

Towards a



national core curriculum for Year 12



Professor Gabrielle Matters

Gabrielle is a Principal Research Fellow and General Manager of ACER's Brisbane office

*In February this year Federal Education Minister Julie Bishop released the report, Year 12 Curriculum Content and Achievement Standards, prepared by ACER. This provides a strong case for a common curriculum core in at least some senior school subjects after a review of curricula found there is already a high degree of consistency in what is being taught, as **Gabrielle Matters** writes.*

This study, undertaken in the second half of 2006, provides the first Australia-wide picture of what is expected of students taking five subjects – English (including Literature), Mathematics, Chemistry, Physics and Australian History – in the final years of secondary school.

The study examined Year 12 curricula in all states and territories and posed three broad questions: What is currently taught in these five subjects across Australia? What is the 'essential' content that all students should be acquiring through these subjects, regardless of the state or territory in which they live? What standard of performance is expected of students in these subjects, and how do these expectations vary across states and territories?

Existing similarities

The degree of curriculum consistency varies from subject to subject across Australia. Consistency is highest in Physics, Chemistry and Advanced Mathematics and lower in English and Australian History.

It was estimated that 90 per cent of the content of Advanced Mathematics courses, 85 per cent of the content of Physics courses, and 95 per cent of the content of Chemistry courses in the senior school curriculum was common across all Australian states and territories.

The same high level of consistency was not evident in Australian History and English courses. There are more than twenty different TER Australian History courses and 18 TER English courses offered across Australia. It is not possible to identify specific topics in History courses while commonality in English courses can be found in the study of text types such as poetry. However, there was significant agreement on the kinds of skills students should develop in Australian History courses and the general types of texts that should be studied in English courses.

Essential content

Opinions were sought from a range of experts on what *should* be taught in these five senior subjects. Experts were asked to review and rate the importance of current curriculum content and to identify other content that they considered important but missing from current curricula.

A high level of consistency in what subject experts considered 'essential' curriculum content was found for Physics, Chemistry and Advanced Mathematics. Most were already included in the curriculum in all states and territories. There were a few examples of essential content absent from curricula in some jurisdictions (see below).

Topics that subject experts considered 'essential' but that are not currently included in all state/territory syllabuses are:

- Physics:** static electricity and electronics
- Chemistry:** analytical techniques
gases in the atmosphere
- Adv Maths:** the binomial theorem*
logic proof*
sequences and series*

* these topics sometimes are covered in other senior mathematics courses

Reviewers were less inclined to identify specific topics as 'essential' for all students to study in Australian History and English. There is no history topic that all reviewers considered essential to the senior curriculum. The topics considered most important were: The Nature and Impact of Immigration, Foreign Policy and Changing Relations, and The Social and Economic Impact of World War I. In English, Prose Fiction was judged to be most essential, followed by Contemporary Literature.



Achievement standards

The study also considered the standards of achievement expected of students in each state and territory through an inspection of readily available assessment materials.

While it was possible in most subjects to identify the kinds of achievements that states and territories value and assess (ie, what students are expected to be able to do), it was not possible to draw conclusions about relative performance expectations (ie, how well students are expected to do these things). For example, it was not possible to judge whether an 'A' in Chemistry in Western Australia represents a higher or lower level of achievement than a 'VHA' in Chemistry in Queensland.

Part of the reason for this is that the Australian states and territories use different terms to describe achievement expectations. Terms such as 'advanced', 'extensive' and 'outstanding' may have unambiguous meanings within particular jurisdictions, but these meanings are not shared across Australia.

Moving forward

This study showed that there is already a high degree of consistency in course content across the country in key subjects, increasing the feasibility of a common curriculum, at least in Physics, Chemistry and Advanced Mathematics.

Based on these findings, it is difficult to justify the continued development of essentially the same syllabus in these key subjects seven times across Australia, the use of seven different ways of examining this syllabus and seven different formats for reporting student results.

The report, therefore, calls for the establishment of a common curriculum 'core' in each of the key subjects to be expressed in terms of subject matter and skills, together with national standards for

assessment to provide comparable student results across the country (see text box). National examinations in Chemistry, Physics and Advanced Mathematics would provide results that could be compared across Australia for the first time.

Since the release of the study there has been increasing interest in the concept of a common curriculum. Both the Australian Government and federal opposition have announced intentions to pursue a national curriculum in some subjects. Employer groups such as the Australian Chamber of Commerce and Industry (ACCI) have echoed calls for greater consistency in curriculum and the reporting of results so that employers can easily compare the standards achieved by prospective employees.

It should be a relatively straightforward matter to reach agreement on national curriculum consistency in senior subjects such as Chemistry, Physics and Advanced Mathematics. It may also be possible to achieve national agreement on common standards and methods of reporting student results, and agreement on some common assessments and examinations. And, in doing so, it would be vital to agree on a common language to describe curriculum and assessment (including moderation) and a common nomenclature for reporting results on certificates.

ACER welcomes the debate taking place on national curriculum and curriculum reform in general. ACER will continue to take a leading role in the debate and push for bold national responses on curriculum issues. ■

Further information:

The report, *Year 12 Curriculum Content and Achievement Standards*, by Gabrielle Matters and Geoff Masters is available on the DEST website at

<http://www.dest.gov.au/schools/year12study>

A curriculum core

Curriculum 'core' in a subject could be expressed in terms of subject matter (eg, topics, text types, big ideas and concepts) and skills (both subject-specific and generic). It should:

- ensure sustained engagement with central concepts and principles in order to develop deep understanding;
- relate these central concepts to the world that students understand;
- express central concepts in language that is familiar to students;
- be developed to minimise overlap or duplication of core content across subjects;
- ensure the integration of academic content with the teaching and learning of higher-order thinking skills (ie, not privilege generic skills over conventional knowledge categories);
- require the development of factual (or declarative) knowledge. Students must learn facts, concepts and procedures and must be able to demonstrate and apply this knowledge (eg, to problems, performances); and
- strike a balance between everyday relevance and application and more esoteric knowledge.