certificate was re-instated and strengthened, and the existing English and Mathematics Reference Tests were supplemented by an additional test in Science.

The new Government also commissioned a wide-ranging *Committee of Review of NSW Schools* (Carrick Committee) which supported retention of the School Certificate. Concurrently the Government undertook a

major curriculum review, leading to the White Paper, *Excellence and Equity*. The outcomes of these two reviews formed the basis for the *Education Reform Act 1990*, which further consolidated the place of the School Certificate. For 1991, students' achievement in all courses was reported as a grade, A to E, in order to make the School Certificate a more meaningful and useful credential.

In 1993 the Board issued a discussion paper on the future role of the School Certificate, in the context of national debate around the assessment and reporting of key competencies or core skills. The Board received over 800 responses, and there was a high level of support for retaining key aspects of the School Certificate, including external moderation. Over eighty per cent of respondents also agreed that an exit credential should be provided to students at the time of leaving school, across Years 10 to 12.

During 1996-97, in the context of his review of the Higher School Certificate, Professor Barry McGaw identified dissatisfaction with the School Certificate as it was operating at that time. Submissions indicated that there was little respect for the Certificate in the community and it was of limited value to the minority of students leaving school at the end of Year 10. The Reference Tests were seen as being "low-stakes" from the students' point of view, because results were used to establish the school's distribution of grades in English, Mathematics and Science, rather than students being given their own results. McGaw also reported a strong discontinuity between Year 10 and Year 11, and noted that there was no certificate available to students leaving between the School Certificate and the HSC.

To address these concerns, McGaw recommended the abolition of the School Certificate credential, to be replaced with an exit credential available from the end of Year 10 onwards. This "Statement of Achievement" would include the student's results in state-wide tests in at least literacy and numeracy (conducted towards the end of Year 10, with the possibility of repeating the tests in Year 11), and school-based assessments in all courses completed. He also recommended retention of the 4+2 year curriculum structure, but with Preliminary courses commencing at any time from the start of Term 4 in Year 10. This was intended to give greater purpose to the end of Year 10 and ease the transition to senior studies. (McGaw, *Shaping Their Future*, 1997, pp76-80)

The recommendations in *Shaping Their Future* were not all adopted. The Government decided to retain and strengthen the School Certificate. It decided that Year 10 studies should run their full course with the Preliminary HSC studies not to commence until the beginning of Term 1 in Year 11. The curriculum was strengthened with the introduction of mandatory History and Geography for Stage 4 and mandatory Australian History and Geography for Stage 5, based on new syllabuses implemented from 1999.

The previous Reference Tests (held in July) were replaced by curriculum-based tests of foundation knowledge and skills in Term 4 of Year 10. English-literacy and Mathematics tests were introduced in 1998, Science in 1999, Australian History, Geography, Civics and Citizenship were added from 2002, and a test in Computing Skills introduced in 2006. The Board also revised all 42 Years 7–10 syllabuses, and made significant modifications to assessment and reporting.

The 2006 School Certificate cohort of students was the first to complete their Stage 5 studies using the revised Years 7–10 syllabuses and the full suite of foundation tests. To coincide with this, the Board chose 2006 as the year to introduce revised School Certificate credentials. The Board also approved adjustments to the credentials that enabled courses based on Life Skills outcomes and content to be credentialled on the School Certificate Record of Achievement in a more inclusive way.

Following the Commonwealth Government's decision in 2004 to require common national tests in literacy and numeracy in Years 3, 5, 7 and 9, the then NSW Minister for Education and Training commissioned Professor George Cooney to review the state's school assessment program. While the future of the School Certificate credential as such was not part of Professor Cooney's terms of reference, some of the groups he consulted questioned the need for the Year 10 tests once the Year 9 national tests were introduced.

In light of these comments, Professor Cooney recommended “that the role of the School Certificate as an exit credential be reviewed in the first half of 2007, with consideration given to a credential being presented at the time at which a student leaves school and that contains a cumulative record of achievement”, and “that the review include consideration of the role of the current Year 10 examinations” (Cooney, 2006, p131). The Government decided, however, not to proceed with such a review at that time.

2.6 School Certificate Components

2.6.1 The School Certificate credential

The School Certificate credential consists of two parts: a Record of Achievement which details the student’s courses of study and their results; and a testamur, which is the Certificate awarded when all requirements have been met.

The Record of Achievement lists all Stage 5 (generally Years 9 and 10) courses and School Certificate tests satisfactorily completed. It includes, where appropriate:

- the Stage 5 courses that a student has completed and the grade awarded by the student’s school for each course.
- the results achieved by the student in the School Certificate tests, in terms of a mark out of 100 and, except in the case of Computing Skills, the Band achieved.
- the mandatory requirements in the areas of Languages, Technology, Music, Visual Arts and Personal Development, Health and Physical Education, which are reported as “Completed” or “Not Completed”.

Where students have undertaken courses based on Life Skills outcomes and content the student is also issued with a Profile of Student Achievement that shows all Life Skills outcomes achieved in each course.

Where students have undertaken a vocational course as part of their School Certificate program of study, their Record of Achievement lists the course and refers to the separate vocational documentation, which provides further detail.

School Certificate credentials are sent to schools for distribution to students. In 2010, 84,698 students were awarded a School Certificate, and 2,264 students studying courses based on Life Skills outcomes and content received a Profile of Student Achievement.

2.6.2 School Certificate grades

School Certificate grades – A, B, C, D or E – are awarded to students by schools, based on each student’s performance in school-based assessment tasks. Teachers award School Certificate grades in accordance with Course Performance Descriptors, which are specific to the Stage 5 outcomes and content of each syllabus. In Mathematics, Grades A to D are subdivided so that students receive one of nine grades: A10, A9, B8, B7, C6, C5, D4, D3, and E2, reflecting the breadth of student achievement across the Mathematics curriculum.

The Board’s Assessment Resource Centre website provides samples of student work to illustrate the standards at each of the grade levels, as described by the Course Performance Descriptors. These work samples assist teachers to report student achievement consistently across New South Wales. Currently there are some 600 aligned Stage 5 work samples in 24 of the most popular courses.

To further support the consistent implementation of the standards across the state, each year the Office of Board of Studies monitors the awarding of grades to Year 10 students in all Stage 5 courses. School results in the previous year’s School Certificate tests are used in the process of identifying school course groups whose pattern of grades appear anomalous. The schools concerned are requested to review the grades in the identified courses. Principals then either make changes to the grade allocation via Schools Online, or confirm the existing grades.

2.6.3 School Certificate tests

There are five School Certificate tests: English-literacy; Mathematics; Science; Australian History, Geography, Civics and Citizenship; and Computing Skills. With the exception of the Computing Skills Test, the School Certificate tests are not a comprehensive assessment of the outcomes of a particular course of study. They test students' achievements of foundation skills within the context of the Board's syllabuses, by a sampling of course outcomes and content. The specific way in which this occurs in each tested subject is explained in the Test Scope Statements and Test Specifications, published on the Board's website.

The preparation of the School Certificate tests begins around the middle of the previous calendar year with the selection of Chief Examiners, followed by the selection of test committee members in September. In November, six test committees commence the development of test papers and marking guidelines. For the Computing Skills Test, writers produce items during July and August which are then refined by the test committee.

Test committees usually comprise six practising teachers from metropolitan and non-metropolitan, government and non-government schools. For the 2010 tests, 39 people participated as members of test committees or as assessors, and over 60 committee meetings were held to prepare, review and finalise the test papers and marking guidelines.

