Chapter Ten

Post–school Transition

Students who complete the Western Australian Certificate of Education seek a variety of post-school opportunities in employment, training and higher education. There tend to be more people seeking entry into each of these sectors than there are places available.

In 2000, approximately 36 percent of year 12 students left school and did not directly enter a university or TAFE college. A further 24 percent enrolled in a TAFE college or another form of training, at the beginning of the year. It is noted that there is a mid-year enrolment for TAFE, which increases the proportion of students who select this option.

While 40 percent of students completing year 12 proceeded directly to university study, this represented only a portion of the number eligible. Although 92 percent of students with a TER applied for tertiary admission, only 78 percent enrolled in university courses. It should be noted that, in Western Australia, the number of university places cannot be increased without changes to the current funding model imposed by the Commonwealth Government.

Nonetheless, the Council is anxious that university selection does not dominate the goals of the school systems and the broad needs of students.

Identifying the standards

Given that the majority of post-compulsory school leavers apply for entrance to tertiary programs, there is a need for a process by which universities and TAFE colleges can rank students for selection into courses. Nationally, when selecting school leavers, higher education institutions use a summary measure of their performance in year 12 that brings onto one scale the results in specific subjects. This measure is accepted in all States.

The use of a standards framework with scales of achievement will enable universities and TAFE colleges to identify performance standards to assist in the process of selection.

It is acknowledged that universities and TAFE colleges may well continue their existing practice of using a competitive ranking process to select prospective students, and that this process must have what is known as predictive validity. In the case of universities, the current TER has proven to be the best available predictor of how likely students are to succeed in the first year of university study and, to a lesser extent, how likely they are to complete university courses (Everett & Robins, 1991).

While the Curriculum Council will continue to make student achievement data available to universities and TAFE, each of these sectors will utilise these data according to their own entry requirements. This is a process over which the Curriculum Council has no jurisdiction.

However, negotiations, with universities, the Department of Training and Employment and VET training providers, as required by the *Curriculum Council Act 1997*, will occur in order to identify requirements and procedures for admission, and to ensure that these do not dominate the goals of the school system and the broader needs of students.

From school to employment

The new arrangements will provide for reporting levels of achievement for outcomes within each course of study. This should be useful for employers, as the comprehensive portfolio of certificates to be issued to students will help them to select future employees using criteria that relate accurately to the purposes of their fields of employment and provide comprehensive statements about the diverse range of student achievement.

The Council understands that the portfolio of certificates will not be the sole criterion used for employment. Comments on school reports and references will continue to be important supplements to the Curriculum Council's certificates when making judgements about the qualities a person possesses.

After a student has been enrolled with the Curriculum Council in at least one course of study for a year, a Record of Achievement will be generated as part of the Folio of Achievement. When students exit from school for employment, they will be able to download their appropriate certificates from the Internet.

From school to TAFE

Nearly one-quarter of the year 12 students leaving school enter a TAFE college. Providers of vocational education and training will be able to refine their selection process to encompass the information available through this model.

Levels of achievement for all course of study outcomes could be used as valid and reliable elements in TAFE selection. A range of school-managed and externally judged levels of achievement of course of study outcomes will be available to TAFE colleges to rank for selection. This will provide better comparability than the current method of selection based on grades from subjects with wide-ranging levels of difficulty. Under the current arrangements, students are allocated points and these points vary according to the grades achieved and fields of study undertaken. Little account is taken of the varied difficulty levels of the subjects. TAFE colleges will also continue to have available information about the course units that students have completed.

In addition, other methods may be used for selection, including interviews, presentations, portfolios and additional tests.

As is now the case, where achievements towards VET qualifications relate to entrance eligibility requirements, they may contribute to selection into TAFE.

From school to university

While there continues to be competition for university places, the method for selecting students for admission must be subject to public accountability and be fair to all applicants. It is of concern to the Council that there is an inadequate number of publicly funded places compared to other states. This results in an artificially high TER cut-off point by comparison.

In the new system, the universities, through the Tertiary Institutions Service Centre (TISC), will be provided with finer-grained information about students' levels of achievement of the course of study outcomes. To ensure fair selection decisions, a scale with fine levels within each level of achievement will be provided to TISC.

Universities will be able to combine this information onto a single scale, such as the existing Tertiary Entrance Rank (TER), and thus determine the relative positions of students applying for admission. It should be noted that not all universities are members of TISC and therefore do not receive data directly from TISC. At least one university does not use the TER as a sole determinant of university entrance, but rather uses a combination of grades, interview and TER (predicted or actual) for admission purposes.

If, as intended, it can be demonstrated empirically that the scales of achievement are comparable in terms of difficulty across all courses of study, a scaling process will not be necessary. This will depend on teachers and markers being consistent in their application and interpretation of the level descriptors that represent the standards. As explained earlier, some form of statistical moderation and/or statistical scaling will be retained until such a demonstration is available.

The Council proposes to use a measurement expert group to evaluate trial data and to recommend the most appropriate form of statistical moderation. This group could also provide advice on how best to use the data for ranking purposes.

As is now the case, the grades achieved for units will not contribute to the calculation of the Tertiary Entrance Rank. However, because they provide more detailed information about the context of a student's achievement, this information could contribute to other criteria used for university admission.

In addition to the TER, universities may continue to use other methods of selection, including interviews, presentations, portfolios and additional tests.

Phasing in the selection process

During the trialing and adaptation stages, considerable work will be undertaken to test, negotiate and evaluate indicators of importance to post-school destinations. During this phase, no student will be disadvantaged. Time will be allocated for students to organise course of study selections for preferred career options and to understand the new structures and processes.

SUMMARY: Post-school transition

A comprehensive Folio of Achievement, including certificates issued to students, will be provided to all students and will help employers select future employees.

The Curriculum Council will continue to provide student achievement data to TAFE and universities, which will utilise these data according to their own entry requirements.

The Curriculum Council will undertake negotiations with universities, the Department of Training and Employment and VET training providers to:

- ensure that the courses and levels on the scales of achievement are recognised for the purpose of selection into post-school destinations; and
- determine the levels of achievement and associated admission procedures required for the purpose of entrance to a university or to act as prerequisites for vocational education and training.

For selection purposes, the universities, through the Tertiary Institutions Service Centre (TISC), will be provided with finer-grained information about students' levels of achievement of the course of study outcomes.

A range of school-managed and external levels of achievement of course of study outcomes will be available to rank students for selection.

Some form of statistical moderation and/or statistical scaling will be retained until it can be demonstrated empirically that the scales of achievement are comparable in terms of difficulty across all courses of study.

Students will be able to download their appropriate certificates from the Internet when they exit from school for employment.

Trialing will be undertaken to test, negotiate and evaluate indicators for post-school destinations.

Chapter Eleven

Implementing the Changes

Implementation

The Council recognises that the current post-compulsory arrangements do not provide fully for all students or fairly for some. Notwithstanding, the Council is committed to an adaptive implementation strategy that is deliverable and achievable. This intention is based upon the Council's acknowledgement of:

- the need to minimise any impact on students already participating in, or currently preparing for, post-compulsory study;
- the effects on teachers and school organisation; and
- the need for ongoing research and field advice to refine some elements, prior to implementation.

The strategic directions outlined in this report will be implemented in a manner that is cognisant of these identified needs. The changes will be coordinated across the relevant agencies with responsibilities for the development and delivery of post-compulsory education.

