

The Qualifications Landscape for Post-compulsory Education and Training Issues and Future Scenarios

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Introduction

The purpose of this paper is to provide a selected overview of the landscape of qualifications of post-compulsory education and training, including its long term directions and possibilities.

This paper is therefore part a description of factual material abstracted from various on-line sources, part interpretation of emerging issues and part speculation about the factors that might shape the design and development of qualifications and pathways in the future.

Most of the factual content has been derived from on-line sources.

Juggling the requirement to describe the features of other system's senior secondary education arrangements and the identification of potential issues has been somewhat problematic. This report has attempted to accommodate these dual tasks by briefly documenting features of senior secondary education arrangements interstate and in several overseas countries and highlighting practices that vary somewhat from practices in Victoria or practices that address a particular issue highlighted in the report. The report does not pretend or attempt to be comprehensive, rather its aim is to raise issues and where possible illustrate how these issues have been tackled in other jurisdictions. In some cases, the author was unable to cross reference a particular issue with a relevant example.

The issues identified are framed as points for further analysis and discussion. They are speculative, sometimes contradictory, sometimes overlapping and their implications for the VQA are often difficult to determine. Nevertheless, they are an attempt to flag some developments that the VQA is likely to find it difficult to ignore in the future.

Executive summary of the issues

Several of the issues emerge from the likelihood, or the desire, that in the future a much broader cohort will want to complete secondary schooling with a recognized certificate than is currently the case. In order to increase the proportion of young people who complete a secondary qualification, inroads will need to be made into those groups who are most alienated from schooling: those with poor language skills, and those at the margins of society for whatever reason. Current curriculum and assessment arrangements at the senior years are unlikely to meet these young persons' needs.

New understanding about what it means to learn and the nature of 'true' or 'deep' learning (e.g. the ability to transfer learning to unfamiliar circumstances) is likely to have an impact on the kinds of teaching that takes place, the kind of learning tasks that students are asked to complete, the kinds of assessments that will be used to test deep learning. Within this context it seems appropriate to consider whether the arrangements in the current qualifications (the way units are described, the tasks that are set and the way assessment is conducted) hinder, are neutral or assist students to develop 'deep learning'.

It has been suggested that most students see secondary school as a series of unrelated topics that vary slightly from year to year. Others have described the curriculum as being a mile wide and an inch deep. In response to this the New Basics movement in Queensland, and others, have suggested that there is a need to develop a curriculum featuring complex problems that require in-depth consideration from a number of different disciplinary perspectives. If more time should be devoted to active efforts at synthesis across disciplines, then the current curriculum will need to be significantly modified.

In some jurisdictions 'inter-disciplinary' or 'cross-disciplinary' studies have been developed to allow students to draw from several disciplines when responding to the requirements of the study. An example of this is provided by the IB interdisciplinary theory-of-knowledge course and the ACT's cross-discipline Cultural Studies. A similar approach might be something that the VQA might examine as a means for providing courses that enable students to see the connections between the disciplines.

New computer hardware and software and online facilities have implications for what, how and when subjects/units/topics are taught and assessed. At the most basic level, the current procedures for accrediting and reviewing courses are inappropriate for learning areas where the knowledge and skills are changing rapidly. Software applications and digital technologies are changing so rapidly that there is a strong argument for accrediting authorities to leave the course development and assessment in these and similar areas to the industry and to recognize industry approved qualifications within the senior secondary certificate.

Similarly, as students become more immersed in learning with technologies (whilst we are still at a very primitive stage in this regard, we may not be in five to ten years time), this will need to be reflected in course design, in the kinds of learning tasks that are set and in the way that knowledge and skills are assessed. Pen and paper assessments of learning based around 'digital' knowledge and skills cannot and should not be sustained for much longer. Within this context it seems appropriate to consider whether the arrangements in the current qualifications hinder, are neutral or assist the development of significant 'digital' learning and understanding.

With increasing bandwidth and greater access to computers at school and in the home, the use of online facilities for delivering learning and for facilitating assessment, marking and reporting procedures (eAssessment) will become feasible. Not only will this produce efficiencies for assessment authorities, but it will also open up new opportunities for 'packaging' curriculum in ways that may better meet the learning needs of 'non-standard' students who could have difficulty attending school regularly and/or difficulty coping with the work-load of a full senior secondary course (those in part-time work, those in isolated communities, young single parents, etc.).

It is reported¹ that trials of two high-stakes examinations that have been successfully computerised include a skills-based ICT assessment where candidates' end products are marked using a rule-based engine and a simulation of a science practical. It seems likely that developments in this area will accelerate². Technologies also make it possible for assessment authorities to develop repositories of quality assessment materials related to expected curriculum learning standards thereby ensuring that performance measures are built in to the system without the need for large-scale, single-date whole-cohort external tests. These assessment repositories could also facilitate assessment for learning by providing teachers with diagnostic tools. With such support it seems reasonable to suggest that teacher assessment methods would greatly increase in validity and reliability and if accompanied by appropriate quality assurance processes could replace external examinations.

Further developments in the eAssessment agenda could lead to testing on demand (why retain a time served model if curriculum is outcomes based and reported in terms of demonstrated standards) and simulation environments allowing different approaches to testing.

Concerns about social fragmentation are also likely to emerge more strongly in the future. Signs that governments see that as a concern include the Commonwealth's project on Values Education (which defines a set of values that young people should be taught) and the requirement that due regard be given to patriotic demonstrations and ceremonies (such as flying and saluting the Australian flag). In countries (e.g. Hong Kong and Singapore) that might be described as more mono-cultural than multi-cultural and where respect for family and country is a strong element of the culture, there is also a push for 'cultural' studies to be a core component of the senior secondary curriculum and to use this as a vehicle for consolidating cultural perspectives. So knowing more about and appreciating your country is a theme that has currency in many jurisdictions, even though the sentiments that drive this 'patriotic' emphasis may stem from somewhat different concerns.

The VCE did attempt to provide a 'common culture' study when Australian Studies was a compulsory subject in Year 11, but this tended to become more a study of work and like any study that is 'values' based suffered the criticism that it was biased and that it was not sufficiently robust to justify being a compulsory study. Within this context it seems appropriate to consider whether there is a need to do more to assist students to gain a greater understanding of Australian society including its democratic principles, processes and practices.

The other pressure is the one that emerges from the globalization of our society. Whilst students might need to know more about their own culture, they also certainly need to know more about other cultures that they are unfamiliar with in order to be prepared to join the 'global society'. These 'other cultures' should not be solely understood as those from 'far away' as students in a multicultural society do not automatically learn about the other cultures in that society with whom they have limited contact.

¹ www.qca.org.uk/futures/.

² www.dfes.gov.uk/alevelsinquiry/docs/Tomlinson%20Final%20%20Report.doc#_Toc26601166 (pp.49-51)

The pressures have resulted in two different responses. One is to ensure that ‘patriotic’ studies are a core component of the senior secondary curriculum and the other is to ensure that the curriculum experienced by students is international in outlook and orientation. The strongest expression of a curriculum with an international outlook comes from the International Baccalaureate. This is not surprising given that it originated as a curriculum to meet the needs of expatriate children in international schools. However, its currency has spread well beyond this constituency and the majority of its students are now in national schools. The UK has also made this a focus for action within schools.

It seems that with the inter-dependence of Australia with our Asian neighbours for trade and security, and the growing likelihood that whether they are working locally or overseas, young people will be working alongside peoples from a diverse range of cultures, it seems likely that there will need to be a greater emphasis placed on cultural and global studies right through secondary schooling.

Another theme that emerges in other jurisdictions relates to citizenship and developing young people’s community spirit. The senior curriculum in Singapore, for example, includes ‘non-academic activities that help to develop the values and skills of responsible and active citizenship’ and a similar approach is being trialed in Western Australia where students in addition to completing their studies will be required to complete twenty hours of community work in order to qualify for their senior certificate. As students start to consider pathways at Year 10 and stay at school longer the school will be expected to provide opportunities for them to function within their communities and experience work locations. Whilst this has been a part of the Year 9 and 10 experience, there is also a pattern emerging for these experiences to be formalised and recognised in the senior secondary years.