The School Certificate tests are generally conducted during the second week of November. The English-literacy, Mathematics, Science and Australian History, Geography, Civics and Citizenship tests are held on the first two days, and the online Computing Skills test is conducted over the remainder of the week. In 2010, there were 1,058 School Certificate markers. All of the tests in English-literacy, and parts of each of the other tests, were marked onscreen. The Computing Skills Test is machine-scored.

As with the Higher School Certificate examinations, performance in the School Certificate tests is reported against standards. For each of the syllabus-based tests, the standards are described in Band Descriptors and in the standards packages. Senior markers undertake the standards-setting operation, overseen by the School Certificate Consultative Committee, which also approves the final cut-off marks. For the Computing Skills test, standards were developed after the first Computing Skills test in 2006 and statistical methods are used to align the test marks to the standards.

For each test, students receive a mark out of 100, aligned to a performance band (from 6 being the highest to 1 being the lowest). For the Australian History, Geography, Civics and Citizenship test, there are two marks (out of 100) reported, one each for the Geography and the History components of the test. In the Computing Skills test, student performance is reported as a mark out of 100, in one of three categories: Highly Competent (80–100), Competent (50–79), and Competence Not Demonstrated (0–49).

2.6.4 Feedback to schools on School Certificate performance

Schools receive comprehensive information on their students' performance in the School Certificate, which can be analysed in order to enhance teaching and learning for future cohorts. Principals and other authorised school staff can download various reports and statistical information related to each student's performance in the School Certificate via *Schools Online*. These include: the Principal's Results list; School-State grading comparison; School Group Statistics; School Certificate test components reports; and the Results Analysis Package.

PART 3 – Context of the Review

The impetus for this review arose from changes occurring in the wider environment within which the School Certificate operates. This Part of the paper provides a brief overview of some of these contextual factors.

3.1 Increase in the school leaving age

In June 2009, as part of the State Plan's priorities to improve educational outcomes, and in line with a Council of Australian Governments agreement, the *Education Act* was amended to raise the school leaving age from 15 to 17.

Under the amended Act, all students in New South Wales must now complete Year 10. This means that the great majority of students will complete requirements leading to the award of the School Certificate.

Students must then continue their schooling until aged 17, unless they meet the alternative criteria: undertaking approved full-time education or training, or paid work for at least 25 hours per week or a combination of these.

3.2 NAPLAN (National Assessment Program – Literacy and Numeracy)

The National Assessment Program – Literacy and Numeracy (NAPLAN) commenced in Australian schools in 2008, and is managed by the Australian Curriculum Assessment and Reporting Authority (ACARA). The program involves the testing of all students in Years 3, 5, 7 and 9 in the areas of reading, writing, language conventions (spelling, punctuation and grammar) and numeracy. These tests are conducted across three consecutive days in May each year with the results released during Term 3, and subsequently published on the My School website.

This means that, since 2009, students undertaking the School Certificate tests in November of Year 10 have undertaken NAPLAN tests in two of the five tested curriculum areas some eighteen months prior (May of Year 9).

3.3 The Australian curriculum

In 2008 the Australian Government, with the agreement of all state and territory education ministers, began the development of a national school curriculum for Foundation (NSW Kindergarten) to Year 12. This work is being undertaken by the Australian Curriculum Assessment and Reporting Authority (ACARA), reporting to the ACARA Board, chaired by Professor Barry McGaw AO, under the auspices of the Council of education ministers.

In December 2010, Ministers agreed to endorse and publish the content for Foundation to Year 10 in English, Mathematics, Science and History, for further work. The curriculum in these subjects will be submitted to Ministers for final endorsement in October 2011. Additionally, a second phase of subjects – Geography, Languages and the Arts – is currently under development.

In New South Wales, the provisions of Part 3 of the *Education Act* place statutory responsibility for the school curriculum with the Board of Studies and the Minister for Education. The minimum curriculum must comprise syllabuses developed or endorsed by the Board and approved by the Minister. The Act also requires that, in exercising its functions, the Board is to have regard to the resources available to schools.

In making the decision to approve Board syllabuses inclusive of the Australian curriculum content statements and achievements standards, the Minister needs to be assured:

- of their quality and suitability for NSW schools;
- that any supplementation required to meet NSW legislative requirements has occurred, such as the inclusion of outcome statements;

- that a suitable timeline and sequence of implementation has been determined that has regard to the resources required and the manageability for systems, schools, teachers and students.

In view of these factors, the Board notified schools that the existing curriculum would remain in place in New South Wales for 2011 while new syllabus documents, incorporating the Australian curriculum, were prepared.

3.4 Developments in examination technology

There have been significant developments in the use of technology in New South Wales schools in recent years, and major investment by government in ICT infrastructure and the rollout of computers to students. The 2010 School Certificate cohort was the first to have extensive individual computer access.

In recent years, the Board has also been expanding its use of ICT across various dimensions of the examination program. Major initiatives include:

- the introduction of the School Certificate Computing Skills Test in 2006, which was undertaken online by all students in 2010
- the rapid expansion of on-screen marking, from 10 per cent in 2009 to 25 per cent in 2010, and 45 per cent in 2011
- the popular multiple-choice online self-testing service for students, which delivers over 100,000 tests daily at peak times
- piloting the online delivery of the School Certificate English-literacy test in some 25 schools in 2010.

There is increasingly an expectation from schools, students, parents and the broader community that students will be able to use computers in examinations. This expectation needs to be balanced against the importance of maintaining the integrity of the Board's processes, and the capacity of schools to support changing test arrangements. With this in mind, the Board is now addressing implications such as:

- equity issues – ensuring no student is advantaged or disadvantaged during transition to online delivery, in sitting the exam or in the marking process
- the suitability of particular subjects for online delivery
- the logistics of support for online examinations
- security and supervision issues

Concurrently, school systems/sectors are addressing issues such as: student readiness for online testing; technical support issues; and the logistics and infrastructure requirements for whole cohort testing. The Board has established a Reference Group of key stakeholders to monitor and provide advice on the further expansion of online testing.

3.5 Developments in on-demand testing

Among a number of important drivers of new examination technology is an enthusiasm among educators for more flexible, or on-demand, testing. The concept of on-demand testing (for example, driving tests, musical performance examinations) is not new. Wheadon et al (2009) offer a broad definition of on-demand testing ranging from the provision of more frequent test windows (such as the US Standard Aptitude Test – SAT) to anytime, anywhere testing. Until quite recently, the resources required to write large amounts of content for each new test have limited on-demand testing to performance or low-volume subjects. However, technology enabling the generation of tests automatically from very large item banks is maturing and has been successfully implemented in a number of vocational and professional qualification contexts.

While the potential for improved efficiency is a key appeal for institutions, arguments in favour of e-assessment and on-demand testing are grounded in educational and assessment principles. On-demand testing has been identified in several influential UK reports including the *2020 Vision Gilbert Review* and the *Tomlinson Review*. Both reports emphasised the personalised learning agenda with frequent, targeted assessment, where technology assists teachers to analyse data and operate a fast response system to ensure no learner falls behind.

Research commissioned by the UK regulator Ofqual found that difficulties of demonstrating the validity, reliability and comparability of on-demand testing currently inhibit its adoption for high-stakes examinations of subjects undertaken for general credentials (Boyle, 2010). Where the purpose of assessment favours diagnosis, recognition and standard setting over differentiation and selection, however, on-demand testing can play an increasing role.