The commitment to consultation that has characterised the process to this point will continue to be key a feature of the implementation process.

To ensure that the changes occur in a carefully considered and planned fashion, it is important that they be tested and phased in gradually. The trial strategy will be designed to test the assessment process, including the validity of the scales of achievement, the moderation process and the selection processes for post-compulsory destinations. It will also confirm the assumptions made about professional development needs.

There is a substantial amount of work that has to be undertaken by the Curriculum Council to implement the new arrangements. All courses of study must be developed subject to an accreditation process to ensure that they comply with the new and stringent requirements with respect to assessment and authentication; comprehensive consultative work is needed with regard to standards; and the details of new school-managed assessment arrangements need to be refined.

For schools, time to adjust and plan for the implementation of changes outlined in this report will be critical. The feedback from schools clearly articulated apprehension that changes might be implemented without appropriate lead-in time.

In particular, mention was made of the impact on those students who are currently contemplating career options and subject selections in advance of their senior secondary studies. It is recognised that in order to make good decisions about further study, students need clear information about the choices and processes for the immediate future. Teachers equally need to be aware of proposed changes, particularly with regard to curriculum, assessment and moderation and how the changes might affect their work practices and expectations.

In recognition of these factors, the Council has agreed to an implementation plan that is responsive to advice and further research.

The timeline will be extended and will include extensive trialing and adaptation. Having an adaptive timeline will mean there will be no pressure to make changes faster than is appropriate for schools.

Assessment strategies, comparability of the application of standards, reporting and certification of achievement, and post-school destination selection processes will be tested, negotiated and evaluated during the trials.

Special arrangements will be made with the training sector and universities to guarantee that students from trial schools are not disadvantaged in terms of their entrance eligibility requirements for post-school courses and work opportunities.

It is envisaged that the first stage of trialing will be ready to begin in 2003/4, with all courses having been converted to the new assessment structure by approximately 2009.

A summary of the proposed implementation plan is found at the end of this section.

Professional development

The Council recognises that professional development is a key element in modifying and improving post-compulsory education. It acts both as a means of support for teachers who are undertaking considerable curriculum and organisational development and a catalyst for professional growth.

This view was strongly supported in the feedback provided by schools.

The Council believes that professional development with respect to the proposed changes must be part of a coherent program, rather than a series of disjointed exercises. The trialing process will be used to identify the level of professional development required for teachers of particular courses.

Resources

Some of the changes outlined in this report will require additional expenditure. It is acknowledged that the rate of change will depend not only on the willingness and expertise of teachers and other stakeholders, but also upon the availability of resources.

It is the Council's view that new arrangements relating to course development, assessment research, the trialing process and professional development will depend on additional funding for the Curriculum Council. The adaptive process involving trialing and testing will mean that the existing system will need to be supported in parallel with the new system being developed and introduced. Specifically funding is required for:

- course development which will involve the hiring of writers and teacher relief for teachers to be involved in the development and consultation process;
- the development and testing of outcomes-focused assessment items and the scales of achievement. This will involve consultancy fees for assessment and measurement experts, interstate collaboration and teacher relief for teachers to be involved in the analysis of student work samples;
- the expansion of the moderation process to include equal coverage of the fifty or so courses. Currently there is greater emphasis on the TEE subjects than there is on other subjects in schools; and
- the expansion of the external assessment system to enable all students to participate. These costs are related to the setting, conducting and marking of the external assessments such as examinations.

The budget requirements for the first two items above would be short term, however, the last two are likely to be ongoing as they involve expanding the services to provide an equitable system for all students, which includes catering for a projected increase in the retention rates from 67% to 90%. The extent of the additional funding requirements will be determined by the decisions made as a result of the trialing and testing. The Council is exploring strategies for making the system more efficient as well as more effective for students.

Schools participating in the trial phase will need to be resourced for any additional activities undertaken as part of the trial, for example, participation in evaluation studies. It is critical to the process that implementation of the new arrangements per se be conducted within current resourcing entitlements. Any anomalies arising in the trial phase will provide the basis for refinement.

At each stage, resources (particularly with regard to professional development) will need to be secured through the budget process before any changes are implemented to ensure that the changes can be successfully implemented.

The proposed changes provide for development of an inclusive post-compulsory education system that will accommodate the learning needs, interests and aspirations of all students. This will be a system which has as its key focus the public declaration and achievement of standards of learning; development of an orientation to learning for life; and will equip students to contribute to the social and economic well-being of their community to the fullest of their abilities. The system will contribute to the future of Western Australia, inculcating in our youth the capacity and vision to continue to develop the human and economic resources of our State in the local, national and global contexts. The new post-compulsory system will also contribute to the continued development of a caring and robust community that is outward looking and in which all individuals are nurtured and welcomed on an equal footing no matter what their background. Such a system will return to the people of Western Australia many times over the investment required for its development and implementation.

SUMMARY: Implementing the changes

The Council is committed to an adaptive implementation strategy that is deliverable and achievable in acknowledgement of:

- the need to minimise any impact on students already participating in, or currently preparing for post-compulsory study;
- the effects on teachers and school organisation; and
- the need for ongoing research and field advice to refine some elements prior to full implementation.

Professional development will be a key element in modifying and improving the post-compulsory system and will be provided as part of a coherent program.

The new arrangements relating to course development, assessment research, the trialing process and professional development will depend on the Curriculum Council securing additional funding.

Timeline for Trialing

Trialing	2002	2003	2004	2005
Phase 1 **10 courses of study** **6 schools**	Progress maps completed Course of Study outcomes developed Course of Study • Scales • Content Map subjects as unit packages	Consult on course Statements Refine and Develop new units	Trialing Yr 11 course units and assessment Negotiate special arrangements with post-school destinations for trial schools	Evaluate, refine and modify Yr 11 course units Trial Year 12 course units Negotiate eligibility levels on scales with post school destinations
Phase 2 **20 courses of study** **6 schools**	July 2002 Curriculum Council Endorsed Progress Maps available for course development purposes	Course of Study • Outcomes • Scales • Content Map subjects as unit packages	Consult on Statements Refine or develop units	Trialing Yr 11 course units and assessment Special arrangements with post-school destinations
Phase 3 **20 courses of study** **6 schools**	As above	Course of Study • Outcomes	Course of Study • Scales • Content Map subjects as unit packages	Consult on Statements Refine or develop units

2006	2007	2008	2009
All schools introduce 10 courses of study for Yr 11 students Evaluate, refine and modify Yr 12 course units	**All schools** introduce 10 courses of study for Yr 12 students		
Evaluate, refine and modify Yr 11 Trial Yr 12 Negotiate eligibility levels on scales with post-school destinations	**All schools** introduce 20 courses of study for Yr 11 Evaluate, refine and modify Yr 12	**All schools** introduce 20 courses of study for Yr 12	
Trialing Yr 11 course units and assessment Special arrangements with post-school destinations	Evaluate, refine and modify Yr 11 Trial Yr 12 Negotiate eligibility levels on scales with post-school destinations	**All schools** introduce 20 courses of study for Yr 11 Evaluate, refine and modify year 12	**All schools** introduce 20 courses of study for Yr 12 **All 50 courses of study trialed, evaluated and modified**

Appendices

Appendix 1: Terms of reference

The *Curriculum Council Act 1997* states that the Council must:

4. (b) provide for the development and implementation of a curriculum framework for schooling which, taking account of the needs of students, sets out the knowledge, understandings, skills, values and attitudes that students are expected to acquire;
   (c) provide for the development and accreditation of courses of study for post-compulsory education; and
   (d) provide for the assessment and certification of student achievement.