Concerns are also likely to emerge if the current gap between the ‘haves and have nots’ continues to widen and as a consequence social stability is threatened. If it appears that there is a growing underclass of young people who are poorly equipped to cope with the modern workplace, it seems inevitable that governments will want schools to play their part in solving the problem. The Premier’s goals for the completion of secondary schooling could be escalated and the expectation could be that all young people will achieve defined standards in work and social competencies. In this scenario, standards could be made explicit and known to all prior to the commencement of classes. Lesson planning and teaching would be standards based so that students would be able to demonstrate the ability to meet standards through the tasks they were required to do. This would necessarily change the way that parts of the senior secondary curriculum would be written, taught and assessed.

With each of the issues outlined above, there may be teaching and learning and curriculum and assessment implications. Just what the role of the Victorian Qualifications Authority might be in taking up some of these issues may vary from issue to issue. In some instances the role might simply be to expose poor practice that other agencies may need to address and in others it might be to review and improve current procedures and certificate arrangements.

PART A: Issues to consider

Issue 1.

Credentialing the personal attributes dimension

The Victorian Essential Learning Standards (VELS) strands of Physical, Personal and Social Learning and Interdisciplinary Learning require teachers to make judgments in relation to students' mastery of various learning processes and their personal attributes as learners. Personal and interpersonal learning are considered to be essential learning in the compulsory years and standards in these dimensions are to be formally assessed and reported.

Employers³ have also been asking for the recording of student attainment to better reflect the personal attributes and skills attained by the students. Employers want people who are literate and numerate, information technology savvy, problem-solvers, decision makers, flexible, adaptable and willing to learn new skills. They want employees who have the social and inter-personal skills to build and maintain relationships, work productively in teams and communicate effectively and believe these skills can be developed through the curriculum.

VELS will contribute to the development of these skills in the compulsory years and in the senior years VCAL and a fairly narrow range of VCE/VET studies (those where study units specifically require students to demonstrate communication and other social competencies in a workplace context) are designed to develop these attributes. However many students will not engage in courses that are designed to develop interpersonal skills, nor will competencies in relation to personal, social and interdisciplinary learning be considered when it comes to determining their VCE scores.

Ideas from cognitive psychology, neuroscience and cultural psychology, are generating new views about what 'learning to learn' involves, and how it can be taught. In VELS these ideas are embedded in the Thinking domain that is concerned with the promotion of thinking skills and meta-cognition.

If in the compulsory years the interpersonal development, personal learning and thinking dimensions of learning are 'essential' it would seem that their essentiality would not diminish as students move into their senior years of schooling and establish learning pathways to further education, training and employment.

As familiarity with VELS grows it seems inevitable that there will be increasing pressure for senior secondary courses and qualifications to also promote, assess and report on personal and interpersonal learning attributes. Whilst assessment and reporting of these factors are viewed positively in the compulsory years and in VCAL, how they are dealt within a 'high-stakes' environment like the VCE will be more problematic. Also with a greater emphasis being placed on thinking skills and deep learning, there may also be pressure for 'learning to learn' strategies to be incorporated into course designs and for assessments to be developed that recognise and rate these dimensions of learning.

This issue is being addressed in a variety of ways in the following jurisdictions/qualifications:

- The International Baccalaureate: The structure of the Middle Years IB is similar to VELS and the IB Diploma with its approach to holistic learning in many ways a model of what a senior curriculum consistent with VELS might look like.

³Business Council of Australia and the Australian Chamber of Commerce and Industry (2000) *Employability Skills for the Future*, Melbourne

- Hong Kong: Personal learning will be addressed by making Liberal studies a core element of the HKDSE (10% of total lesson time) so that all students in the senior secondary years will study
 - Self and Personal Development
 - Society and Culture
 - Science, Technology and the Environment.

As open book examinations are generally more suitable than closed book examinations for testing the application of knowledge to novel situations, as well as for testing higher order thinking abilities⁴, it seems that this mode of assessment will also need to be developed and introduced as part of the assessment regime in the senior years.

Issue 2.

Recognition of community-based learning

The expectation that schools will play a role in assisting students to connect with their communities and to develop an understanding of the workforce has been responded to by schools, particularly in the years 9 and 10 when community service and work experience programs are provided to the vast majority of students. However, in the senior years these opportunities for community and workplace learning tend to be replaced by formal structured classroom-based learning. Exceptions to this occur in some VET subjects and in VCAL, but these courses cater for a minority of senior secondary students.

As more students remain at school with the intention of pursuing work or vocational training pathways, and will want to mix their studies in school with learning in the community, there may be a need to incorporate recognition of community learning within the senior secondary qualification.

This issue is being addressed in a variety of ways in the following jurisdictions/qualifications:

- Western Australia: The inclusion of 20 hours of voluntary service as part of the WACE is being trialed in schools.
- Ontario, Canada: All students are required to participate in 40 hours of community involvement before they graduate.
- England – in its vocational qualifications ‘wants to ensure that work-based learning, e-learning, employer training programs, community-based learning and other types of provision all contribute to achievements that are recognized in the Framework for Achievement’⁵.

Issues of the quality of the community experience and its relevance to the kinds of learning that schools want to be promoting would also need to be addressed.

⁴ www.cdttl.nus.edu/publications/CDTLINK/link2/obe.htm

⁵ Qualifications and Curriculum Authority (2005) Framework for Achievement: Questions and Answers, pp.1.

Issue 3.

Choice of subjects or choice of subject packages

Although it is not stated, the credentialing requirements and the way that senior secondary curriculum in Victoria is delivered appear to be based on the assumption that students are rational consumers who are able to make reasonable decisions that are in their best long-term interest and that schools are mindful of the needs of all students and to the best of their ability structure their senior curriculum options accordingly. Practice⁶ would suggest that this often is not the case.

Many schools have a restricted senior secondary subject range and consequently, many students are required to choose a study program that is made up of apparently unrelated subjects. The general exception to this pattern is provided by the science student who is in most cases able to select a coherent set of studies because most schools give priority to ensuring that these students are catered for.

Whilst a course made up of unrelated studies could still be engaging and will not hinder the student earning the qualification, it could also fail to develop students' appreciation of the inter-relatedness of knowledge, their ability to transfer knowledge and skills learned in one area to address problems posed in another and limit their opportunity to engage with what could be described as a coherent study package – in design, performing arts, music production and business for example.

The VQA could play a role (perhaps through stipulating rules governing satisfactory completion) in encouraging schools to offer coherent packages of studies. The current arrangements perpetuate the situation where the top 12-16 studies are offered by nearly all schools and the vast majority of subjects available for study are seldom available for students to choose. Even in areas where there are several smallish schools, the pattern is for a duplication of the same offerings rather than a differentiation to cater for the different needs and interests of students in the area. A more interventionist packaging of studies might also provide an impetus for schools to identify a specialism, and to work with other schools in the area to ensure that a range of specialisms are on offer.

The International Baccalaureate provides an alternative model of a 'coherent package' as it is built on studies that are constructed around key themes, practices and values.

⁶ For example, school size greatly compromises student choice and school capacity to offer courses, and the quality of counseling offered could also have an impact on student choice. Student backgrounds and expectation also differ substantially.

Issue 4.

Catering for greater diversity in the senior years

Student decisions about post compulsory pathways have changed so that past distinctions between the curriculum of the compulsory and the post compulsory years are becoming increasingly blurred. Large numbers of students, perhaps as many as 45% in Year 10 in Victoria are now undertaking a VCE study, and just as many students are undertaking vocational programs as a means of identifying the pathway most suitable for them. This early introduction to units that carry credit towards a formal qualification will hopefully encourage more students with diverse learning interests and abilities to remain through to the end of senior secondary schooling. Another strategy that several jurisdictions (e.g. WA, SA and Victoria) are examining in order to encourage students to complete secondary education is increasing the compulsory age of schooling to 17. If retention through to Year 11 and 12 increases and the range of interests and abilities in these years expands, this will place increased strain on the current qualifications to meet these diverse learning needs.