In Victoria, for example, the Curriculum and Assessment Authority (VCAA) has developed on-demand, on-line tests in English and Maths for Years 3 to 9. A range of general and single dimension tests are available in both linear (fixed set of questions) and adaptive (questions that vary with student ability) forms. Determination of the assessment purposes for which the tests are used is left for the school or teacher to decide. With the exception of extended response questions, the tests are automatically marked and teachers have the option to display scores to students and view results through a range of available reports. The system can store results from a range of assessment tasks, enabling teachers to track and monitor student progress over time. For instance, the computer adaptive tests can provide teachers with a calculated Standard Score based on the Victorian Essential Learning Standards.

It is within the scope of this review to consider what role more flexible, on-demand forms of testing might play in a new School Certificate assessment regime. This requires reaching some broad agreement about the main purposes of assessment in Stage 5. The current School Certificate testing arrangements – whole of cohort, terminal examinations – could be seen to satisfy an assessment regime where a high degree of competitive differentiation is required. The research indicates that at present there remain a number of obstacles to on-demand testing being adopted where this kind of precision is paramount, such as with the Higher School Certificate. However, should the balance of assessment priorities for the School Certificate shift toward diagnosis, recognition and motivation, then quality-assured online testing resources could usefully be made available for schools to use in their assessment mix.

3.6 School Retention Rates

3.6.1 School Certificate Leavers

Board of Studies' credentialling data shows that of the cohort of students awarded the School Certificate in 2008 (84 209 students), there are 15 339 students, or about 18% of the cohort, who have not subsequently completed further school-based study in NSW. This group is not evenly distributed across the student population, but rather:

- 60% were male, compared with 51% of the total cohort;
- 74% were from government schools, compared with 62% of the total cohort;
- 57% were from country areas, compared with 43% of the total cohort.

The effects of this distribution are apparent when various sub-groups of students are examined. Table 1 shows the proportions of different student cohorts from 2008 for whom the School Certificate is the highest NSW school credential obtained.

Table 1: Proportions of student sub-groups with the School Certificate as highest credential

Location	School Type	Total Cohort	Female		Male		
			SC Only	% of Cohort	Total Cohort	SC Only	% of Cohort
Metropolitan	Government	13087	1788	14%	13732	2705	20%
Metropolitan	Catholic Systemic	4212	394	9%	4598	714	16%
Metropolitan	Independent	6200	451	7%	6350	574	9%
Country	Government	12278	2876	23%	13132	4168	32%
Country	Catholic Systemic	2968	426	14%	2722	617	23%
Country	Independent	2248	291	13%	2456	461	19%

It can be seen from Table 1 that there was a wide variation in the proportions of students with the School Certificate as their highest credential, ranging from 7% of female students in metropolitan independent schools to 32% of male students in country government schools. The proportions were less than 15% for all cohorts of female students, except for those in country government schools (23%). For male students, the proportions were about 10–15% in metropolitan non-government schools and 20–25% in other types of schools, except country government schools (32%).

Table 2 shows a more detailed regional analysis of male government school students, who were the largest group of students for whom the School Certificate is their highest credential.

Table 2: Males in government schools by region 2008

Region	Total Cohort	SC Only	% of total
Hunter	3996	1230	31%
North Coast	2674	872	33%
North West	1152	366	32%
Riverina	1658	542	33%
South Coast	3345	886	26%
Western	1579	509	32%
Metropolitan East	2403	376	16%
Metropolitan North	2506	275	11%
Metropolitan South West	4431	1044	24%
Metropolitan North West	3127	778	25%
Total	26871	6878	26%

It can be seen from Table 2 that in most country regions, about a third of male students left school with the School Certificate as their highest credential. In western Sydney, the proportion was about 25% while in eastern Sydney regions it was about 10–15%.

For these young people the School Certificate credential may be of particularly significant value.

Aboriginal students are another group for whom the School Certificate is currently an important credential. The retention rate data indicates that a much higher proportion of indigenous students than non-indigenous students leave school prior to the Higher School Certificate. For example, in 2009 only 54.5 per cent of indigenous students in New South Wales completed Year 11 (compared to 83.4 per cent of non-indigenous students). This gap widened further (36.7 per cent as compared to 72.6 per cent) for Year 12 completion (ABS, NSSC Table 64a – July 2010). The National Indigenous Reform Agreement (2008) has set a target to halve the gap for indigenous students achieving Year 12 completion or equivalent attainment by 2015. While some progress is being made in

improving retention, the School Certificate is currently the highest school credential achieved by almost two-thirds of the State's indigenous students.

3.6.2 Students Leaving during Year 11 or Year 12

An estimate of the number of students leaving school during Year 11 or Year 12 can be made by examining Board of Studies' entry statistics collected at various points of time for a particular cohort of students. Unlike the statistics in the previous section, these figures are expressed as "apparent" retention rates ie they refer to the aggregate numbers of students present at each point in the system, rather than following individual student paths.

The Year 11 (Preliminary) cohort of 2008 comprised 82,025 student at the first point at which entry statistics are aggregated, the end of Term 1 of Year 11. By the end of 2008, a total of 77,733 students had satisfactorily completed at least one Preliminary course, indicating a net loss of about 4300 students or 5.2% of the cohort during Year 11.

The total number of students entered for HSC (Year 12) courses in Term 1 of the following year (2009) was 71,348, indicating a net loss of about 6400 students from the end of Year 11. At the end of the year, 68,405 students were eligible for an award in one or more HSC courses, a net loss of about 3000 students over the course of Year 12. Overall, there was a net loss of about 13,600 students between Term1 Year 11 and the end of Year 12, equating to 16.6% of the cohort commencing Year 11.

3.7 The Bradley Review of Higher Education

Released in December 2008, the Bradley Review of Australian Higher Education recommended, *inter alia*, that "the Australian Government set a national target that, by 2020, 20 per cent of higher education enrolments at undergraduate level are people from low socio-economic status backgrounds."(p45) The Federal Government has adopted this target and allocated \$437 million over four years to support its achievement. Of this amount, \$108m will fund closer collaboration between universities, schools and vocational providers.

The proportion of low-SES students in the Australian university system has remained relatively constant at around 15 per cent since 1990, despite general growth in places in the system. At present universities are directing their low-SES recruitment initiatives at a relatively small target group: those who complete secondary schooling with tertiary entrance scores. The review calls for a more sophisticated approach to increasing access, requiring strong relationships between schools and universities and earlier interventions. This means that universities will increasingly be seeking richer information on student achievements in order to broaden their selection criteria.

3.8 School Reporting in Other States

From 2010 onwards, all states and territories have requirements for compulsory participation in approved education, training or full time work, or a combination of these, for students up to the age of 17. New South Wales is the only state or territory in Australia that issues a Year 10-specific certificate including results from state-wide external tests. Other jurisdictions essentially have school-based graded reporting at the end of Year 10. Where a formal credential exists, it is issued by the school rather than by a state authority. Some states include Year 10 achievements as part of their overall reporting of student achievement, usually at the end of Year 12.

The inclusion of Year 10 achievement in the senior secondary certificate is characteristic of changes to senior credentials introduced by other states in recent years. While there is significant variation, common features include:

- a focus on a continuum of learning through Years 10-12, with Year 10 reconceptualised more as a preparation for the next stage of learning than as a likely exit point

- a course structure that more easily facilitates flexible entry and exit points
- recognition of learning that takes place beyond the classroom, including in the workplace, the community, training and tertiary institutions
- an emphasis on independent study to develop effective skills and work habits through the provision of a personal interest or research project
- a mandatory planning exercise in the form of a course or ongoing project

All other jurisdictions structure their senior curriculum around semesterised delivery of course units in Years 11 and 12 which accumulate to satisfy the requirements for the award of various credentials. This potentially allows recognition of student achievement at an increased number of points, facilitating reporting for early school leavers. Although most states issue formal credentials only if at least one Year 12 subject has been completed, four jurisdictions provide a results statement to students who leave school before the end of Year 12.