9. (1) It is a function of the Council to –
   (g) establish, in accordance with the approved curriculum framework, the minimum requirements for graduation from secondary school and for the issue of a certificate of student achievement.

The *Act* states further that:

12. It is a function of the Council to –
   (d) after consultation with such persons and bodies having functions relating to secondary education, vocational education and training, and university education as the Council thinks fit, establish and carry into effect procedures for –
   (i) assessment of achievement of students undertaking post-compulsory education, and the proper conduct of that assessment, including school and external assessment for the purposes of certification; and
   (ii) ensuring the comparability of assessments of student achievement;

   (e) after consultation with such persons and bodies having functions relating to secondary education, vocational education and training and university education as the Council thinks fit, determine the courses of study to be assessed within secondary schools or by the Council for the purpose of entrance to a university or as a prerequisite for vocational education and training;

(f) consult with universities, and persons and bodies having functions relating to vocational education and training, with respect to requirements and procedures for admission to university and vocational education and training, and review from time to time the effects of those requirements and procedures; and

(g) provide information to universities, and persons and bodies having functions relating to vocational education and training, on the achievement of students seeking admission to university or to vocational education and training.

Appendix 2: Local, national and international research

Outcomes–based assessment and standards

From the beginning of the Review, the Council has been determined to focus courses of study on the outcomes students are to achieve. As a consequence, the proposed assessment system will also need to focus on the outcomes, with a number of graduated levels for each outcome.

International best practice in outcomes-based assessment related to post-compulsory education (Andrich, Ball & Tognolini, 2001)

The Council commissioned Professors Jim Tognolini (University of New South Wales), David Andrich (Murdoch University), and Sam Ball (University of Melbourne) to explore and analyse for the purpose of comparison, systems in Australia, North America and Europe (including the UK) and to provide expert analysis and synthesis based on the relevant literature on outcomes-based assessment.

Their research concluded the outcome statements themselves gave the best direction for a design brief for assessment instruments in any particular learning area and at a particular outcomes level (Andrich, Ball & Tognolini, 2001, p. 13). It indicated that, because the outcome statements generate curriculum, teaching and assessment, ideally those outcomes should be utilised to generate school-based and external assessment and this principle should govern the integration of vocational competence and academic achievement. Where vocational and academic components span across jurisdictions, interaction between these jurisdictions will be required in order that the assessments are compatible with the outcomes and have comparable standards ready for integration (Andrich *et al*, 2001, p. 14).

The Curriculum Council had extended the outcomes-based principles in curriculum and assessment beyond those in most other jurisdictions, especially those overseas, its proposals for the post-compulsory years provided a quite sophisticated base for educational and certification purposes.

Andrich *et al*, also questioned many of the rituals associated with the public examination process: for example, why were students instructed not to write notes during the first ten minutes of an examination? Was it necessary to impose a firm time limit? Why couldn't students bring books and other materials into examinations? Why was it necessary to plan an examination for three hours if levels of achievement could be demonstrated in two hours? They recommended that the Council consider these rituals carefully before agreeing to their continuation.

Post-compulsory education for Aboriginal students

Rates of participation and achievement of Aboriginal students in post-compulsory education have long been a concern for educators in general and the Aboriginal community in particular. In recognition of the failure of the current post-compulsory system to provide for most Aboriginal students and at the request of the Curriculum Council's Aboriginal Advisory Committee and the Aboriginal Education Training Council (the AETC is the government's peak policy advisory group to the State), a major research project was commissioned by the AETC to gain detailed and accurate information on which to build new directions. The project was undertaken by AAAJ Consulting Group Pty Ltd and two reports were produced.

Its aim was to document and implement a process for consultation with Aboriginal people with regard to post-compulsory issues and the needs, interests and aspirations of Aboriginal students. A comprehensive report on the responses of Aboriginal people, together with valuable demographic and practical information, was produced and presented to Council. The major findings of this report are found in Chapter 2 and the Council has established a process for monitoring the system as it evolves to ensure that the issues identified are taken into account.

Participation and completion rates of Aboriginal students of post-compulsory subjects

To address concerns about the participation and completion rates, and subjects being studied by Aboriginal students, this aspect of the project involved wide consultation with the Education Department, the Department of Education Services, the Catholic Education Office, universities and TAFE colleges and the use of other sources such as the Australian Bureau of Statistics. Statistical information that had not previously been collated was provided, together with recommendations for the future collection of relevant data. In addition, information about non-accredited post-compulsory courses being undertaken in schools, together with specific examples, was collected and presented to Council.

As a result of the findings of both of these reports, the Council is better informed about the current situation in relation to Aboriginal students and their needs and aspirations. There was strong support in the reports for the flexibility provided by the extensions proposed in the *Position Paper* and, while these will not be part of the new system, the Council has ensured that the same approaches and flexibility can be achieved in other ways. Each course will have a range of units and some of these could provide options for practical approaches to learning and cater for the preferred learning styles of students. There is a strong focus on VET competencies and there are options for the development of locally-based units.

Summaries of both reports are available at www.curriculum.wa.edu.au.

Courses of study

A great deal of consultation, action research and analysis has supported the development of the course of study list, associated course outlines and exploratory courses. In summary, the following work has been undertaken:

Development of course outlines

The list of some fifty courses of study was developed from an analysis of the types of post-compulsory courses in place in other States and in other parts of the world, including the UKA, US, New Zealand and Canada. From this list, outlines were developed through an exploratory process that took into account the range of TEE and Wholly School Assessed subjects currently in place in Western Australia. These outlines were mapped to the Overarching Learning Outcomes and the key aspects of each of the learning area outcomes in the *Curriculum Framework*. Contexts for learning were identified and relevant VET Units of Competency that could be integrated within courses of study were researched. Full details of this work can be found at www.curriculum.wa.edu.au.

Course of study groups

Some 22 course of study groups, representing 565 people from a wide range of interests across the school sectors and systems and other stakeholders were formed to identify issues arising from the proposed courses of study list. Additional groups were convened when conflicts, such as those arising from similar courses of study across learning areas were identified. As a result of this and the more general feedback, the proposed courses of study list has been modified. It will remain an interim list with working titles, until each course is accredited.

Developing and reviewing six exploratory courses of study to explore design issues

Extensive research and development was undertaken in conjunction with expert teachers to develop exploratory courses for Physics, History and Culture, Physical Education Studies, Media Production and Analysis and Mathematics (two). The purpose was to test the features of the proposed design, such as the style for writing outcomes and scales of achievement, the integration of underpinning knowledge and skills for VET Competencies, the relationship between the scales of achievement and the content and extensions. Each exploratory course took a different approach to testing the range of options for each of the features.