What will be required to keep nearly all young people engaged in learning through to the end of Year 12? Would greater modularization and specialization assist?

It seems likely that there will be a need for a greater diversity in the way curriculum units are constructed in terms of the balance between academic and applied learning, between the time required to complete a unit and in the way that units/subjects are timetabled in schools. Perhaps some courses could be modularized or designed as inter-connected units/topics that could be delivered, as for example a three-day module or a two week module incorporating an assessment component. This would enable students to build their portfolio of completed units in a variety of ways.

Issue 5.

Promoting an international outlook

For many years social commentators have observed the increasing international dimension to life and work. In order to adequately prepare students to live, work and learn in the region and beyond, there appears to be a case for developing studies that heighten students' awareness of and engagement with Asian and other cultures and for ensuring that all students are exposed to learning of this kind.

The question for the VQA is how might students' experience of senior secondary curriculum better equip them for the roles and responsibilities of global citizenship?

This issue has been addressed by the IB which is avowedly international in outlook. It seeks to develop young people who are outward looking, aware of other cultures and are learning a second language and it seems that to sustain its relevance such an orientation should permeate senior secondary studies in the VCE. The UK⁷ is also pursuing projects designed to develop a global dimension in the school curriculum.

⁷Developing a global dimension in the school curriculum, DfES, 2003
www.dfes.gov.uk/publications/guidanceonthelaw/115_00/
www.globalgateway.org.uk

Issue 6.

Information and Communication Technology

Keeping pace with change

Technology is continually changing the practice of subjects in the world outside school and the current processes used and the time it takes to develop and accredit curriculum would suggest that what is being learnt in school will always be behind what is really happening in society. New development and accreditation processes will need to be instituted to enable learning in those areas where knowledge and processes are rapidly changing to maintain currency. This suggests that industry standards should determine the course content, that course content need to be updated regularly and aligned to software developer courses (e.g. Microsoft systems engineering) or that industry courses are accredited for inclusion within senior secondary studies.

Another issue for the VQA to ponder is what processes might be required to produce a more evolutionary approach to curriculum development?

Technology as an aid to learning

Schools are still relatively primitive in terms of using technology as a tool for thinking, making or doing. This is not only because computers are not as ubiquitous and easy to use as a telephone but also because course developers and teachers are not skilled in knowing how technology can be used more effectively to help develop learners' enquiry skills, logical reasoning, analytical thinking and creativity or to support independent and collaborative learning. Most technology in schools used by students still appears to be mainly used for researching (replacing books), game playing in primary years (e.g. vocabulary and maths games), presentations and report writing. It can also provide 'authentic' experiences, giving learners immediate access to richer, engaging primary source materials and the opportunity to take part in authentic, collaborative problem-solving.

Nevertheless, despite the relatively low daily use of computers and the limited ways it is generally applied, it seems that ICT can increase learners' motivation, through greater engagement and increased control over their own learning processes.

However, the way that the 'academic' curriculum is constructed in the senior years often provides little scope or encouragement for experimenting with ICT and for using ICT as a tool to assist one's learning.

Which raises the question of what process needs to be set in place to develop a curriculum that requires students to use technology as a learning aid (e.g. hypothesizing, testing and modeling) as well as an aid to research and the storage of learning materials and student's written work.

Issue 7.

Australian Certificate of Education

The Minister for Education, Science and the Training has commissioned the Australian Council for Educational Research (ACER) to develop options for an Australian Certificate of Education that is proposed to become a nationally and internationally recognised and agreed system for assessing the academic standards of students completing Year 12.

As this initiative was announced in May of this year it is difficult to say very much other than it will be a development that the VQA will need to monitor closely.

PART B

Descriptions of post-compulsory qualifications in other jurisdictions

The descriptions below provided a brief outline of the nature of the qualification referred to and highlight aspects of the qualification that are somewhat unusual or that provide a direction that the VQA might wish to investigate further.

1. International Baccalaureate (IB) Diploma⁸

Overview

The International Baccalaureate (IB) Diploma program emerged from the need to provide a consistent standard of education for students in international schools.

IB programs are now available for the full range of primary and secondary schooling. The IB's Primary Years Program (PYP), for students aged 3 to 12, focuses on the development of the whole child and is designed to meet children's academic, social, physical, emotional and cultural learning needs. The PYP serves as an introduction to the IB's Middle Years Program (MYP), but it is not a prerequisite for this or for the IB Diploma Program. The Middle Years Program is designed for students between the ages of 11 and 16. The outcomes sought by the IB programs include knowledge, concepts, skills, values and actions. These programs provide students with learning experiences that are consistent with the various strands of VELS.

In the IB Middle Years Program teachers assess student work with guidance from the International Baccalaureate Organisation (IBO) according to prescribed, published criteria that state final levels of achievement in each discipline.

The IB offers a broad and balanced curriculum. Wherever possible the subjects are approached from an international perspective. Students take six subjects, three at a higher level (240 hours), and three at a lower (150 hours), including English, a second language, Mathematics, a Science and another Humanities subject. They also do an interdisciplinary theory-of-knowledge course intended to stimulate critical reflection, a 4,000-word essay on a topic of their choice, and 150 hours of community, sports and creative activities. Students are awarded marks out of seven for each paper, and get a final overall score.

The International Baccalaureate Organisation IBO provides IB world schools with⁹:

- detailed curriculum guidelines for each program and subject area
- teacher training workshops
- online access to 3,000 education resources, subject area experts, and discussion sessions with teachers at IB schools throughout the world
- external assessment of DP students' work
- procedures for school-based (internal) assessment of student work.

⁸ www.ibo.org

⁹ www.ibo.org/ibo/index.cfm?page=/ibo/about&language=EN

There are no formal externally set or externally marked examinations. The IBO instead validates the standards of the authorised school's assessment through a process of external moderation. This procedure is required for all schools wishing the IBO to issue certificates to their graduating students.

The IBO provides a secure web-based service for its 4,400 examiners. The site enables them to receive marking instructions and submit information to the IBO, such as reports and marks for candidates' work. An additional function of the site is to provide examiners with training material and to make it easier for examining teams to communicate, with the aim of improving the accuracy and consistency of marking candidates' work.

Over the last 5-10 years, the candidature for the IB Diploma Program has doubled, with the composition of IB schools shifting from predominantly international schools 20 years ago, to around two-thirds of candidature coming from national schools. In the US, which has seen much of the increase, many of the state schools adopting the IB have been those seeking to improve their standards and branding in the community, rather than top schools.

The Diploma programs are regulated by the IBO and are delivered in over 1500 accredited schools in 110 countries. Worldwide, around 18,000 received the internationally recognised International Baccalaureate (IB) Diploma. IB is accepted as an entry qualification by over 1,700 universities in around 110 countries, including all of North America, Western Europe, and Australia¹⁰.

Note 1:

Twelve non-government schools and one international school in Victoria are accredited to deliver the IB. In addition, two other schools are in the process of applying for accreditation to offer the IB Diploma.

Note 2:

No single country/state has adopted the IB as its national/state curriculum, because the IB program's objective of providing a common curriculum worldwide to enable geographically mobile students to transfer from one IB school to another works against any significant move to tailor the curriculum to meet the specific objectives and needs of an education system. It is also costly to deliver the IB¹¹. However, experience interstate¹² suggests that early adopters would be likely to attract increasing enrolments.

Note 3:

Fee for service assessors and moderators are a core element of the IB and standards are determined on an international basis.

¹⁰ <http://nefs.dest.gov.au/consistency.htm>

¹¹ The costs of accreditation, annual fees and examination fees are likely to exceed \$10,000.

¹² <http://www.mtncreekshs.qld.edu.au/>

2. European Baccalaureate¹³

Overview

The European Baccalaureate is awarded by the 12 European Schools in the EU¹⁴, which offer education to the children of EU staff. Students do Mathematics, English (or a student's native language), History, a foreign language, Science, Geography, Ethics and Religion, and PE, for two thirds of the week, and elective subjects for the rest of the time. A large part of the curriculum is studied in the student's second language. The first awards of the European Baccalaureate were made in 1959.