All states and territories with the exception of Western Australia and New South Wales require Year 10 students to document past achievements and consider future learning pathways as part of a formal planning subject. This is designed to engage students with their education as well as develop a range of skills. In Queensland and South Australia the completion of a planning component contributes a unit value to their senior high school certificates.

Another area of difference in credentialling across the states and territories is in the recognition of community service/activities and other endorsed courses/experiences. All states and territories other than New South Wales have some level of acknowledgement of such activities as part of their formal school credentials. There is significant variation, however, in what may be reported, how it counts towards the credential, and the way in which it is endorsed and delivered. Some of the areas that are credentialled include:

- compulsory or voluntary community service
- recognised certificates and awards (e.g. Duke of Edinburgh, Royal Life Saving Society, AMEB Music)
- workplace learning
- personal development programs
- self-directed community learning

Most of these activities and achievements are given a weighting that allows them to count as credits towards the award of the credential. In some cases the hours of participation are specified and/or reported. Some activities are “stand alone” while others are part of programs of study endorsed by the relevant state authority. At present, South Australia is the only state to introduce a mandatory research project as part of its new senior certificate.

This trend towards providing broader reporting of student achievement is also evident overseas. In Hong Kong, for example, planning is well underway for the introduction of a comprehensive Student Learning Profile as part of the Diploma of Secondary Education from 2012. The peak awarding body for England and Wales, the Assessment and Qualifications Alliance (AQA), has also recently introduced a record of this kind. The “Enrichment Diary” allows students to record information online in three extra-curricular areas: work-related learning, community participation and personal development.

PART 4 – Discussion of Key Issues – Phase 1 Consultation

4.1 Purposes of the School Certificate

In recent years, a number of key stakeholders have been expressing the view that the School Certificate in its current form is no longer valued by the majority of students or teachers. The message is that the School Certificate is in need of renewal, as the context in which it is operating has shifted significantly since the last major changes were made. It is felt that the School Certificate needs to be re-conceptualised and modernised so that its purposes are clear and valued.

The first phase of the School Certificate review process has included meetings with over twenty peak stakeholder groups. These meetings have provided the opportunity for representatives of principals, teachers, parents and others to raise issues of concern, to suggest options for the future and to respond to emerging directions for change. In particular, discussions have focussed on four broad areas:

- The School Certificate tests
- School-based assessment
- Cumulative reporting for students beyond Year 10
- Enhanced reporting of student achievements

Any proposals for change ought to be guided by a consensus view as to the overarching purposes of the credential. In discussing the School Certificate with a range of interest groups, it is evident that it serves a variety of purposes for students, employers, parents and schools. A consideration of these purposes, and their policy implications, follows.

4.1.1 For Students

The discussion below reflects the views of principals, teachers and parent groups, as there is no state-wide organisation to represent the voice of secondary school students. Student opinions on the School Certificate would need to be sought directly as part of the wider consultation process.

Three broad categories of students have been identified: those who proceed to the Higher School Certificate; those who commence senior studies but leave school during Year 11 or 12; and those who leave school at the end of Year 10 for work or further training.

a) students who proceed to the HSC

Around 70 per cent of the School Certificate cohort proceeds to complete the Higher School Certificate, and the increased school leaving age could be expected to raise this proportion in future years. The Council of Australian Governments has set a target of 90 per cent Year 12 or equivalent attainment rate by 2015. (“Equivalent attainment” is currently defined as a Certificate II qualification, for example a vocational certificate.)

To large numbers of students proceeding to complete Year 12, the School Certificate is seen as being of little relevance or value. This group generally regard the School Certificate tests as fairly “low stakes”, particularly when compared with the Higher School Certificate. These students may use their School Certificate in applying for casual employment during Years 11 and 12, but it is then superseded by their HSC in terms of a public record of their school education.

Subject selections for senior study are usually made around the middle of Year 10, well before the School Certificate is issued, meaning that it has limited relevance to future study choices. Of course some students may refine their subject selections at the start of Year 11 after reflecting on their School Certificate results or taking

further advice from their school. Schools also use School Certificate data as a benchmark for predicting likely HSC performance, and there is in fact a high correlation (around .85) between students' School Certificate and Higher School Certificate results.

Some groups consider that the School Certificate is a useful trial for the Higher School Certificate as it gives students the experience of preparing and sitting for a series of state-wide external tests. Other groups feel that the current generation of students is well-accustomed to external testing because of NAPLAN (and the former Basic Skills Tests). The fact that the School Certificate tests require limited study preparation, particularly when compared with the HSC, also reduces their credibility in the minds of many students.

b) students who leave during Year 11 or 12

Recent figures indicate that, of the cohort that commence Year 11, about 5% do not complete Year 11 and at least a further 10% do not complete any HSC courses. Even accounting for the small numbers of students accumulating their HSC over more than two years, this is a substantial number and may well rise with the new leaving age requirements. These students are not a homogeneous group. Some are continuing their schooling only until they find employment, and others are likely to be reluctant students, compelled to remain by the increased leaving age until they reach 17.

Students who complete Year 11 currently receive a Preliminary Record of Achievement, listing the courses satisfactorily studied, but no further information as to the standard of their achievements is provided. Any additional reporting is at the discretion of the student's school. This means that there is minimal formal recognition of student learning beyond the School Certificate for students leaving prior to the HSC.

There is strong and widespread support for extending the formal recognition of learning outcomes achieved by students who leave school during Year 11 or Year 12. Several groups indicate that it is important for students staying on, but not intending to complete the HSC, to have goals to work towards while still at school, rather than feeling that they are just marking time.

In this context the "compressed" model of course delivery is seen as beneficial. This involves students taking around half the usual number of courses, but compressing both the Preliminary and HSC course content into a single calendar year, and sitting for examinations in these courses at the end of Year 11. Students leaving school at the end of Year 11 under this model can fully achieve some units towards an HSC, providing more substantial recognition than a Preliminary Record of Achievement across more courses. A further benefit is that the Board's provisions for accumulating the HSC mean such students have a greater incentive and a more simple option for re-entry to education – to complete their HSC within the five year accumulation period. The model also allows schools, if they wish, to focus their Year 11 curriculum for "at risk" students on those courses which best meet their current needs.

Another suggestion made in relation to this group of students is that they could be given the opportunity to re-take Year 10 tests with a view to achieving more current and improved results prior to leaving school. This was seen as providing them with an incentive to continue learning and with a more worthwhile credential.

c) students leaving at the end of Year 10 for work or further training

As noted earlier, 15–20% per cent of students do not proceed to gain any school credential beyond the School Certificate. For the foreseeable future, the end of Year 10 will remain an exit point from schooling for a significant number of young people wishing to enter trade occupations. Numerous apprenticeship and traineeship courses offered by TAFE NSW and other providers are open to students who have completed Year 10. For these students, the School Certificate will continue to be the formal public certification of their schooling.

Most students who achieve highly at the School Certificate will proceed to the HSC, while those who actually need the School Certificate to seek employment often have less impressive results. The reporting of additional student activities and achievements was supported in this context, as it is seen to provide employers and others with a more balanced and richer profile of the student. Details of work experience, community service, participation in sporting teams and leadership roles were some of the areas proposed for consideration. Some parent groups also indicated support for more vocational education to be available for these students during Years 9 and 10.

4.1.2 For Employers and Training Providers

Several groups stressed the importance of the Board consulting widely with employers and training providers as part of the review process. It is recognised that these groups are key stakeholders in relation to the School Certificate. In this context, some groups raised the issue of whether assessment and reporting for the School Certificate should focus more on skills, particularly employment-related competencies. It was acknowledged, however, that there are difficulties in assessing and reporting on these dimensions in isolation from subject contexts. Another potential issue here is that a greater focus on skills-based reporting may encourage employers to rely more heavily on the results as a filtering mechanism.