Course of study groups, together with interested teachers and independent experts (including Professor Sue Willis, Dean of Education at Monash University), reviewed the six exploratory courses of study. Professor Willis was commissioned to undertake a

more in-depth review of the course design from the perspective of consistency with the philosophy and particularly the outcomes focus of the *Curriculum Framework*. These studies included an examination of the way in which the content was being represented and how comparability of the depth and scope of the content between schools could be ensured. It was found that while the potential existed for the courses to be inclusive of all students, teachers wanted more structure in developing learning programs for students of different achievement levels. The feedback confirmed this issue and as a consequence content will now be packaged as semester units. The need for outcomes and scales of achievement to be stated in very precise and unambiguous terms was also highlighted.

Developing exemplars of extensions

Ten templates for exemplars were developed by officers of the Council secretariat, providing illustrations of a range of possible types of extensions that would meet the criteria for encompassing the 13 Overarching Outcomes and other areas, such as work studies. This was indicated in the feedback as being important for all students. These templates were then adapted to courses of study in which course outcomes could continue to be achieved through the extensions. While extensions will no longer be a feature of the system, the exploratory work will inform the development of courses where appropriate.

Exploring VET in schools issues

A range of models for integrating VET and structured workplace learning was developed in order to explore ways of dealing with emerging issues within the proposed system. These were discussed widely with teachers involved in providing VET in Schools and adapted as a result of the feedback. In addition, several case studies were undertaken with schools to identify the extent and scope of the issues for particular groups of students. The secretariat also undertook research for the implementation of the new VET in Schools policy, which provided valuable insights into the Training Packages and competencies that are most suited to the school environment.

Investigating the feasibility of scales of achievement

A considerable amount of investigative work was undertaken to provide advice on the feasibility of developing scales of achievement that would be comparable in terms of difficulty within and across courses of study. This process is continuing and will be informed by the concurrent work being undertaken as part of the process of developing Council-endorsed progress maps from the Department of Education's *Student Outcome Statements* and the Catholic Education Office's trial draft progress maps.

Analysis of Queensland Core Skills Test data

Core Skills test data were acquired from Queensland to test the viability of using the data as a starting point for developing comparable scales of achievement. Written descriptions of the highest levels of achievement across the five categories used to cluster the 49 core skills were provided. Further analysis of this data in order to develop descriptors for the remaining levels will be possible if required. In addition, Dr Reg Allen of the Queensland Board of Senior Secondary School Studies worked with the secretariat to describe how the Queensland Core Skills testing process and the Overall Position (selection) system works and how the Core Skills are used as part of this process.

Analysis of Monitoring Standards in Education (MSE) data to inform scales of achievement

MSE data for year 10 students, derived from the random-sample testing program over eleven years, were used to test their usefulness for identification of the first post-compulsory level on the scales of achievement in a course of study. MSE data are one of the sources to be used by the Australian Council for Educational Research (ACER) in calibrating and comparing the levels on the K–12 progress maps. These preliminary investigations showed that level descriptors and the analyses of student work samples (see below) could be used with the information derived from the Queensland Core Skills data to develop a conceptual framework for the scales of achievement.

Analysis of student work samples to identify and compare levels of achievement

Analysis of student work samples on TEE 2000 papers and on school-assessed tasks was undertaken for six groups of subjects: History, Mathematics, Drama, English, Information Technology and Physics. The methodology used was developed from an earlier project using student work samples in TEE Geography. Teams, that included strong teacher representation, analysed the selected syllabuses, assessment instruments, student scripts from TEE paper (in decile groups) and student portfolios of school-assessed work using Student Outcome Statements and the Queensland Core-Skill domains of learning. Units of Competency in relevant Training Packages were also analysed. This work enabled the mapping of current subjects and student achievement on examinations and school assessment to the Department of Education's *Student Outcome Statements* and the Catholic Education Office's trial progress maps. It will be possible to map all existing subjects to the course of study outcomes and scales using this methodology.

Comparisons with the NSW course scales of achievement

The NSW Board of Studies is in the process of introducing a standards-based assessment system and this work is being closely monitored. The performance bands in its course syllabus documents were analysed. Professor Gordon Stanley, the Chair of the Board, addressed the Council and officers from the Council secretariat visited NSW to investigate the process used for developing the standards and trialing the new courses and assessment system. While NSW did not set out to make performance bands comparable in terms of difficulty, they are using the one set of performance bands in English, for example, where there are a number of English courses at different levels of difficulty. The NSW Board believes that after a few years of testing, it will be able to provide useful data in relation to this issue.

As a result of these investigations, the proposed empirical validation of the progress maps and the views of Andrich, Ball and Tognolini, the Council believes that reasonable comparability of difficulty can be achieved with trialing and testing. Whether the comparability of difficulty is sufficient to obviate the need for scaling for a fair aggregate selection measure such as a TER would be another question, that could only be resolved by detailed annual testing to the satisfaction of the universities.

"*The outcomes and standards should be developed by experts in each of the courses of study offered for senior secondary school certification. The experts should be provided with empirical, normative evidence to inform their decisions and with guidelines that ensure an overall consistent and coherent standard setting procedure"* (Andrich, Ball and Tognolini, May 2001, p. 9).

English language competence

To inform debate on this issue, a research paper to clarify English language competence issues was circulated widely, as well as being available on the Council's Website. This paper described the current WA requirements for graduation and university entry; outlined issues that had been identified by industry, the training sector and the universities; and provided an overview of national and international requirements in relation to English and to the literacy standards being developed by OECD though the Program for International Student Assessment (PISA). Regular meetings were conducted to inform key stakeholders about the ongoing debate on English language competence. In addition, recommendations in relation to English language competency in the *Position Paper* were explored in detail at each briefing session and with discussion groups. The Council's decisions in relation to English language competence are based on this research and feedback.

The comparability of student ratings in external and internal assessment

Year 12 Drama Studies uses a common rating scale for both external and internal assessment of the outcomes, with the same performance criteria being used for both measures. An investigation was carried out by the Council secretariat to establish how consistently teachers applied standards, whether students performed at a lower level in external assessments than in class, and what internal assessment actually assessed. The question of whether there was any development during year 12 was also investigated. Data that were collected and reported identified the effects of different conditions in internal and external assessment, as well as differences in the interpretation of performance criteria.

Investigating the feasibility of the proposed moderation process

Analysis of the resource implications of the proposed moderation system proposed is continuing. The Review Secretariat has been engaged in researching alternative possibilities that could be supported by national and international research initiatives and has had ongoing discussion at school sector/system and course of study group meetings. Dr Reg Allen was commissioned to provide insights into the way the Queensland system of moderating school-based assessment operated and the issues that might need to be considered in estimating the resourcing and professional development implications. As a result of these investigations, the system proposed in the position paper has been modified to be less resource intensive.

Feasibility and implications of the course of study design on school management: for example, timetabling

A group of secondary school administrators was engaged to research and explore exemplars for different ways of managing the course of study design from a school management perspective. Examples were developed to inform consultation. This study highlighted the difficulties that could be experienced by schools if extensions were to be a part of the system, however, they demonstrated that it could be done. The perceived difficulties were reflected by feedback and, as a result, the proposed notion of extensions has been dropped.

Appendix 3: Provisional course of study list

As explained in Chapter 4, this is a provisional list with working course of study titles which will be adapted, if necessary, during the development process. It might be found that more than one course is needed in some areas or that some can be merged.

The list makes explicit those courses where VET competencies will be available in both an integrated mode and as a course of study. These courses, identified by an asterisk (*), have strong connections with training packages from which qualifications and competencies have already been negotiated as appropriate for inclusion in school programs.