The European Baccalaureate:

- is taken at the end of the seventh year of secondary education.
- is a two year course and assesses the performance of students in the subjects taught in secondary years 6-7
- is administered and directly supervised by an external examining board appointed annually by the Board of Governors.
- Examining Board, which oversees the examinations in all the language sections, is chaired by a university professor and is composed of examiners from each of the Community countries
- is fully recognised in all the countries of the European Community, as well as in a number of others

The assessment of each student consists of two elements:

- A preliminary mark based on course-work, oral participation in class and tests during the seventh class.
- A series of written and oral examinations at the end of the seventh class.

¹³ www.restena.lu/ecole_europ/ee_bac.htmlen.wikipedia.org/wiki/European_Baccalaureate

¹⁴ http://en.wikipedia.org/wiki/European_Baccalaureate

3. Australian Capital Territory Year 12 Certificate¹⁵

Overview

In the ACT, nine secondary colleges cater for Years 11 & 12 student learning.

The ACT Board of Senior Secondary Studies (ACTBSSS) is the statutory authority responsible for the certification of senior secondary school studies in government and non-government schools in the Australian Capital Territory. The principal functions of the Board include the responsibility to:

- accredit or register courses taught by recognised educational institutions
- approve recognised educational institutions for teaching vocational education courses
- establish guidelines for the development of courses (Course Frameworks)
- establish principles and procedures for the assessment of students and the moderation of those assessments
- provide certificates and transcripts of students attainments

The ACT operates a system of school based curriculum and assessment within the policy and procedures of the Board. Colleges determine the courses (and units) that they offer to the students. There are no compulsory courses or units. Assessment in the ACT is continuous school based assessment. There are no examinations set by a central authority for any subject.

Course documents are based on the appropriate Course Frameworks. These courses are proposed and developed for accreditation by colleges. Course developers are responsible for detailing the content, across-curriculum perspectives and teaching/learning strategies that implement the goals and promote student achievement within identified areas of knowledge and skill. Courses are either classified as Type 1 or Type 2. A Type 1 course has been developed by a single college. A Type 2 course has been developed by a group of colleges. The Board provides guidelines for the development and accreditation of courses.

The ACT Year 12 Certificate is awarded to all students who successfully complete an approved program of study in Years 11 and 12 within the ACT senior secondary system of education. Candidates can complete an ACT Year 12 Certificate through a package of studies as a Standard Student; a Mature Age Student; a Repeat Student; or an Older Student.

The requirements to complete a package are defined in terms of standard units. One standard unit has a minimum of 55 hours of timetabled class time over one semester. A Standard Student must complete the equivalent of at least 17 standard units. A standard unit is a combination of lessons, assignments, excursions, tests, etc. organised around a particular theme and offered over a specified period of time, e.g. a semester. A course is a set of standard units which are related to each other in a coherent way.

Courses have differing values, indicating the depth of study given to the particular subject area. The depth of study is indicated by the labels: minor, major, major-minor and double major. Minors require a minimum of the equivalent of 2 standard units, majors the equivalent of a minimum of 3.5 standard units, major-minors the equivalent of a minimum 5.5 standard units and double majors are worth the equivalent of a minimum of 7 standard units.

¹⁵ www.decs.act.gov.au/bsss/welcome.htm
www.decs.act.gov.au

There are four different types of units or courses:

- A courses are educationally sound and appropriate for students studying in Years 11 and 12
- T courses are A courses that provide appropriate preparation for higher education
- R units or courses are appropriate for students in Years 11 and 12 and are usually designed to provide personal development, recreational or community service activities
- M courses provide appropriate educational experiences for students who satisfy specific disability criteria.

A and T courses can have vocational qualifications attached. Vocational courses are learning programs which lead to a Vocational Certificate or Statement of Attainment as defined by the Australian Qualifications Framework (AQF). Students who are assessed as competent in vocational competencies receive a separate vocational qualification.

The basis for grading a student's achievements in the course are the criteria and standards specified in the relevant Course Framework. Grade Descriptors outline standards that are based on criteria against which student work is assessed in particular units of study and the letters A, B, C, D and E are used to represent the specific descriptions of student achievement relative to unit objectives.

Candidate's grades are determined by externally-moderated school-based assessments. This assessment is criterion-based (i.e. teachers assess student's work against explicit criteria) and standards referenced (i.e. teachers grade students according to agreed standards across the system). Students are awarded grades in all units that they study, and scores and grades in T units. Grades that are awarded in A, T and M units are verified by structured, consensus-based peer review model of moderation, and statistical moderation is applied to T course scores.

Moderation within the ACT encompasses structured, consensus-based peer review of Unit Grades for all accredited courses, as well as statistical moderation of course scores, including small group procedures, for 'T' courses.

Two formal documents are issued to ACT senior secondary system students by the ACT BSSS at the completion of Year 12:

- Year 12 Certificate which lists courses and grades in all units completed during Years 11 and 12;
- Tertiary Entrance Statement (for eligible students) on which the Universities Admission Index (UAI) is reported.

The Board and Registered Training Organisations (RTOs) issue:

- Vocational Certificates which are recognised within the Australian Qualifications Framework. These certificates provide the level and competencies achieved by the student under the relevant industry Training Package.
- Statements of Attainment which are recognised within the Australian Qualifications Framework. These statements list the competencies achieved by a student under the relevant Training Package.

Note:*Inter-disciplinary courses*

Three examples of course design frameworks¹⁶ that incorporate thinking, workplace or inter-personal learning skills are the Transition Education Course Framework, the Contemporary Transitions Course Framework and the Theory of Knowledge Course Framework.

Courses written under the Transition Education Course Framework aim to provide students with the skills necessary to make a smooth transition to post school options and to participate in society in a meaningful and effective manner. The type of courses most suited to meeting this aim are those which focus on an understanding of the workplace, social and independent living skills.

Courses written under the Contemporary Transitions Course Framework aim to develop life skills and employability skills from a cross-curriculum community-based learning model.

Courses written under the Theory of Knowledge Course Framework explore the nature and communication of knowledge and related concepts, such as truth, belief, objectivity, reason, worldview, narrative and myth. It is also concerned with the similarities, differences and connections between various kinds of knowledge.

Cross-discipline studies are promoted through the Cultural Studies Framework. This framework offers a coherent approach to analysing and comprehending the social, historical, geographical, political and economic factors that have influenced and continue to influence the development of specific cultures. Through studying courses based on this Framework, students learn to make sense of the world they live in and to exercise judgement and responsibility as participants in that world. Students gain perspectives and understandings that help them appreciate social and cultural complexity, respect difference and act in informed and ethical ways.

¹⁶ <http://www.decs.act.gov.au/bsss/frameworks.htm>

4. New South Wales Higher School Certificate¹⁷

Overview

Responsibility for the curriculum in the compulsory years in NSW rests with the NSW Board of Studies.

The Higher School Certificate is an internationally recognized credential that provides a strong foundation for tertiary qualifications, vocational training or employment. There are about 150 Board Developed Courses available and a large range of Board Endorsed Courses.

In relation to the Higher School Certificate, English is the only compulsory Higher School Certificate subject. To be eligible for the award of the Higher School Certificate students must satisfactorily complete at least 12 units in a Preliminary study pattern and at least 10 units in a HSC study pattern. Both study patterns must include¹⁸:

- at least six units of Board Developed Courses
- at least two units of a Board Developed Course in English
- at least three courses of 2 unit value or greater
- at least four subjects.

The Preliminary component of a course must be completed before commencing the HSC component. There are a few exclusions that may affect course choices. The external examination accounts for 50% of the HSC mark, with the remaining 50 % being moderated school assessment.

¹⁷ www.dse.nsw.edu.au

www4.boardofstudies.nsw.edu.au/

¹⁸ http://www.boardofstudies.nsw.edu.au/schoolcertificate/pdf_doc/studying_for_hsc_05.pdf

5. Queensland Senior Certificate¹⁹

Overview

Responsibility for the curriculum in the compulsory years in Queensland rests with the Queensland Studies Authority.