Previous consultation with employer groups has shown that employers value information from the state-wide School Certificate tests, as it provides an easy and reliable way of comparing the educational achievements of Year 10 school leavers. This position was confirmed by the employers who participated in Phase 1 of the current consultation process. They expressed strong support for state-wide comparability of results, and indicated that they find the School Certificate gives a reliable indication of students' academic ability. They will look for strengths in areas of relevance to their business – for example, Maths and Science results for an engineering enterprise.

Results on external tests also give employers an insight into how students prepare, perform under pressure and work within a timeframe. Testing is supported as a strategy for developing these skills in young people, and not just as an assessment tool.

In addition to test results, employers also value information on work experience, as well as teacher comments in relation to attitude, application and attendance. They are seeking a broad picture of the individual, and would welcome additional information on student achievements. The point was made, however, that any changes to credentialing need to be easily comprehended by employers and other audiences.

Another observation is that employers generally have less contact with Year 10 school leavers than in previous times. One reason for this is that fewer apprentices are starting directly after the School Certificate. Some may start following a work placement during Year 11 or only after they have finished Year 12. In general, these students are found to be more reliable and to have greater potential than the early leavers. Another factor is that employers are commonly obtaining their apprentices through Group Training companies, so they are not as directly involved in assessing young people on entry to the workforce. Many businesses do not engage school leavers at all, so they are interested in other qualifications and attributes such as tertiary qualifications, licences or computer proficiency, rather than school credentials.

4.1.3 For Parents

Parent groups support the provision of a credential for students leaving school before the HSC. They recognise, however, that the credibility of the School Certificate needs to be improved, and indicate that a broader assessment of students would be welcomed. Reporting on additional student activities, rather than just subject results, is strongly supported by parent groups. Some groups told the Board that parents need to consider the potential pathways for their child earlier than the end of Year 10. Others suggested that the credential would be enhanced by an element of student self-evaluation. Some teacher groups are of the opinion that parents attach value to the School Certificate by virtue of its status as a state-wide credential with public examinations, rather than for any intrinsic reason.

4.1.4 For Schools

The views of schools on the value of the School Certificate as it currently operates appear to be polarised. Representatives of the interest groups that spoke to the Board cover a wide spectrum of school types and locations, and reflected a diverse range of opinions. In general it appears that those schools with large numbers of students leaving school at the end of Year 10 continue to value the School Certificate, both in terms of the curriculum structure and as an exit credential. The School Certificate is also an important milestone for those schools that terminate at Year 10.

Many schools, however, indicate that the School Certificate is largely irrelevant to them as nearly all their students proceed to the senior years, and most complete the Higher School Certificate. Nevertheless, they recognise the continuing role and value of the credential for other school communities. Some teacher groups also noted that the School Certificate is useful in motivating students to apply themselves to their schoolwork.

School Certificate test data is used for various additional purposes by schools and school system authorities. Each year, the Board of Studies monitors the awarding of School Certificate school-determined grades to Year 10 students in all Stage 5 courses. The monitoring process examines the patterns of grades awarded in school course groups, and in the course as a whole. Feedback to schools on the various patterns of grades can help them to fine tune their teaching and assessment programs.

The Board provides education authorities with School Certificate data which they then use to conduct analyses and provide detailed reports to schools, including value-added data, aimed at improving school performance in teaching and learning. For each test, schools are provided with a comparison of their school's performance on a number of syllabus-based components to the performance of the state as a whole. This information can be used to identify relative strengths and weaknesses of the performances of their students, and to inform the teaching of future cohorts.

4.1.5 For other purposes

The information available as a result of the School Certificate has a number of uses and values beyond its immediate value for students, parents and schools. The Board itself makes use of the data generated by the School Certificate in a number of ways, largely aimed at monitoring and fine-tuning the curriculum.

The Board also benefits from the School Certificate as a valuable test bed for developments and innovations in testing and credentialling. While taking care to ensure the best interests of Year 10 students are kept foremost, the Board has gained valuable information in piloting innovations through the School Certificate that are often then taken up in the HSC. One example of this is the online delivery of the Computing Skills test.

The School Certificate tests can play an important role in “auditing” school delivery of the mandatory curriculum. The response of various states and territories to the draft Australian curriculum has highlighted this important function of state-wide testing. For example, New South Wales argued that the draft History curriculum for Years 9 and 10 was unmanageable, as the content to be covered was far more extensive than in the current NSW syllabus. In other jurisdictions, the extent to which this content could be properly covered was less concerning, partly because of the lack of external tests, and hence reduced accountability.

Another perhaps lesser known use of the School Certificate tests is to provide baseline data for the calculation of the Australian Tertiary Admission Rank (ATAR). Once percentiles have been calculated to show students' positions relative to the ATAR cohort, the School Certificate tests are used to compare this ATAR cohort with the corresponding School Certificate cohort. This establishes the relative ability of each ATAR candidature.

4.2 The School Certificate Tests

Regardless of where in New South Wales a student attends school, the external state-wide tests mean that all students are measured against the same benchmark. This gives the School Certificate a level of rigour and integrity that attracts the confidence of parents, employers and the wider community. It is clear, however, that the way in which the tests are currently conceived and delivered is perhaps the most significant issue that this review needs to address.

Comments on the School Certificate tests have centred mainly on the nature of the tests, rather than questioning the rationale for testing per se. Nevertheless, a few stakeholders feel that the continuation of the testing regime is driven more by public perceptions than by its intrinsic educational value. It is argued that the tests create an artificial barrier in school programs, and that the time would be better spent on classroom learning. Parent groups expressed the view that students are now subject to extensive testing and that they would not favour any changes that increased the testing load.

Several groups discussed abolishing the external tests, and relying solely on school-based assessment. It was suggested that additional moderation processes as used in other jurisdictions could be introduced if necessary, such as sampling, school visits or teacher meetings. Alternatively, consideration could be given to limiting state-wide testing to English-literacy and Mathematics, mirroring the focus of the NAPLAN tests. Another suggestion was that the tests could be made optional (either for schools or for individual students), in much the same way as an optional examination is currently available for Industry Curriculum Framework courses in the Higher School Certificate. Optional testing was preferred by some groups, particularly where most of a student cohort was continuing to the HSC. Other groups indicated a preference for any new tests to be mandatory, to ensure equitable and guaranteed access for all students. Several groups commented on the value to schools and school systems of the data generated by state-wide tests.

4.2.1 Scope, Content and Structure of the Tests

At the Higher School Certificate, all Board-developed courses have an external examination. This is not the case for the School Certificate, where only core subjects are externally tested. This reflects the role of the School Certificate curriculum in providing an agreed learning entitlement for the mandatory phase of schooling.

It has been observed, however, that the restricted scope of School Certificate testing can be seen as signalling the value accorded to particular subjects. It has been suggested that a greater use of online testing would offer the opportunity for a suite of state-wide tests to be made available across all Stage 5 subjects.