Other training packages that may be negotiated in the future as being appropriate are listed in brackets and will be used to inform the development of the courses with which they have been linked. Workplace learning will be included in courses and students will also be able to study VET stand-alone Units of Competency that are not included in this list.

Furthermore there may be opportunities, identified during the development process, for students to achieve relevant Units of Competency in other courses which are less strongly connected with Training Packages (eg Electrotechnology with Physics).

After further consultation, units for selected courses will be developed for students with learning difficulties and disabilities.

The details of the processes to be used for developing and accrediting each of the courses is provided in Chapter 4.

Provisional course of study list

Title	Course Overview
Aboriginal and Intercultural Studies	Students explore and are engaged in cross-cultural communication. They develop respect for and empathy with the socio-cultural diversity of Aboriginal peoples and that of other cultures - past, present and future. Students investigate disadvantage and discriminatory practices and participate in their communities to redress issues arising from these practices.
Accounting and Finance* *Business Services BSB0 (Financial Services FNB99)* *Includes workplace learning.*	Students understand the principles and practices of accounting and finance, from simple to more complex systems. Through the investigation of realistic financial situations, they appreciate the importance of financial information for decision making in personal, professional and business contexts.
Aeronautics *(Aero Skills MEA97 including workplace learning)*	Students investigate the theory, environmental impacts and historical and future trends of aviation in a broad range of contexts. They develop theoretical and practical skills to interpret and understand aircraft performance and operations, aeronautics, meteorology, navigation, communication and avionic systems. They analyse the application of aviation law and policies and have the knowledge and understanding to make informed decisions about aviation and its impact on people and places.
Agriculture* *Agriculture RUA98 Horticulture RUH98 (Metalliferous Mining MNM99, Forest and Forest Products Industry FPI99)* *Includes workplace learning.*	Students learn about and develop skills in sustainable and enterprising use of natural resources, and the development, implementation and management of production and marketing systems across a range of primary industries. They consider the requirements for their local communities when developing strategies appropriate to a range of situations, including commercial and personal enterprises.
Applied Information Technology * *Information Technology ICA99* *Includes workplace learning.*	Students acquire and develop knowledge and skills related to the creation, manipulation, storage, retrieval and communication of information using a range of industry-level software and hardware. They learn to work in the climate of rapid change associated with information technology and appreciate its impact on individuals and social systems.
Automotive Engineering and Technology * *Automotive, Industry Retail, Services and Repair AUR99* *Includes workplace learning.*	Students use the principles of mechanisms, automotive systems and transportation to analyse the need for transportation in society, the limitations related to current automotive systems, and the impact they have on the environment. They apply technologies to practical situations in a range of contexts such as automotive design and assembly, maintenance and support services, as they use, adapt, maintain or create solutions.

Title	Course Overview
Biological Sciences	Students assess the impact of biology and its related technologies. Through selecting and applying appropriate scientific methodologies, they investigate biological structures and functions. They use their understanding of relevant concepts to make informed decisions about biological developments and practices.
Building and Construction* *General Construction BCG98* *Includes workplace learning.*	Students analyse the values and needs of local communities when investigating, planning, designing and constructing built environments. They apply the principles of built environments when considering the impact that building and construction decisions have on industrial, commercial, domestic and community environments.
Business Management and Enterprise* *Business Services BSB01* *Includes workplace learning.*	Students study business organisations and how they manage resources to achieve their objectives. They understand business concepts, decision making, planning and day-to-day operations. There is an emphasis on managements in relation to styles, communication, marketing, human resources, innovation, change and resources. The ethics and values underlying business management practice and theory are integral to students' learning.
Career and Enterprise Pathways* *Retail WRR97, Tourism THT98, Hospitality Industry THH97* *Includes workplace learning.*	Students develop a repertoire of knowledge, skills and attributes related to the world of work. They develop and demonstrate generic and specific industry competencies that equip them to identify, initiate, successfully manage and create personal, community and business work opportunities, including self employment.
Chemistry *(Laboratory Operations PML99 including workplace learning)*	Students analyse and explain chemical phenomena and propose solutions to related problems using their understanding of chemical concepts. By selecting and applying a range of practical and analytical skills, they investigate the structure and functions of materials that make up their surroundings. Students consider the impact of chemistry and its related technologies on society and make informed decisions on appropriate and safe use of chemicals.
Children, Family and the Community* *Community Services CHC99 (Health HTP01)* *Includes workplace learning.*	Students understand ways in which the personal and social futures of children are shaped within families and communities. They investigate models of human development and and apply their understandings in a range of contexts including interactions with children, parents, families and other community settings. They understand the role of policy and service provision and develop advocacy skills through active involvement in community and volunteer services.
Dance	Students create, perform, analyse and evaluate dance in a range of historical and cultural contexts using artistic creativity and aesthetic sensibility. They develop spatial awareness, coordination, flexibility, self esteem, confidence, concentration, social awareness, communication and management skills, through the exploration and integration of technical and aesthetic elements to extend the potential of dance.

Title	Course Overview
Drama *(Entertainment Industry CUE98 including workplace learning.)*	Students create, perform, analyse and evaluate forms and styles of drama in a range of historical and cultural contexts using skills in interpretation of text and individual expression. Through drama, they reflect, explore, shape and symbolically represent ideas, emotions, experiences and consequences in order to define their identity in the context of their immediate surroundings and the broader community.
Earth and Environmental Science	Students investigate geological, biological and ecological aspects of the Earth to assess society's impact on the environment and its resources. They use their understanding of relevant concepts to select and apply appropriate scientific methods and make informed decisions about ecological sustainability.
Economics *(Financial Services FNB99 including workplace learning.)*	Students analyse and evaluate a range of contemporary understandings in economics. Within the context of global and local economic systems, they recognise that people have to make choices in their use of limited resources, price, demand, production, equilibrium, international trade, growth, sustainability, equitable distribution, employment and inflation. Students explore and critique the roles of market forces and government policies and develop innovative management and enterprise practices.
Engineering Studies* *Metals and Engineering MEM98* *Includes workplace learning.*	Students investigate, through the principles of engineering, contexts and related industries such as civil, electrical, electronic, mechanical and marine. They consider a range of historical and contemporary issues related to local and global contexts when applying their understanding of materials, systems and the environment to design and develop solutions for a technology-based society.
English/ESL *(The number of courses will be decided during the development phase)*	Students read, view, listen to, speak, design and write a range of print, electronic and visual texts required in their personal and public lives and post-school destinations. Using their analytical and creative skills and knowledge of the conventions of the English language and the ways in which meaning is made, they develop an understanding of the relationship between culture, values, identity and texts.
Food Science and Technology* *Hospitality Industry THH 97* *(Food Processing Industry FDF98)* *Includes workplace learning.*	Students understand the scientific principles, cultural influences and entrepreneurial opportunities in the Australian food industry. They investigate the influence of cultural diversity on the food, health and lifestyle of Australians and other factors impacting on food selection and consumption. They design, produce and market food products appropriate for a healthy lifestyle in a range of contexts.
Geography	Students investigate and develop knowledge and understandings about the range of processes that have developed natural and cultural landscapes over time. They understand how the interdependence of people and places is influenced by the interaction of people and the environment and examine ecologically sustainable practices that enhance the relationship of people within the environment.