In 2002 an Education and Training Reforms for the Future: White Paper was published that sets out a package of reforms including legislation to raise the school leaving age to 16 and an expectation that all students will complete either the Senior Certificate (equivalent of the VCE) or a VET Certificate III.

In order to be eligible for the QSC students must satisfactorily complete 20 units of Queensland Studies Authority subjects, including at least three subjects for four semesters each (12 units). Student achievement is determined by external moderation of continuous school-based assessment undertaken within the school. There are no state wide examinations or assessment tasks.

For higher education consideration, the student must sit a seven hour (taken over two days) state-wide common skills QSC Test. Scores on this test provide a measure of achievement across the curriculum and for scaling different groups of students.

¹⁹ www.education.qld.gov.au/
www.qscc.qld.edu.au/kla/other_studies/index.html#dev

6. South Australian Certificate of Education²⁰

Overview

Responsibility for the curriculum in the compulsory years in South Australia rests with the South Australian Department of Education, Training and Environment. Curriculum is developed by schools in the context of the South Australian Curriculum Standards and Accountability Framework (SACSA). The Senior Secondary Assessment Board of South Australia (SSABSA) is responsible for awarding the South Australian Certificate of Education (SACE) and the South Australian Matriculation (SAM).

South Australian Certificate of Education (SACE)

SACE exists to encourage students to successfully complete secondary education, and to attest to their readiness for entry into post-school studies and employment. To meet the requirements of the certificate, students need to take a balanced range of studies, generally over two years, although no particular time limit is specified.

Stage 1 of the SACE is usually studied in Year 11 and Stage 2 of the SACE is usually studied in Year 12. Students may negotiate alterations to this schedule. The studies include English or English as Second Language, Australian Studies, and Mathematics at Stage 1 (Year 11), as well as a selection from other subject groups. To be awarded the SACE, students must:

- study 22 semester (half-year) units, some of which may be combined to form full-year programs;
- reach a level of satisfactory achievement in at least 16 of the 22 units;
- meet the subject pattern requirements (at least five 2 unit Stage 2 –Year 12 - subjects, included among the five must be four Higher Education Selection Subjects - HESS);
- satisfy a writing-based literacy requirement (WBLA).

HESS subjects can be any combination of PES (publicly examined subjects) and PAS (publicly assessed subjects) that contain common assessment tasks. PES subjects contain a state-wide external examination worth 50% and moderated school assessment of 50%. While PAS subjects contain a common state-wide assessment task that counts for 30% and moderated school assessment of 70%.

To qualify for the SACE²¹, a student must undertake specified studies at Stage 1 and Stage 2, study up to 8 free choice units, and meet the required standards.

At Stage 1 (usually Year 11) there are literacy, numeracy and Australian studies requirements and requirements for breadth. The literacy requirement is a writing-based literacy assessment²² based on a folio of work consisting of four pieces of writing in English, each at least 250 words long, produced in the normal course of SACE studies and successful completion of 2 units of English, English as a Second Language, or Communication for the Hearing-impaired. The numeracy requirement is successful completion of 1 unit of Mathematics. Candidates also need to complete 1 unit of Australian Studies. The requirements for breadth are 2 units from the arts/humanities/social and cultural studies group of subjects (Group 1) and 2 units from the mathematics/science/technology group of subjects (Group 2).

²⁰ www.sacsa.nexus.edu.au
www.dete.sa.gov.au

²¹ <http://www.ssabsa.sa.edu.au/docs/ssabsadocs/opman2005.pdf>

²² This requirement will cease at the end of 2005

At Stage 2 (usually Year 12) there are requirements for breadth and depth. Breadth requirements are that candidates undertake 2 units from the arts/humanities/social and cultural studies group of subjects (Group 1) and 2 units from the mathematics/science/technology group of subjects (Group 2). To meet the depth requirements candidates must undertake three 2-unit sequences.

Students can select up to 8 free choice units from the Stage 1 and/or Stage 2 subject offerings. Decisions about the free choice units to be studied are guided by what students plan to do after finishing their SACE and by the range of subjects offered by their school. Some community-based learning²³ (e.g. community activities outside school and part-time work) can count for up to 8 units 19 of the 22 required to complete the SACE, provided candidates present evidence of having attempted some of the tasks according to the criteria negotiated in a contract of work. Fifty nominal hours of successfully completed VET units of competency are considered by SSABSA to be equivalent to 1 free choice unit in the SACE.

Successful achievement of vocational education and training outcomes leads to recognition against endorsed national competency standards and leads to a qualification under the Australian Qualifications Framework. Vocational education and training contributes towards the SACE in three ways²⁴:

1. First, as vocational education and training embedded within SSABSA accredited subjects. This strategy recognises the vocational education and training outcomes related to endorsed national competency standards, which have been embedded and assessed within SSABSA accredited subjects. This is referred to in this Policy Statement as 'VET embedded within SSABSA accredited subjects'.
2. Second, as vocational education and training recognised as SACE units. This strategy recognises vocational education and training outcomes related to endorsed national competency standards towards completion of the SACE. This is referred to in this Policy Statement as 'VET recognised as SACE units'.
3. Third, as vocational education and training approved as SSABSA subjects. These are referred to in this Policy Statement as 'SSABSA VET subjects'.

These three mechanisms by which recognition is given to students' achievements in vocational education and training provide opportunities to package vocational education and training, with SACE studies, to suit the needs and aspirations of individual students. The decision about which strategy/strategies to use is a school decision.

To meet the standards required to qualify for the SACE, a student must:

- reach at least recorded achievement in 22 units of study
- reach satisfactory achievement in at least 16 of the 22 units, including at least 6 units (three 2-unit sequences) at Stage 2
- satisfactorily complete the four components of the writing-based literacy assessment.

There are no external exams at Stage 1 of the SACE (usually Year 11). At Stage 2 of the SACE (usually Year 12) some subjects have external exams, while others are assessed using other tasks, such as practicals and research work. SSABSA provides schools with resources in the form of curriculum statement documents and learning area manuals, including the Flexible Learning Programs Manual, to support understanding of assessment criteria and uses a combination of four forms of standards validation (Central moderation, School-based moderation, Group moderation and Statistical moderation).

²³ <http://www.ssabsa.sa.edu.au/comlearn/programs.pdf>

²⁴ Recognition of VET outcomes towards the SACE policy statement can be found at <http://www.ssabsa.sa.edu.au/docs/policy/vet-pol.pdf>

Note 1:*Issues regarding community based learning*

Keightley and Bauer ²⁵ (2003) have identified several issues in regards to recognizing student learning gained through their participation in community based programs. These include the different degrees of capacity in community agencies to document (quality assure) student learning and the need to:

- move beyond verifying participation to verifying learning outcomes
- balance the informality of community work with the formalities required by SSABSA
- establish consistency when determining the relative value (number of unit points) placed on a community learning experience,
- not equate the level of responsibility given to a student with the value of learning
- train community workers in the collection of evidence of learning.

Note 2:*Review of Senior Secondary Schooling*

The South Australian Government is undertaking a review of the senior secondary years ²⁶, the most significant in a decade. The intended outcome is more relevant and contemporary education, improved student retention, completion and success. Research ²⁷ had indicated that two-thirds of students and 44% of teachers perceived that the SACE did not meet students' needs. Nationally 80% of teenagers complete year twelve, whereas in South Australia only 40% completing year twelve, making South Australia the lowest ranked state in Australia in terms of Year 12 completion rate.

The terms of reference for the review are to:

- identify the characteristics of a relevant and contemporary certificate of education
- develop clear procedures so that students, parents/caregivers, teachers and employers understand the certification process
- provide a mechanism that ensures the continuous improvement of the certificate of education so that it responds to the changing needs of young people and better supports the economic and social development of the state
- advise on requirements for legislative reform.

²⁵ Keightley, J. and Bauer, R. (2003) Recognition of other learning, Australasian Curriculum, Assessment and Certification Authorities Annual Conference (Reconceptualising senior secondary certificates: issues and solutions), 29-31 July, 2003.