While the School Certificate tests are a summative assessment *of* learning, schools are increasingly focussed on assessment *for* learning – using assessment as a diagnostic tool and to provide constructive feedback to students. In this context, a number of teachers and principals groups have proposed that the nature of the tests be changed, and in particular focus more strongly on the assessment of skills. They told the Board that:

- Assessment should focus on students being able to demonstrate a deeper understanding of core concepts and performance of skills
- Students are disengaged from tests that are too heavily reliant on content
- Employers are more interested in transferable skills
- Assessment of skills would allow for greater flexibility in testing options and reduce the pressure of “teaching to the test”

Other comments made in regard to testing include:

- The School Certificate should be driven by the curriculum, and not by the demands of testing
- There is a need to reconnect tests with the syllabuses

- Tests would be more useful if they provided a greater range of discrimination, as school-based assessment can provide, and allowed students to demonstrate higher order skills
- Tests should provide useful data for students and teachers to assist in senior years subject selection
- Tests should better inform teaching and learning for Years 11 and 12.

4.2.2 Relationship to NAPLAN testing

There is a widespread public expectation, at least in New South Wales, that there will be state-wide external testing of students at key points in their education. If School Certificate testing were to be withdrawn, the longest gap for secondary students between external tests would be from May in Year 9 (the last NAPLAN test) to the Higher School Certificate some three and a half years later.

The argument that the Year 9 NAPLAN tests have somehow made the Year 10 School Certificate tests redundant does not take account of the major differences between these two tests:

- The NAPLAN tests assess literacy and numeracy skills development only. The School Certificate tests currently also cover mandatory learning in Science, Australian History, Geography, Civics and Citizenship and Computing Skills.
- Other than a single writing task, NAPLAN consists mainly of multiple choice questions, with a few short answer responses. The School Certificate tests have a wider mix of item types, including various extended response (essay-style) questions.
- NAPLAN assesses students during Term 2 of Year 9 (hence testing mainly what has been learnt prior to Year 9), while the School Certificate tests are near the end of Year 10.

While no groups felt that the introduction of NAPLAN tests had a direct bearing on the future of the School Certificate tests, some groups did raise the need to clarify the future relationship between NAPLAN and the School Certificate tests in English-literacy and Mathematics. Any new tests should not follow the NAPLAN model, but should allow for richer assessment.

4.2.3 Current Timing of the Tests

Currently the School Certificate tests are conducted in November, generally in the second week. This timing allows for the marking of the tests and production of the results for delivery to schools in the second week of December. Most schools are therefore able to present the students with their School Certificates prior to the end of the school year.

Depending on the school calendar, this can mean that there are up to five weeks of Term 4 between the end of the School Certificate tests and the start of the school holidays. (For example, in 2010 the School Certificate tests were in the week 8–12 November, while the final day of Term 4 in government schools was officially 17 December.) This creates significant organisational problems for schools in maintaining the attendance of Year 10 students for the remaining weeks of the school year.

The rules for the award of the School Certificate include a requirement that students have a satisfactory record of attendance up until the final day of the school year, as defined by their school principal or school system authority. Schools are obliged to provide meaningful programs of learning to students after the School Certificate tests until the official end of the school year.

For a variety of reasons, schools cannot commence courses of study towards the Higher School Certificate during this time. The rules for the HSC include a requirement that courses of study may not commence before Day 1 of Term 1 in Year 11. In addition, there is a significant movement of students between schools and even between school systems between Year 10 and Year 11. A number of schools do not even operate beyond Year 10 and thus do not offer the HSC curriculum.

Accordingly, schools have devised a variety of programs to fill the period between the School Certificate tests and the end of the Year 10 school year. These include such activities as work experience, careers events, study skills workshops, the “All My Own Work” modules on ethical scholarship, and a range of other options.

Nevertheless, in the minds of many students, and indeed their parents, the end of the School Certificate tests marks the completion of the School Certificate. In addition, those students intending to leave school for employment or vocational training are understandably difficult to motivate. Many schools report that as the weeks beyond the School Certificate tests pass, and absences become more widespread, it becomes increasingly difficult to run worthwhile learning programs for Year 10 students.

4.2.4 Changing the Test Timing

In relation to the timing of the tests, one option suggested was to move the tests later in the year. In some cases there is a rush to cover the examinable syllabus content prior to the tests, so moving the tests a few weeks later would minimise this problem while also reducing the post-tests “gap”. In this regard, it was noted that the issuing of the School Certificate in December is not essential for most students. The Board’s Office could investigate whether new technologies may enable the timing of the tests to be reviewed, while still providing the credential promptly to those who are leaving school.

Another option discussed with stakeholders was to allow more flexible timing of tests to meet the differing needs of schools. Many groups felt that increased flexibility would be well received, and identified possible benefits as follows:

- It could allow students to see themselves as more independent learners
- Testing could occur closer to the relevant learning
- Testing could be scheduled when the students are ready
- Flexible testing would be more engaging for students
- Flexibility would better cater to the wide range of student needs and abilities
- Students could re-sit the tests at a later stage to obtain better and more current results
- Schools could schedule testing to complement their teaching and learning program, rather than having to organise around point-in-time tests.

Understandably, given that flexible timing would be a significant change from the traditional point-in-time testing, a range of questions and issues were raised, including:

- If students were to undertake School Certificate tests earlier in the year and achieve at a satisfactory standard, could provision be made to spend more time on other subjects and/or to commence senior studies?
- Even if the tests were taken earlier in Year 10, schools may not be in a position to take advantage of the flexibility because of organisational factors. For example, there is a significant rate of student transfer between schools/sectors at the end of Year 10.
- Allowing the tests to be undertaken earlier would only lengthen the gap to the end of the year. Some schools may just use the new flexibility to move tests later in the year to minimise this gap.
- Schools may resist the extra administrative burden, resources and complications of organising multiple testing sessions.
- There is potential to extend the pressures caused by testing throughout the year.
- Testing at a single point in time provides direct comparability between candidates. Would flexible timing make valid comparisons more difficult? It is important that test data remain reliable, if it is used to compare with HSC data in measuring value-added.

- There may be problems in public perceptions of fairness if the testing were to be delivered more flexibly. It may be difficult to convince employers and the wider community that there is no specific endpoint to the School Certificate.
- Schools may query how the changes could affect their accreditation for the School Certificate, in terms of criteria such as indicative hours.
- How would issues of consistency and security of tests be managed?
- What would be the implications in terms of marking?
- Would flexible timing rely on testing being online?

4.2.5 Test Delivery

The expanded use of technology to facilitate assessment is widely supported. It is also recognised that online testing could provide for different modes of assessment, and allow for tests to be made available beyond the current core subjects. It is recognised, however, that the timeframe for the expansion of online test delivery is dependent on resource considerations, both centrally and in schools.

Several groups have told the Board that online testing would be suitable for some subjects but not others, or for certain aspects of what is currently tested but not for other components. Some teacher groups were concerned that online assessment could further narrow the focus of the tests.

One possibility is to change the nature of the tests, so that students would undertake a random sample of questions from an item bank – analogous to a driver’s licence test. This is similar to the model currently used for the online Computing Skills test. Another approach would be for the Board to develop different but equated test questions, as used in HSC examinations with multiple options.

4.3 School-based assessment and grading

The balance between school-based assessment and the external state-wide tests is an important focus of this review. Currently these two dimensions are reported separately on the School Certificate Record of Achievement, and the tests apply only in a range of core subjects. A strong message arising from the Board’s initial consultations is that the role of school-based assessment for the School Certificate should be strengthened across the curriculum. It was even suggested that this could culminate in a major cross-curriculum project to be completed by students at the end of Year 10. The clear message is that the school program should be the dominant organiser, and that tests should support rather than constrain teaching and learning for Year 10.

Several teacher groups noted that school-based assessment provides better discrimination than is currently provided by the external tests, and allows students to demonstrate a broader range of learning outcomes. School assessment should be conducted in concert with tests to obtain a full and balanced picture of student achievement.