Title	Course Overview
Health Studies * *Community Services CHC99 (Health HTP01)* *Includes workplace learning.*	Students investigate and evaluate the influence of socio-cultural, environmental, political and economic factors on the health of individuals and communities. They apply knowledge, attitudes, values and skills to take effective personal and social action in the promotion of equitable health outcomes. They understand and critique the social view of health in contemporary society.
History: Ancient and Modern	Students develop understandings of and interpret the influence of significant people, events and ideas from the past. They develop and apply their critical analytical skills to interpret the social, technological, economic, political and moral transformations that have occurred throughout history. They establish connections between past and present events and consider future trends.
Human Biological Science	Students develop knowledge, understandings and skills relating to biological and social aspects of being 'human'. By selecting and applying a range of methodologies, they investigate human structure and function and the evolution of humans and their culture. They make informed decisions about biological and related ethical issues.
Integrated Science	Students develop knowledge, understandings and skills relating to a range of scientific principles and theories through investigation in interdisciplinary contexts such as forensics, optics and consumer science. They select and apply practical and analytical skills to address scientific issues in a range of contexts, solve related problems and make informed decisions that take into account the impact of science and related technologies on society.
Languages LOTE *(The number of courses will be decided during the development phase.)* • Australian Indigenous Languages (national framework) • First Language: Chinese; Indonesian; Japanese (NSW); Malay • Second Language: Chinese (interstate); French; German; Indonesian; Italian; Japanese • Small Candidature Languages, eg Modern Greek, Spanish	*First Language* Students, having built on their significant cultural and linguistic background in the Target Language, engage with a wide variety of spoken and written texts (including literary texts) that use language in a sophisticated manner and deal with a range of traditional and contemporary socio-cultural issues. Students communicate effectively and appropriately by expressing and substantiating ideas and opinions and through well-structured argument and debate. They move effectively, where appropriate, between the Target Language and SAE. *Second Language* Students use the Target Language to communicate with others on topics related to their personal world, the Target Language speaking communicates and some common, significant social issues. they communicate effectively and appropriately in both spoken and written form by exchanging information, ideas and experiences. They comprehend and process information from a range of authentic spoken and written texts dealing with these topics. Students understand significant cultural aspects of the Target Language speaking communities and demonstrate this through effective communication in the Target Language.

Title	Course Overview
Marine and Maritime Technology * *National Outdoor Recreation SR099* Includes workplace learning.	Students analyse factors related to contemporary marine environments and evaluate the impact that humans place on this natural resource. This will facilitate their need to understand, synthesise and apply principles of navigation, meteorology, marine technology and communications to develop practical seamanship, and an appreciation of the related industries' marine environments. They explore opportunities of employment in recreational and commercial boating, and are provided with opportunities to apply practical skills within a wide range of related industrial contexts.
Materials, Design and Technology * *Metal and Engineering MEM98 (Light Manufacturing and Furnishing)* *Includes workplace learning.*	Students design, modify and make products to meet required specifications and needs using their understanding of the nature and function of materials. Through investigation of the properties of natural and man made materials, they select and use these appropriately in a variety of contexts including wood, metals, plastics and fabrics. Students consider the environmental, sociological and technological impacts and constraints of product development.
Mathematics *(The number of courses and units will be decided during the development phase)*	Students learn about mathematics, what it is and how it is used in solving problems, recognising that their future personal and occupational needs for the use of mathematics will vary, as will the demands of the time. They learn to deal readily and efficiently with commonly occurring situations that can benefit from the use of mathematics. Their effective and appropriate use of technology supports the learning of mathematics and its application. Students apply investigative, modelling and problem-solving approaches to their mathematical work, which is underpinned by the study of patterns. Mathematical processes include investigating, generalising, reasoning, explaining, justifying and communicating. Content areas include number and patterns, variation, functions and graphs, equations and inequalities, direct and indirect measurement, data handling, chance processes and two and three dimensional space.
Media Production and Analysis *(Film, TV, Radio and Multimedia CUFO including workplace learning.)*	Students design, produce and critically analyse a range of media works from a variety of contexts. Using their analytical and creative skills, and the skills of media literacy, they develop understandings of how media works contribute significantly to the central and dynamic role of media in the creation of personal, social, cultural and national identity, and an understanding of how aesthetic values are constructed.
Music *(Music CUSO1 including workplace learning.)*	Students create, perform, analyse and evaluate music in a range of historical and cultural contexts using available technologies. They explore the fundamentals of performance, composition, listening, Western and non-Western musical tradition in both art and popular forms, and choose from a diversity of ideas to create music works that integrate technical and aesthetic elements.
Philosophy and Ethics	Students develop understandings of the significant local and global philosophical and ethical positions that influence contemporary society. They apply independent, responsible and critical thinking when developing understandings of factors in personal, local, national and global situations.

Title	Course Overview
Physical Education Studies * *National Outdoor Recreation SR099 National Sport Industry SRS99* *Includes workplace learning.*	Students acquire skills and understandings and critically analyse strategies in human movement contexts. They develop and evaluate plans to optimise physical performance through investigating psychological, biomedical, physiological, cultural and social factors which influence sport and physical activity in local, national and international settings. The personal development of a repertoire of physical skills reflects the value of a healthy, active lifestyle.
Physics	Students analyse and explain physical phenomena and propose solutions to related problems using their understanding of relevant concepts. By selecting and applying practical and analytical skills, they investigate physical phenomena and properties of matter. They make informed decisions on the impact of physics and its related technologies on society.
Politics and Law	Students investigate and, where appropriate, participate in political and legal systems to understand the characteristics of these systems. They demonstrate how people are affected by, and influence, political and legal systems at the local, national, regional and global levels, in terms of democratic process and social justice. Students hypothesise about future directions in political and legal systems.
Psychology *(Health HTP01 including workplace learning.)*	Students understand the distinct features of the psychological approach to understanding and accounting for human behaviour. They investigate the relationship between psychology and contemporary issues, and apply analytical, interpretive and critical skills to events likely to be encountered in everyday life. They understand the social, cultural and ethical applications of psychology.
Recreational and Environmental Studies * *National Outdoor Recreation Industry SRO99 National Sport Industry SRS99* *Includes workplace learning*	Students analyse contemporary environmental issues, study the impact of human activity on ecosystems and critique environmental values. They apply their understandings to develop planning, logistical, leadership and interpersonal skills in a variety of environmental contexts such as eco-tourism, conservation and land management, and expedition leadership. They are able to participate within their environment in ways that are safe, ethical and ecologically sustainable.
Religion and Life	Students gain an understanding of spiritual and religious experience and the way this can give people meaning and purpose in their lives. They understand the different visions of life found in the culture in which they live, in order to critically evaluate the opportunities and challenges associated with living in modern society at both the local and global level.
Systems Technology *(Electrotechnology Industry UTE99 including workplace learning.)*	Students investigate, create, modify and use systems to meet specific individual, community or client needs in contexts such as electronic, information or mechanical systems. They understand and apply the principles related to the structure, organisation, management, control and assessment of these systems. They analyse the impact of systems on the nature of work and on communities and environments.