²⁶ www.sacereview.sa.gov.au

²⁷ http://www.sacereview.sa.gov.au/files/links/Discussion_paper_4_may_04.pdf

The Discussion Paper on the South Australian Certificate of Education (SACE) ²⁸ Review highlighted several issues that needed to be addressed through the review. These were framed in the following way:

- How do we address the different needs and interests of the diverse range of students?
- What should be learned in senior secondary education and how should learning be organised?
- Is flexibility in the curriculum an important aim?
- What are the implications of university selection?
- What do we mean by ‘senior secondary’ education?
- How should learning in the senior secondary years be assessed?
- What is the significance of a senior secondary certificate and what should it certify?

Note 3:

School leaving age

The South Australian government has signaled its intention of increasing the school leaving age from 16 to 17 by 2010 as one means for increasing senior secondary completion rates.

7. South Australian Matriculation (SAM)

Overview

The South Australian Matriculation program ²⁹ (SAM) is an internationally recognised one year pre-university matriculation program administered by SSABSA and offered to international students and studied in their own country. Students who successfully complete the SAM are accredited with the South Australian Certificate of Education (SACE) and provided with a university entrance score used by universities around the world to select students for degree courses.

The SAM program consists of five subjects. At least one subject must be taken from List 1 and at least one from List 2 (see below). Students must take English as Second Language Studies, or English Studies.

LIST 1	LIST 2
Chinese (Background Speakers)	Accounting Studies
Economics	Biology
English as Second Language Studies	Chemistry
English Studies	Information Technology Studies
Legal Studies	Mathematical Methods
Malay (Background Speakers)	Mathematical Studies
Modern History	Specialist Mathematics
	Physics

The SAM is offered at one location in China and five locations in Malaysia.

²⁸ Ibid

²⁹ www.sam.sa.edu.au

6. Tasmanian Certificate of Education³⁰

Overview

Responsibility for the curriculum in the post-compulsory years in Tasmania rests with the Tasmanian Qualifications Authority and with the Tasmanian Secondary Assessment Board for Years 9-12.

The TCE requires satisfactory completion of a minimum of four pre-tertiary syllabus subjects, with at least three being done in Year 12. Pre-tertiary syllabus subjects have both internal school based assessment and external examination, which are both moderated. The external examination is assessed on 40 to 60% of the criteria stated in the syllabus.

Note:

Formal learning

In 2005 the Tasmanian Qualifications Authority developed a new policy that offers recognition to a wide range of formal learning undertaken by senior secondary Tasmanian students. Qualifications issued by recognised formal learning providers are listed on a student's Tasmanian Certificate of Education issued by the Tasmanian Qualifications Authority.

For learning to be considered for recognition on the Tasmanian Certificate of Education it must:

- have an educational aim appropriate for students in the senior secondary phase of education in Tasmania (i.e. those engaged in the final years of secondary schooling); and
- include identifiable generic skills (e.g. communication skills, group work, problem solving skills).

³⁰ www2.education.tas.gov.au/
www.tassab.tased.edu.au

9. Western Australian Certificate of Education³¹

Overview

The Western Australian Curriculum Council is the statutory authority responsible for the certification of senior secondary school studies in government and non-government schools in Western Australia.

In May 1998 the Council began a statewide review of post-compulsory education as it was felt that the existing post-compulsory system did not cater adequately for all students eligible for participation in Years 11 and 12. For example, only two-thirds of all students stay on into Year 12 and, for some groups, the rates are far lower (e.g. less than 50 percent of males in rural areas complete Year 12 and for Aboriginal students the rate is lower again). In addition the WA system locks students into pathways (university, TAFE or work) when they choose their Year 11 subjects in Year 10, consists of three different types of subjects with inconsistent standards and different types of assessment and has only 22 subjects plus Languages Other Than English (LOTE) that can be used for gaining a Tertiary Entrance Rank (TER).

Extensive research and consultation were undertaken to obtain the views of the community on new directions for Years 11 and 12. A discussion paper was followed by the position paper in November 2000 which further developed the positions that had emerged as a result of the consultation process. This paper was released in November 2000 for eight months of intensive consultation and in November 2001 the Post-compulsory Education Review report was issued. In March 2002 a summary of the Post-Compulsory Education Review directions endorsed by the Western Australian Government³² was released.

The concerns highlighted by the review³³ include:

- the failure to capture the interests and aspirations of one-third of students who leave school early and often face bleak employment prospects without further education or training;
- an insufficient emphasis on the transition from school to further work or study and in developing a capacity for, and inclination towards, lifelong learning and adaptation;
- de facto streaming of students into narrow pathways, inhibiting post-school options and restrictions on subject choice for students studying for university entrance in comparison with their counterparts elsewhere in Australia;
- the slowness of the system to embrace and react to the emerging context and accelerating challenges facing education as a result of global change;
- an exclusive curriculum for those confidently expecting to gain access to university only;
- an absence of explicit and public educational standards, clear reporting of student achievement and transparency;
- an assessment and reporting methodology that allocates students' scores according to a pre-determined distribution rather than on the basis of their actual achievement.

As an outcome of the review between 2005 and 2009 a new Western Australian Certificate of Education (WACE) will be introduced for Years 11 and 12 students.

³¹ www.curriculum.wa.edu.au/

<http://newwace.curriculum.wa.edu.au/pages/home.asp>
www.curriculum.wa.edu.au/files/pdf/taskforce_report.pdf

³² <http://newwace.curriculum.wa.edu.au/docs/Summary.pdf>

³³ Curriculum Council (Nov 2001) *Our Youth, Our future: Post-Compulsory Education Review*, Government of Western Australia, p.31.

Currently there are three different types of subjects in Years 11 and 12:

- TEE subjects (22 subjects plus 11 LOTE) - these are the only subjects that lead to university
- Wholly-school assessed subjects (327 inc all D and E coded subjects)
- VET competencies (2002 different units of competence from Training Packages)

The curriculum, the standards and the methods of assessment are very different in each type of subject. This is confusing for students studying more than one type of subject. It is also almost impossible to move from one type of subject to another.

The new WACE will have the following features³⁴:

- Up to 50 new courses will replace all of the current Year 11 and 12 subjects. The new, expanded range of courses is based on the same wide range of fields of study offered at WA universities
- There will no longer be three current types of subjects – Wholly School-Assessed (WSA), Tertiary Entrance Examination (TEE) and Vocational Education and Training (VET).
- All subjects will be considered for the TER, TAFE entrance and other further education opportunities (there will still be some pre-requisites or recommended courses for certain subjects).
- Each new course will have a syllabus comprising:
 - outcomes
 - essential content
 - standards
- There will be one consistent standard for all students, state-wide, which will mean students, parents, universities, training providers and employers all receive meaningful information about a student's standards.
- A student's Tertiary Entrance Rank (TER) will be based on their four best course results.
- 50% of a student's final result will be based on their performance at school and 50% on exams.

To be eligible for a WACE, students must have:

- met the assessment requirements in at least 20 course units (including at least three two-unit combinations); up to eight units can be Council-endorsed (that is, Structured Workplace Learning, VET units of competency, extracurricular or community-based units or university units)
- achieved to an average Level 4 on outcomes from at least five courses (or four courses if eight Curriculum Council-endorsed units are included)
- met the requirement for English Language Competence (Students who study English Literature or English as a Second Language will be required to achieve a grade of at least 'C' in the Year 12 (E code) version of these subjects or achieve a satisfactory standard in the English Language Competence Test.)
- completed four units from an English course
- included all 13 Overarching Outcomes in their course selections
- completed about 20 hours of voluntary service.

Note:

The inclusion of 20 hours of voluntary service as part of the WACE is being trialed in schools.

³⁴ <http://newwace.curriculum.wa.edu.au/pages/publications.asp>

10. Hong Kong Diploma of Secondary Education³⁵

Overview

Hong Kong has commenced the implementation of its reform of senior secondary education and higher education. The new system is called ‘3+3+4’ and is a departure from the current structure of the senior secondary school and the university undergraduate degree, which is called ‘5+2+3’. These numbers signify the time students spend in school and on an undergraduate degree. At present most students in Hong Kong spend 5 years in secondary school (S1-S5) and only those students who win senior secondary places (about one third) can have a further 2 years to pursue further studies in sixth and seventh forms (S6 and S7). Students who achieve high grades on completion of Seventh Form can then go on to university for a 3-year undergraduate degree.