It should be noted here that one parent group expressed some reservations about a greater reliance on school-based assessment, as external testing is seen as more equitable, and not subject to any perceived teacher bias. Other parent groups supported an increased emphasis on school-based assessment, particularly as it encourages students to focus consistently throughout the year.

4.4 The School Certificate credential

All stakeholder groups support the retention of some form of state-wide credential that recognises student achievement at the end of Year 10. The School Certificate has a long history in New South Wales, and continues to be valued for providing comparable reporting on all students at the completion of the mandatory curriculum.

All stakeholders also support the concept of a cumulative credential being available for students leaving school during Year 11 or 12. Within these broad parameters, there are varying opinions as to the future format of the credential, the timing and mode of issuance, and the scope and nature of the reporting. Discussion of these aspects follows.

4.4.1 Format

The proposal for a cumulative credential raises the question as to the relationship between such a document and the School Certificate issued to students at the end of Year 10. There are various models that could be considered here. For example, the exit credential could be in the form of an updated School Certificate Record of Achievement; it could be an enhanced Preliminary Record of Achievement; or it could be a document issued by schools, perhaps downloaded from *Schools Online*. Another idea is that the School Certificate be renamed and redesigned to form the start of a cumulative record of student achievement that would continue until shortly before the HSC. It has also been noted that the School Certificate is less flexible than the Higher School Certificate – for example, there are no provisions for accumulating or for repeating to improve results. Some groups argue that greater flexibility would better meet the full range of student needs.

Several groups favour a model that encourages students to be actively involved in planning their future learning and considering their career directions. One concept is that students could have an “e-portfolio” of their achievements that could be added to progressively, and viewed via *Students Online*. In addition to courses studied, it could include updated reporting on additional activities/ achievements (as discussed below) and updated VET competencies for students undertaking vocational courses. This would be compatible with students undertaking nationally-recognised skill sets rather than whole qualifications. If an option for re-sitting Year 10 tests were introduced, the credential would also report the most recent test results. Provision for a component of self-evaluation was also suggested.

4.4.2 Issuance

In regard to the time of issuing the School Certificate, one suggestion was that final assessments could be moved later in the year, and the results issued in January. It was noted that a number of schools do not distribute the School Certificate to students until the following school year in any case, as their academic year ends before the Certificates are available.

There are also some practical questions as to whether the Board could support a true “exit” credential for Years 11 and 12 leavers, in the sense of it being issued at any point in the year. It may be more feasible to provide for updates at several set points in each calendar year.

4.4.3 Scope of Reporting

Some groups have suggested that the School Certificate should report on the full breadth of student learning, rather than the main focus being on the tested subjects. Others are satisfied with the way in which results are currently reported. It is generally agreed that the Year 11 Record of Achievement in its current form is of little value to school leavers and that improved reporting for this group is required.

Universities are increasingly seeking richer information to inform their student selection processes. More detailed and longitudinal reporting would be welcomed by the university sector, particularly in the context of the Commonwealth’s target to improve the participation of students from low-SES backgrounds.

The language of reporting is also important. The review may provide an opportunity to consider different ways of reporting student outcomes, other than just marks or grades. Public perceptions of how results are reported need to be considered. For example, it was observed that the meaning of a “C” grade in NAPLAN reporting is still not well understood.

4.4.4 Reporting of additional student activities and achievements

As indicated earlier in this paper, other states and territories provide some type of broader reporting on students as part of their school credentials. This aspect of the review was the focus of much discussion with key stakeholder groups, and a wide variety of opinions were expressed and issues raised.

Many groups supported the concept of broadening the reporting base of the School Certificate, with a view to capturing a profile of student achievement across multiple dimensions of learning, beyond the academic curriculum. They argued that the full range of school experiences should be valued in any revamped credential, including school to work competencies. Reporting on a wider range of achievements should also encourage students to reflect on their overall strengths, weaknesses and future educational directions.

Several groups noted that schools already provide information of this type in school reports, and felt that they should retain responsibility for such reporting. They argued that the jurisdiction of the Board in terms of reporting should be limited to the formal curriculum. Other groups accepted that a common framework for reporting would enhance the reliability of the information for users of the credential and ensure that all students receive a comparable and comprehensive document.

University personnel indicated that the reporting of student achievements in areas such as teamwork, leadership and community service, would assist them as they continue to broaden their selection criteria. They would welcome more consistent information than schools currently provide. Other areas of achievement of interest to universities include: language competency (outside of the formal curriculum); communication and multimedia skills; creativity and innovation.

It was acknowledged that the Board could provide a central, online service for collecting and reporting the information in a consistent way, but some groups questioned the work that may be required by schools to enter student data. It is clear that any change that increases the administrative burden on schools would be difficult to introduce. The possibility of an “opt in” system was floated, although some felt this may raise issues of accountability and equity for students.

Another equity-related concern is that not all schools have the resources or parental ability to support a range of co-curricular activities. Some students need to work outside school hours, limiting their opportunity to participate in community service or other activities. Many activities have significant costs involved, ruling out some students. Other students have disabilities which affect their capacity to participate.

A further aspect to be considered is whether the recording of additional student achievements would be limited to those run under the auspices of the school. Some schools offer a wide range of extra-curricular programs, while other students achieve in areas such as music or sport outside of school. There may be a reluctance by schools to vouch for some forms of activities or achievements not directly under their control.

There was no suggestion that the reporting of additional student achievements should count towards the requirements for the credential (as occurs in some other states) nor that any such achievements should be graded, other than to report the level or standard achieved, where applicable. It was suggested, however, that activities such as community service or work experience could have the number of hours recorded.

The scope and parameters of this reporting would need to be carefully considered. While some formal learning programs already have assessment and reporting criteria in place (AMEB Music, the Duke of Edinburgh awards, etc), other areas of student achievement would need to have a reporting framework developed by the Board. Given that other states and territories have already broadened their reporting along these lines, there are various models that the Board could consider. Other practical issues that will need to be resolved include the point in schooling at which the collection of information would begin and the nature of the additional documentation to be issued to students.

PART 5 – Future Directions

Broadly, the current School Certificate has two main purposes. The first is to provide all students with a statement of their achievements on completion of the mandatory Stage 5 curriculum at the end of Year 10. The second is as a leaving credential for those students who do not continue to Years 11 and 12.

Consultations undertaken in the review make it plain that while there is substantial support for the continuation of a School Certificate credential, there is also a strong mood for reform.

5.1 A Cumulative Comprehensive Credential

That a credential be available to students from the end of Year 10 as a cumulative comprehensive record of achievement, periodically updated to record achievement of students leaving school prior to the end of Year 12.

While some stakeholders contend that the provision of a leaving credential is counterproductive to retention, there is acknowledgement that a credential for those students who leave school is important and recognising students' achievements before the senior years is positive.

Simply abolishing the School Certificate would not only commit young people to additional time at school without the certainty of academic or economic advancement, it would also remove any form of qualifications 'safety-net', giving young people no state-wide document to attest to the eleven or more years of learning completed short of attaining an HSC.

The raising of the school leaving age has also challenged the traditional purpose of the School Certificate as a lower secondary exit credential. As in the rest of the developed world the policy impetus is to keep students in the system rather than select them out, and the credentialing system needs to align with this purpose.

There is agreement among stakeholders that, at a minimum, the credential should acquire a cumulative aspect, available to students on demand from the end of Year 10 and at points in Years 11 and 12. The on-demand aspect would diminish the perceived signal that formal education has ended but provide young people with some recognition if they leave school prior to the HSC.