Title	Course Overview
Visual Arts * *Printing and Graphic Arts ICP99 (Film, TV, Radio and multimedia CUF01)* *Includes workplace learning.*	Students design, create, produce, analyse and interpret art works in a range of forms, which integrate technical and aesthetic elements and which reflect a range of historical and cultural contexts. Selecting and using available technologies, they manipulate and extend the potential of works to communicate effectively to specific audiences and purposes.
Visual Communications* *Printing and Graphic Arts ICP99 (Film, TV, Radio and Multimedia CUF01)* *Includes workplace learning.*	*Students know, understand and apply, in an enterprising way, visual communication techniques relating to texts, image, media and multi-media for design layouts in a range of contexts. They understand the principles of graphical communication and develop the skills required to solve technical problems related to achievement of optimum form and impact.*

Appendix 4: Sample student learning programs

Each school will provide a configuration of courses of study from which students can develop their overall learning program. Students will design their program by selecting courses of study that provide them with opportunities to progressively achieve the outcomes they need for post-school options. The following sample programs illustrate the many options that could be available to students.

These examples are based on a notional full time load of six courses of study (12 semesterised units), which is the equivalent of 24 units over 2 years. As the eligibility requirements for a student to be awarded a WACE are achievement of outcomes, to some extent, from 5 courses with completion of 20 units (16 Council developed and 4 Council endorsed) students will have flexibility to include up to four additional units in their program.

Student A

Year 11	***Year 12***	**TOTAL**
English (2 units)	English (2 units)	Outcomes from
Mathematics (2 units)	Mathematics (2 units)	6 Courses
Biology (2 units)	Biology (2 units)	22 CC developed units
Physics (2 units)	Physics (2 units)	
Accounting (2 units)	Accounting (2 units)	
Career & Ent. (2 units)		

Student B

Year 11	**Year 12**	**TOTAL**
English (2 units)	English (2 units)	Outcomes from
Mathematics (2 units)	Mathematics (2 units)	7 Courses
Biology (2 units)	Biology (2 units)	21 CC developed units
French (2 units)	French (2 units)	2 CC endorsed units
Accounting (2 units)	Business Management (2 units)	
Workplace leaning (2 unit equiv using endorsed skills lists)	Career & Ent. (1 unit)	

Student C

Year 11	**Year 12**	**TOTAL**
English (2 units)	English (2 units)	Outcomes from
Mathematics (2 units)	Mathematics (2 units)	6 Courses
Human Biology (2 units)	Health Studies (2 units)	18 CC developed units
Food Sc Tech (2 units)	Stand alone VET (2 units equiv)	2 CC endorsed units
Business Management (2 units)	Business Management (2 units)	

Student D

Year 11	**Year 12**	**TOTAL**
English (2 units)	English (2 units)	Outcomes from
Mathematics (2 units)	Applied Info Tech (2 units)	6 Courses
Materials Design Wood (2 units)	Materials Design Metals (2 units)	16 CC developed units
Career & Ent. (2 units)	Career & Ent. (2 units)	8 CC endorsed units
Stand alone VET (4 units equiv)	Stand alone VET (4 units equiv)	

Appendix 5: References and Bibliography

References

Andrich, D., J. & Ball, S. (2001) *Report of the consultancy to research international best practice in outcomes-based assessment related to post-compulsory education*. (Available from the Curriculum Council of Western Australia).

Butorac, A., Alderson, A., Figgis, J. (2001) *Post-compulsory education of Aboriginal students in Western Australia*. Perth, WA: Aboriginal Education and Training Council.

Curriculum Council Act 1997. Perth, WA: State Law Publisher.

Curriculum Council of Western Australia. (1998). *Curriculum Framework for kindergarten to year 12 education in Western Australia*. Osborne Park, WA: Author.

Curriculum Council of Western Australia (1999). *Post-compulsory education review discussion paper*. Osborne Park, WA: Author.

Curriculum Council of Western Australia (2000). *Post-compulsory education review position paper*, Osborne Park, WA: Author.

Everett, J. E. and Robins, J. (1991). *Tertiary entrance predictors of first-year university performance*. Australian Journal of Education, 35(1), 24-40.

Lamb, S. (2001). *The Pathways from school to further study and work for Australian graduates*. (Research Report No. 19). Melbourne, Vic: Australian Council for Educational Research.

Lamb, S & McKenzie, P. (2001). *Patterns of success and future on the transition from school to work on Australia*. (Research Report No. 18). Melbourne, Vic: Australian Council for Educational Research.

McGaw, B. (1996) *Their future – Options for reform of the Higher School Certificate*. Sydney, NSW: Department of Training and Education Co-ordination.

Ministerial Council on Education, Employment, Training and Youth Affairs. (2001). *New framework for Vocational Education in Schools*. Canberra, ACT: Curriculum Corporation.

Ministerial Council on Education, Employment, Training and Youth Affairs (1999). *Common and Agreed National Goals for Schooling in the Twenty-first Century*. ACT: Curriculum Corporation.

Ministerial Taskforce on Structures, Services and Resources supporting Government Schools. (2001). *Investing in government schools: Putting children first.* Perth, WA: Department of Education Services.

Organisation for Economic Co-operation and Development. (2000). *Adult Literacy.* Retrieved May 18, 2001, from http://www.oecd.org/pdf/M00006000/M00006368.pdf.

Parker, L., Figgis, J., Stanley, G., Bowden, G. & Mooney, L. (in press). *University credit for school students.* Canberra ACT: Department of Employment, Education, Training and Youth Affairs.

Stanley, G. (1999). A cognitive developmental approach to ICT in teaching and learning. *In Australian Curriculum Assessment and Certification Authorities, Proceedings of theACACA Conference 1999, 2-6 August, Perth, Western Australia: On the Edge, Leading the Learning Revolution.* Osborne Park, WA: Curriculum Council.

Bibliography

Centre for Labour Market Research. (2000). *The demographic, social and labour market factors that will influence education in Western Australia.* (Available from the Department of Education Services).

Department for Education and Employment. (1998). *Learning and working together for the future:* a *strategic framework to 2002.* London: Author.

Department of Education and Training. (1997). *Securing Their Future – The New South Wales Government's Reforms for the Higher School Certificate.* Sydney, NSW: Author.

Department of Employment, Education and Training. (2000a). *Ministerial review of post-compulsory education and training pathways in Victoria: Final Report.* Melbourne, Vic: Author.

Department of Employment, Education and Training. (2000b). *Public education: The next generation, report of the Ministerial Working Party.* Melbourne, Vic: Author.

Department of Employment, Education, Training and Youth Affairs. (1997) *Numeracy = everyone's business: The report of the Numeracy Education Strategy Development Conference.* Adelaide, SA: Australian Association of Mathematics Teachers.

Dow, K. L. (Chair) (1997). *Enhancing their futures.* Report of the Committee of the Review on the Victorian Certificate of Education. Melbourne, Vic: State of Victoria.

Education Queensland. (2000). *New Basics Project – Technical paper.* Brisbane, Qld: Author.

Sweet, R. (2000). *The jigsaw revisited: Comparative perspectives on transitions.* Paper presented at the International Career Conference, Perth, Australia, April 2-5, 2000.

Tucker, M. & Codding, J. (2000) *Building a World Class Education System in the United State.* Paper delivered to the Curriculum Corporation Seventh Annual Conference, May 2000, Melbourne, Australia.