The 3+3+4 reform will mean that all students will be able to access 3 years in the lower secondary system (S1 to S3), and a further 3 years in the senior secondary school (S4 to S6). The current S7 year will no longer be part of secondary schooling, but will become part of further education at the tertiary institutions. The 3-year undergraduate degree will be lengthened by one year and become a 4-year degree. The current two examinations, one at S5 and another at S7 will be replaced by a single examination at S6 that provides for a new single credential, the Hong Kong Diploma of Secondary Education (HKDSE).

The rationale for the changes includes the arguments that:

- Hong Kong society and economy is changing dramatically and the rapid development of new technologies and knowledge and increasing global competitiveness require that Hong Kong nurtures the talents of not just a few people, but all of its human resources and this will be greatly helped by having a bigger proportion of students complete a broadly-based high quality education at school;
- an additional year of senior secondary education for every student and an additional year in university education will raise the overall quality of our young people. Hong Kong’s participation rates in senior secondary education and post-secondary education are low by international standards;
- a narrow knowledge base continues to dominate teaching;
- too much emphasis is placed on assessment as a tool used solely for selection and there is a need to make assessment part of constructive learning;
- there is a need for more developed, integrated and recognised pathways to further education and employment from the secondary school, which can be viable alternatives to the traditional academic path that leads to the university;
- the new system for primary and secondary education better aligns the Hong Kong system with mainland China and the international community, and promotes better international articulation;
- greater flexibility enables schools to tackle the problem of “triple disengagement” (out of a job, out of school, in school but not engaged in productive learning).

³⁵ www.emb.gov.hk/
www.ed.gov.hk/report

The new senior secondary course will introduce more school based assessment and consist of:

- four core studies: two languages (Chinese and English 25-30% of learning time), mathematics (10-15%) and Liberal Studies (LS) (10%);
- choices of 2-3 subjects (20-30%) where students, pending their interest and aptitude, can make choices from different key learning areas, including career oriented studies (e.g. design, performing arts, technologies of food and materials), or build depth of knowledge in a group of related subjects, such as sciences or business;
- Other Learning Experiences (15-35%) consisting of structured opportunities for all students to engage in aesthetics (5% or more), physical (5% or more), moral and civic education, community services and exposure to the world of work (5% or more).

Liberal studies is designed to help students develop multi-perspectives and critical thinking skills and a broadened knowledge base. It has three areas of study:

- Self and Personal Development
- Society and Culture
- Science, Technology and the Environment

All students will be provided with a Senior Secondary Student Learning Profile that records their achievements for the whole senior secondary education. It will include:

- Results of school internal assessment
- HKDSE Results (including School-based Assessment)
- Awards in COS courses (if any)
- Other learning experiences
- Other achievements/awards and significant activities

Note 1:

Hong Kong is examining whether to introduce a “diploma of applied learning” which might run parallel to, and be partially integrated with, the HKDSE.

Note 2:

There are similarities with the International Baccalaureate (IB) in the design of the HKDSE. The IB program has 6 subjects chosen from related learning areas (HKDSE has 6 or 7 including core and electives); an extended essay and theory of knowledge (HKDSE has Liberal Studies as core, including an independent study); and creativity, action, service required for award of the IB (HKDSE has Other learning experiences to be included in the Student Learning Profile).

Note 3:

Personal learning will be addressed by making Liberal Studies a core element of the HKDSE (10% of total lesson time) so that all students in the senior secondary years will study:

- Self and Personal Development
- Society and Culture
- Science, Technology and the Environment.

11. Singapore New A Level Certificate³⁶

Overview

Singapore has developed a new 'A' level curriculum that will commence in from 2006.

The new 'A' level curriculum:

- emphasises breadth of learning and flexibility (subjects have been redesigned and are pitched at three levels of study - H1, H2 and H3)
- is aimed at preparing students well for the rapidly changing world of the 21st century
- emphasises multi-disciplinary learning (students undertake Project Work, and study at least one subject outside their area of specialization)
- enhances students' capacity to learn independently
- encourages students to think critically and innovatively (teaching and assessment are to place greater emphasis on assessing skills such as creative and critical thinking)
- incorporates community and character-building components.

The new 'A' level curriculum comprises:

- Life Skills

The holistic curriculum of the school, including non-academic activities, that helps develop the values and skills of responsible and active citizenship.

- Knowledge Skills

The part of the curriculum that focuses on developing thinking, process and communication skills. These skills are also developed through the content-based subjects.

- Content-based Subjects

The part of the curriculum that provides grounding in content disciplines in three different areas: Languages, Humanities & the Arts, and Mathematics & Sciences. Humanities & the Arts students must take at least one contrasting subject from the Mathematics and Sciences disciplines, and vice versa.

The new three levels of study replace a system that previously had three levels of study but the new H1, H2 and H3 levels are described as offering broader choice than the previous system. H2 is the standard program. H1 is 'half of H2 in breadth but similar to H2 in depth' and H3 offers opportunity for extension (e.g. advanced content, research paper, university module) from H2 subjects. Students would normally take a specialist package (maths/science or humanities /arts) that included 3 H2 subjects (one of which needs to be a 'contrasting' subject), 2 H1 subjects and a General Paper or Knowledge and Inquiry and Project Work.

³⁶ www.moe.edu.sg

www.moe.edu.sg/exams/html/subjects.html

www.moe.gov.sg/cpdd/alevel2006

www.moe.gov.sg/jcreview/JC_Upp_Sec_Review_Report.pdf

Knowledge and Inquiry (KI) provides the opportunity to explore different methods of inquiry in fields like the sciences, the humanities, mathematics and the aesthetics. Students can take KI in place of General Paper. As KI is multi-disciplinary, it can be taken as a contrasting subject for students whose main specialisation is in either the Humanities and the Arts or the Mathematics and Sciences disciplines. There is an independent study component where students are required to work on a research topic of their choice for six months, “so students undertaking KI should be capable of and comfortable with working independently”.

Note:

Graduates from the new A level curriculum who apply for national university of Singapore entrance and the Nanyang Technological university will do so under a new admission framework that supports the objectives of the new curriculum (e.g. contrasting subjects count for admission, subject pre-requisites have been loosened and there is a discretionary admission scheme for 10% of the intake).

12. Ontario, Canada³⁷

Overview

In 2000 Ontario introduced a 'new' Year 11 and 12 curriculum 'designed to ensure that students are well prepared for their futures with a solid foundation in English, math and science and that they have the knowledge and skills they need whether their destination is university, college or the workplace'. Separate courses/subjects were developed to meet the needs of those seeking university placements and those seeking to enter the workforce. Previously Ontario's high school curriculum did not include courses that were specifically designed to give students the wide range of knowledge and skills they will need if they are heading directly to the workplace or into various apprenticeship programs.

In Grades 11 and 12, students will choose from among four destination-related course types: *university preparation*, *university/college preparation*, *college preparation*, and *workplace preparation*. Open courses are also offered in Grades 11 and 12. Students will make their choices on the basis of their interests, achievement, and career goals. Students who revise their educational and career goals and who wish to change from one destination-related stream to another in a particular subject may often do so by taking a transfer course. Transfer courses enable students to achieve the expectations not covered in one course type but required for entry into a course in the next grade and can be taken as a summer course or as an independent-study or partial-credit course within school hours.

Note 1:

All students are required to participate in 40 hours of community involvement before they graduate and they must pass a Grade 10 literacy test to get their high school diplomas. School boards and schools provide remediation and extra support to students who fail the test so they can improve their reading and writing skills and re-take the test in later grades.

Note 2:

One feature of the Ontario senior secondary curriculum is interdisciplinary studies courses that are offered in Grades 11 and 12 and provide students with opportunities to understand the links among discrete subjects/disciplines and to develop their knowledge and skills beyond the scope of individual disciplines to solve problems, make decisions, and present new findings.