Instead of having separate School Certificate and HSC Records of Achievement, it is proposed that a single secondary school Record of Achievement be issued at designated points prior to the HSC. The document could accumulate the student's results from Years 10, 11 and 12, and be updated before they left school. Moving to a cumulative Record of Achievement would provide a more consolidated picture of a student's achievements, across a continuum of learning.

5.2 External Tests

Replace the current external tests with broader assessments.

In line with past reviews, the Certificate's assessment and reporting arrangements emerge as a major source of dissatisfaction. The external tests remain unpopular and many stakeholder groups regard the information provided by them as neither a fair reflection of the broad mandatory curriculum nor of students' actual achievements. The current tests are seen as being neither a well-constructed assessment of the important curriculum domains nor as providing information on foundational skills sought by employers and the broader community.

In relation to their curriculum purpose, the current tests are based on a subset of the relevant syllabuses. In some subjects there has been criticism that the tests are narrow, or overly concerned with arbitrarily selected Stage 5 content, rather than assessing the underlying skills that students are developing through the study of these subjects. The tests are seen as exerting undue influence on the delivery of the curriculum as a whole, privileging certain aspects and resulting in other areas of equivalent or greater importance being neglected.

Consequently, it is proposed that the current tests be replaced by a broader assessment which provides a stronger alignment to the curriculum and the opportunity for a more complete picture of student accomplishment.

5.3 School-based Assessment

A stronger role for school-based assessment as the basis for reporting student achievement on the new credential, supported by external moderation to ensure the reliability of the credential.

A strong message arising from the Board's initial consultations is that the role of school-based assessment for the School Certificate should be strengthened across the curriculum. Assessment for the School Certificate should have a wider focus, covering content knowledge, skills development, and depth of understanding.

While retaining key summative aspects of the present system, the balance could be shifted toward diagnostic, motivation and recognition purposes. An assessment regime based primarily on teacher judgement would also give schools more scope to adapt their curriculum to meet the unique needs of the school community.

The graded work samples and other information already available on the Board's Assessment Resource Centre provides a good basis for schools in implementing a consistent approach to standards-based assessment and reporting across the State. The Board could increase the support it provides to teachers by providing additional assessment resources.

Comparability could be further enhanced by the introduction of other external moderation procedures, such as collaborative processes involving teachers and external moderators as used in some other States. Strengthened moderation could also assist in addressing accountability and quality assurance concerns that may arise from discontinuing the external tests.

Improved data collection at the Board of Studies would allow school assessments (A-E grades) to be submitted up until the first week in December, two weeks later than currently applies. This would enable more productive teaching and learning towards the end of Year 10, with more time to finish the Year 10 course content and assessments.

5.4 Literacy and Numeracy Tests

Online tests in core literacy and numeracy skills be made available.

There is a strong demand from employers and the wider community for information on the foundational skills of school leavers. These skills are seen as fundamental for vocational purposes and as the basis for further learning. It is proposed that tests be made available that focus on literacy and numeracy skills drawn from the mandatory domains of the curriculum.

Such tests would be particularly relevant to students who leave school prior to the HSC, who would be able to take the tests at a point close to their departure. While potentially less relevant, the tests could also be available for students who continue to the HSC, assisting in addressing concerns such that all school leavers should meet minimum standards in literacy and numeracy, including those proceeding to higher education.

New technologies, particularly online approaches, enable flexible delivery. Tests can be constructed using banks of items, structured so as to provide adequate coverage of the domain of testing and calibrated so as to reliably and validly measure achievement against standards. It is important that the administration of any new tests is not burdensome for schools.

5.5 Reporting a Broader Range of Achievements

The credential be expanded to allow schools to voluntarily but authoritatively recognise a wider range of student achievements with standard frameworks, including with extra subject-based activities, such as sport, music, languages and community work.

There was an enthusiasm among stakeholders for recognising the valuable learning that takes place outside of the classroom that contributes to students' broad capacities and personal qualities.

In addition to the Board's current Stage 5 and early Stage 6 vocational education pathways, there is scope to recognise the learning taking place through community and employment activity. The potential benefits go beyond increased opportunities to engage students. Universities face increasing pressure to develop better and more comprehensive approaches to student selection. The credential of the future will likely need to provide a broader student profile incorporating experience, skills and understandings drawn from additional activities.

What kinds of learning will be included and how these are recognised will depend on a number of factors. A key consideration is whether or not this learning, once recognised, will formally contribute to the awarding of the credential. Some jurisdictions have designed rigorous assessment frameworks to ensure consistency and accuracy for senior certification. Other credentials such as the International Baccalaureate Diploma do not assess the community component of the course, but students cannot obtain a diploma without their authenticated participation.

In some areas, existing reporting arrangements would be able to be used. For example, the Duke of Edinburgh awards scheme reports completion of its programs at bronze, silver and gold level. Another example of an existing reporting framework is the graded reporting of Australian Music Examinations Board examinations at various levels for particular instruments.

In other areas of student achievement such as community service, leadership or work experience, the Board would need to develop a framework to guide what can be reported and the reporting format. One possible approach would be for the Board to develop an electronic tool that would provide students with a portable record of additional activities.

During consultation, some stakeholders expressed reservations regarding the reporting of additional student achievements being made mandatory for all schools/students. Accordingly, any additional reporting of this kind would be introduced on an optional basis.

These broad directions have been approved by the Board of Studies as the basis for the development of further detail and consultation.

Appendix – Organisations consulted during Phase 1

The following organisations have met with the Board President and/or other senior staff during the first phase of the review:

School Authorities

Department of Education and Training/TAFE
Catholic Education Commission
Association of Independent Schools
Christian Schools Australia
Christian Education National

Principals

NSW Secondary Principals' Council
Association of Heads of Independent Schools of Australia
Association of Catholic School Principals

Teacher Unions

NSW Teachers' Federation
Independent Education Union

Professional Associations

Professional Teachers' Council
Catholic Secondary Schools Association of NSW/ACT
English Teachers' Association NSW
Mathematics Association of NSW
Science Teachers' Association of NSW
History Teachers' Association of NSW

Parents

Federation of Parents and Citizens' Associations of NSW
Council of Catholic School Parents
NSW Parents' Council
Isolated Children's Parents' Association

Others

Aboriginal Education Consultative Group Inc.
Australian Association for Special Education
Teacher Education Council
Commission for Children and Young People
Australian Industry Group

References

- Australian Bureau of Statistics *NSSC Table 64a – Apparent Retention Rates (ARR) – by States and Territories, Affiliation, Sex, Grade Range and Years (1993 to 2009)*. ABS, Canberra, July 2010.
- Boyle, A. *Regulatory research into on-demand testing*. Office of Qualifications and Examinations Regulation, Coventry, 2010.
- Bradley, D. (Chair) *Review of Australian Higher Education – Final Report*. Commonwealth of Australia, Canberra, 2008.
- Cooney, G. *Review of Statewide Assessments in the context of National Developments*. School of Education, Macquarie University, Sydney, 2006.
- Gilbert, C. (Chair) *2020 Vision: Report of the Teaching and Learning in 2020 Review Group*. Department for Education and Skills, Annesley, 2006.
- McGaw, B. *Shaping Their Future – Recommendations for reform of the Higher School Certificate*. Department of Training and Education Co-ordination, New South Wales, 1997.
- Tomlinson, M. (Chair) *14–19 Curriculum and Qualifications Reform – Final Report of the Working Group on 14–19 Reform*. Department for Education and Skills, Annesley, 2004.
- Wheadon, C., Whitehouse, C., Spalding, V., Tremain, K. and Charman, M. *Principles and practice of on-demand testing*. Office of Qualifications and Examinations Regulation, Coventry, 2009.

Other material in this Discussion Paper is drawn from Board of Studies records, data and consultations.