Willis, S. (Ed.). (1990). *Being numerate: What counts?* Hawthorn, Vic.: Australian Council for Educational Research.

Appendix 6: Curriculum Council Membership

Prof Lesley Parker	Chairperson of the Curriculum Council
Therese Temby	Deputy Chairperson of the Curriculum Council
Paul Albert	Chief Executive Officer, Curriculum Council
Margaret Banks	Education Department of Western Australia
John Barich	Parent interests
Barbara Bosich	Industry, education or community affairs
Lucina Cross	Industry, education or community affairs
John Garnaut	Department of Education representative (from Aug 2001)
Mike Keely	Teacher interests
Dianne Kerr	Education Department of Western Australia (until Aug 2001)
Jeremy Madin	Association of Independent Schools of WA Inc. (until Aug 2000)
Graham Rixon	Association of Independent Schools of WA Inc. (from Sept 2000)
Lyndon Rowe	Industry, education or community affairs
Lesley van Schoubroeck	Vocational Education and Training (until May 2000)
Malcolm Goff	Vocational Education and Training (from June 2000)
Assoc Prof David Treloar	Universities

Appendix 7: Curriculum Council Post-Compulsory Education Review Secretariat

Paul Albert	Chief Executive Officer
Norma Jeffery	Director of Curriculum
Rosemary Naughton	Executive Officer to the Review
Rees Barrett	Director of Accreditation and Moderation
Jenny Morup	Manager, Certification and Examinations
Sharyn O'Neill	Writer

Support Staff

Matthew Marsh	Research Officer
Roberta Mackay	Administrative Support
Jill Venn	Administrative Support (until July 2001)

The contributions and support of all the members of the Secretariat throughout the review process are acknowledged by the Curriculum Council.

Appendix 8: Post-Compulsory Education Review Position Paper submissions

Individuals

Anderton, Graham
Bowden, Bevan
Bray, Sharon – Northam Senior High School
Candy, Chris
Curtis, A C – Principal, Trinity College
Diggins, Glen
Donohoe, Brother Frank
Dullard, Christina – Principal, Carmel School
Gilham, Trevor – Comments from Mathematics Conference held at Guilford Grammar
Gould, Valerie – AISWA, Issues Raised during Workshops with Independent Schools
Harris, Neil – Churchlands Senior High School
Hoffman, Nathan
Hogan, Terry –Head of English Department, Bunbury Senior High School
Hughes, Maryanne – VET Coordinator, Hamilton Senior High School
Lewis, Peter
Lindsay, Ian
McKenzie, Marilyn - Aquinas College
Mitchell, Fay – Ocean Reef Senior High School
Mizen, Sharatha – Trinity College
Paveling, Barry – Rossmoyne Senior High School
Slowiak, Suzanne – Coordinator of English, Mercy College
Talbot, Beth
Thomson, Lynne – Principal, St Mary's Anglican School
Wray, John – Mathematics, Santa Maria College
Wynne, Garth – Headmaster, Christ Church Grammar School

Schools and Other Organisations

All Saints' College
All Saints' College - English Department
Applecross Senior High School - Career Education Department
Art Education Association of Western Australia
Art Syllabus Committee
Association of Independent Schools of Western Australia
Association of Independent Schools of Western Australia - English Head of Departments

Association of Independent Schools of Western Australia - Response to specific recommendations
Australian Association of Career Counsellors
Biology Syllabus Committee
Business Educators of Western Australia
Busselton Senior High School
Busselton Senior High School – Business Studies Department
Busselton Senior High School – English Learning Area
Busselton Senior High School - VET
Canning College
Cannington Education District
Career Education Association of Western Australia
Career Link – Northern Suburbs Cluster, Independent and Catholic Schools VET Clusters
Career Link – Response in Relation to Structured Workplace Learning
Carmel School
Catholic Education Office
Centre for Studies in Australian Literature
Chamber of Commerce and Industry
Churches' Commission on Education
Churchlands Senior High School
Collie Senior High School
Corpus Christi College
Corridors College
Council of Australian Secondary Tourism Teachers
Curtin University of Technology
Dance Syllabus Committee
Department Heads from Christian Brothers' College Fremantle
Department of Education, Training and Youth Affairs, South Australia
Department of Fair Trading
Drama Syllabus Committee
Eastern Goldfields Senior High School
Economics Teachers' Association of Western Australia
Edith Cowan University
Education Department of Western Australia
Educational Computing Association of Western Australia
English as a Second Language Syllabus Committee
English Literature Syllabus Committee
English Syllabus Committee
English Teachers' Association of Western Australia
Fremantle Education District
French Syllabus Committee

Geographical Association of Western Australia
Hale School - Chemistry Department
Helena College Senior School
History Teachers' Association Of Western Australia
Home Economics Institute of Australia
Independent and Catholic Schools VET Clusters
Indonesian Syllabus Committee
INSTEP – Central and South East Region
INSTEP West
Iona Presentation College, Heads of Years
Italian Syllabus Committee
John Forrest Senior High School - English Department
John Septimus Roe Anglican Community School
John Wollaston Community School
John XXIII College – English Faculty
Kent Street Senior High School
Kolbe Catholic College – English Department
Lockridge Senior High School
Mandurah Senior College
Manjimup Senior High School
Margaret River Senior High School
Merredin Senior High School
Methodist Ladies' College
Methodist Ladies' College English Department
Midland College of TAFE
Midlands Education District
Midlands VET Cluster
Modern Language Teachers Association of Western Australia
Murdoch College – English Department
Newman College – LOTE Department
North Lake Senior Campus
Onsite Cluster Management Committee
Parents and Friends' Federation of Western Australia
Penrhos College
Perth Modern Post Compulsory Intensive Language Centre
Perth Modern School
Perth Modern School Ballet Support Group
Presbyterian Ladies College – Roland Leach and the English Department
Rockingham Senior High School
Rossmoyne Senior High School
Santa Maria College – English Learning Area
School of Communication and Cultural Studies, Curtin University
School of Isolated and Distance Education - English Learning Area

Science Teachers' Association of Western Australia
Servite College
Servite College – Mathematics Department
Seton Catholic College
Sevenoaks Senior College
Social Science Association of Western Australia
South West Independent Schools Vocational Program
South West Independent Schools Vocational Programme - Response in Relation to Structured Workplace Learning
South West VET in Schools Cluster
St Brigid's College – English Learning Area
St Hilda's – English Department
St Hilda's Anglican School for Girls
St Mark's Anglican Community School
St Mary's Anglican Girls' School – Mathematics' Department
St Mary's Anglican Girls' School – School Counsellors
St Norbet College
St Stephen's School English Department
Swan Education District
Tertiary Institutions Service Centre
The Hills & Associated Colleges – Management Committee of the Worklink Program
The Hills & Associated Colleges – Worklink Cluster Principals
Training Accreditation Council
Training and Employment
Trinity College
Tuart College
Tuart/Canning College English as a Second Language Staff
University of Western Australia
University of Western Australia – Minutes from Academic Council/Teaching and Learning Committee
University of Western Australia - Response to English Paper
Warnbro Community High School
Wesley College
Western Australia District High Schools Administrators Association
Western Australia Teachers of English to Speakers of Other Languages
Western Australia Vocational Education and Training Network
Western Australian Secondary School Executives' Association
Willetton Senior High School – English Department
Work Studies Syllabus Committee