Interdisciplinary studies courses³⁸ are designated as "open" or "university preparation" depending on which designation is the most appropriate as a basis for combining other courses and/or expectations. Course content, instructional strategies and assessment procedures should be designed to meet the grade-level expectations for each course. For an interdisciplinary studies package of courses, students must satisfy the prerequisite for each of the courses in the package. An example of an interdisciplinary course is Studies in Education, Grade 12, and University Preparation. This study requires students to examine the history of education and the contribution of key educationalists, to compare learning theories and teaching strategies used in various disciplines, to research education-based careers, and to assess their own plans for lifelong learning.

Note 3:

In Grades 9 and 10, three types of courses are offered: academic, applied, and open. Students must choose between academic and applied courses in each of the core subjects – English, French as a second language, mathematics, science, geography, and history. The two types of courses differ in the balance between essential concepts and additional material, and in the balance between theory and application. Open courses are the only type of course offered in most subjects other than those listed above. They are designed to prepare students for further study in a subject, and comprise a set of expectations that are appropriate for all students.

³⁷ www.edu.gov.on.ca/
www.curriculum.org/

www.edu.gov.on.ca/eng/document/curricul/seccurr.html

³⁸ www.edu.gov.on.ca/eng/document/curricul/secondary/grade1112/inter/program.pdf

13. Welsh Baccalaureate ³⁹

Overview

The Welsh Baccalaureate is a nationally approved certificate formed of two parts:

- Core Studies - consisting of four components i.e. Key Skills; Wales, Europe and the World; Work-related Education; and Personal and Social Education.
- Optional Studies - courses/programs selected from various certificates currently offered (e.g. GCSE, VGCSE, AS/A levels, VCE (Vocational A levels), GNVQ, NVQ, BTEC).

Together, the Core and Options make up the Welsh Baccalaureate Diploma that is currently offered at either Intermediate or Advanced level and a Foundation level is to be developed.

The Welsh Baccalaureate model was developed to address the following aims:

- Inclusion
- Retention
- Completion
- Achievement.

The Welsh Baccalaureate Core provides breadth and balance through the variety of the experiences it promotes. The Core assists students to develop their key skills through experiences which complement the subject specialist knowledge and skills gained through the Optional Studies.

The Key Skills are:

- Communication
- Application of Number
- IT
- Improving Own Learning and Performance
- Working with Others
- Problem Solving.

Communication, Application of Number and IT are known as the 'first three key skills'. Improving Own Learning and Performance, Working with Others and Problem Solving are known as the 'wider key skills'. To gain both the first three Key Skills and the wider Key Skills the students must provide a portfolio of evidence for assessment.

Students will have the opportunity to:

- work with employers (minimum of 30 hours)
- develop entrepreneurial skills (Team Enterprise activity of at least 30 hours)
- participate in community activities
- improve their language skills
- improve their personal confidence.

³⁹ <http://www.wbq.org.uk/>

Students will also have opportunities to make innovative use of computers and other modern learning technologies. Taking part in the *Wales, Europe and the World* and *Personal and Social Education* subjects will help students understand relevant issues affecting Wales and the wider world. The language module provides the opportunity to enhance existing skills, or to start a new course from beginner level.

To gain a Welsh Baccalaureate Advanced Diploma, students must achieve:

- Core Certificate at level 3
- Three key skills at level 3, one of which must be from the first three key skills together with the other three key skills at level 2
- Satisfactory Working with an Employer and Community Participation reports
- Individual Investigation at level 3
- Specified curriculum requirements.
- Options
 - NVQ Level 3 or BTEC National Certificate at pass level or two grades A-E at GCE Advanced or equivalent (i.e. VCE 12 units).

Students in 24 schools⁴⁰ and colleges are currently following the Welsh Baccalaureate. These schools and colleges had a year of preparation and planning. The first 18 schools and colleges began delivering the Welsh Baccalaureate to students in September 2003 with the remaining 6 starting in September 2004. A further 7 schools and colleges joined the pilot in September 2004 for a year of preparation before offering the Welsh Baccalaureate from September 2005.

The total entry for the Welsh Baccalaureate Advanced Diploma in 2005 was 499 candidates, of whom 304 (60.9%) completed the program. 233 candidates have been awarded the Welsh Baccalaureate Advanced Diploma, being 76.6% of the 304 who completed the program.

Note:

Research into the WB suggests that there are potentially significant benefits that can arise if the Baccalaureate structure is adopted for the 14-19 age range. Under the current structure students are required to meet the whole of the Baccalaureate's demands within their post-16 experience whereas in future it is likely that several of the requirements could be satisfied cumulatively across the pre-16 and post-16 phases.

⁴⁰ <http://www.wbq.org.uk/index.cfm?method=content.pilots>

14. United Kingdom ⁴¹

Overview

The Qualifications and Curriculum Authority (QCA) is a non-departmental public body, sponsored by the Department for Education and Skills (DfES), which maintains and develops the national curriculum and associated assessments, tests and examinations; and accredits and monitors qualifications in colleges and at work.

The QCA recently issued a document *Futures: Meeting the Challenge* ⁴² that identifies and discusses the following forces for change.

- The increasing international dimension to life and work
- The need for greater personalisation and innovation
- New understanding about learning
- The impact of technology
- Changes in society and the nature of work

QCA subject teams have also written about progress and current issues ⁴³ for their subjects.

In September 2005 the QCA will publish the results of four forums that discussed:

- What the forces for change mean for subjects?
- How should the current broad aims, values and purposes of education be better embedded into the curriculum and how might subjects best contribute?
- What should be the characteristics of a modern, world-class curriculum?

A levels

Two types of A level certificate are available, each in a range of subjects. The General Certificate of Education A level (which consists of two parts, the AS and A2) and the Vocational Certificate of Education (VCE) A level.

The GCE Advanced Subsidiary (AS) is a stand-alone qualification and is valued as half a full A level qualification. It has three units (assessed at the standard expected for a student half way through an A level course) that contribute 50 per cent of the full A level. The A2 is the second half of a full A level qualification. It has three units (assessed at the standard expected for a student at the end of a full A level course) that are worth 50 per cent of the full A level qualification.

VCE A level

Vocational A levels are qualifications that enable students to develop skills, knowledge and understanding in the vocational area they are studying, and that prepare them for both the world of work and progression to higher education. The formal titles of the qualifications are:

- Vocational Certificate of Education (VCE) Advanced Subsidiary (3 units)
- Vocational Certificate of Education (VCE) Advanced Level (6 units)
- Vocational Certificate of Education (VCE) Double Award (12 units)

⁴¹ www.nc.uk.net
www.dfes.gov.uk/index.htm
www.qca.org.uk/

⁴² http://www.qca.org.uk/downloads/11493_futures_meeting_the_challenge.pdf

⁴³ <http://www.qca.org.uk/13951.html>

The VCE is being restructured⁴⁴ to match GCE in having AS units that are assessed at the standard expected for a student halfway through an A level course. This means that there will be a 6-unit AS VCE as the first half of a 12-unit award. The new VCEs will be available for first teaching in September 2005.

In 2002 the report⁴⁵ of the *Inquiry Into A Level Standards* that was conducted by Mike Tomlinson was released. The inquiry was set up following concerns expressed about the setting of A level standards in July 2002. It made a series of recommendations that were responded to by the Government in 2005 in the form of a White Paper (14-19 Education and Skills). The White Paper outlined a series of proposals designed to:

- tackle low post-16 participation - participation at age 17 is to increase from 75% to 90% over the next 10 years;
- ensure that every young person has a sound grounding in the basics of English and maths and the skills they need for employment;
- provide better vocational routes which equip young people with the knowledge and skills they need for further learning and employment;
- stretch all young people; and
- re-engage the disaffected.

It is too early to say whether and in what form the proposals in the White Paper are being taken up.

⁴⁴ http://www.qca.org.uk/14-19/qualifications/index_a-levels.htm

⁴⁵ <http://www.dfes.gov.uk/alevelsinquiry/docs/Tomlinson%20Final%20%20Report.doc>