KEY COMPETENCIES

Report of the Committee to advise the Australian Education Council and Ministers of Vocational Education, Employment and Training on employment-related Key Competencies for postcompulsory education and training

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The Chairs
The Australian Education Council
and
Ministers of Vocational Education, Employment and Training

Dear Ministers

It is with pleasure that I present the final report and recommendations of the Committee formed by AEC and MOVEET to provide advice on the employment-related Key Competencies. Our work is based on the recommendations of the Australian Education Council Review Committee (Finn Committee).

The heart of the Committee’s proposal is a set of Key Competencies for effective participation in the emerging patterns of work and work organisation that are essential for all young Australians. I believe the Key Competencies are fundamental to our future economic competitiveness.

Australia’s ability to compete internationally will be enhanced if the Key Competencies are acquired by our young people. As noted by the AEC and MOVEET at its meeting in May 1992, our Committee has adopted 1995 as the planning date for implementation of the Key Competencies and associated assessment and reporting arrangements. This target date remains critical, having regard to the current economic climate and to the development of the Australian Vocational Certificate Training System.

The work on Key Competencies has benefited greatly from careful and extensive consultation and from the dedication and ability of the members of our Committee and its Secretariat.

I commend the Committee’s recommendations to you and to all Ministers of Education and Vocational Education and Training throughout the States and Territories.

Eric Mayer
Chair
Committee to advise the AEC and MOVEET on employment-related Key Competencies for postcompulsory education and training

31 August 1992
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EXECUTIVE SUMMARY

INTRODUCTION

THE TASK

In its report, *Young People’s Participation in Post-Compulsory Education and Training*, released in July 1991, the Finn Committee concluded that there are certain essential things that all young people need to learn in their preparation for employment. It called these things employment-related ‘Key Competencies’ and recommended that steps be taken to ensure all young people are able to develop these Key Competencies regardless of the education or training pathway they follow. The report proposed that the employment-related Key Competencies should be identified in the areas of Language and Communication, Mathematics, Scientific and Technological Understanding, Cultural Understanding, Problem Solving, and Personal and Interpersonal Characteristics.

To facilitate development of the Key Competencies, the Finn Committee proposed the design of a ‘standards framework’ to describe the nature of each Key Competency at a number of levels. This would allow educators in different education and training sectors to focus on the desired outcomes and develop curriculum and teaching approaches to suit. It would also allow a consistent approach to the assessment and reporting of young people’s achievement in each of the Key Competencies. Such a framework, the Finn Report argued, would offer new opportunities for creating clearer linkages between education, training and the world of work, and new ways for industry to clarify its expectations of young people and the education and training system.

This Committee’s task has been to identify the Key Competencies and to develop a means of describing them that will provide a common reference point for curriculum and teaching in both the school and training sectors and provide the basis for a consistent approach to assessing and reporting achievement.

The Key Competencies comprise the core component of the proposed Australian Vocational Certificate Training System and the basis for improved articulation between general education and vocational training that is the foundation for the proposed system.

THE APPROACH

*Key Competencies* is the culmination of three stages of research and consultation.

The first stage involved research and Committee discussion leading to the publication of *Employment-Related Key Competencies for Postcompulsory Education and Training: A Discussion Paper* in February 1992. This paper outlined the Committee’s initial proposals for defining the Key Competencies and developing descriptions of the competencies to inform curriculum development and teaching and to provide a basis for nationally-consistent assessment and reporting.

Consideration of the results of extensive consultation on the *Discussion Paper*, combined with further developmental work, led to the Committee’s second publication, *Employment-Related Key Competencies: A Proposal for Consultation*, released in May 1992. This paper included a detailed proposal for the set of Key Competencies together with principles for nationally-consistent assessment and reporting and discussion of the factors to be taken into account in planning for implementation of the proposal. During the second period of consultation, the Committee placed particular emphasis on issues of access to the Key Competencies through an Access and Equity Audit. A Preliminary Industry Validation of the proposed Key Competencies was also undertaken and a project investigating the incorporation of the Key Competencies in industry competency standards.

The results of these activities and the responses to consultation were taken into account in preparing the refined proposal contained in this report.
THE PROPOSAL

PUTTING GENERAL EDUCATION TO WORK

Australia’s workplaces are changing in response to the need to improve productivity and compete with world best practice in international markets. These changes are underway in many workplaces and the pace and scale of change will increase over the next five years as the Australian economy becomes even more closely integrated with the economies of the region and our major trading partners. The most obvious change in workplaces is a move away from specialised jobs and separate functions towards more broadly-defined work roles and organisational structures that provide for devolved and shared responsibility for planning and decision making. Greater value is being placed on factors such as creativity, initiative, being entrepreneurial and being able to think critically about how to improve work practices.

To make their way in these changing circumstances young people need to be multi-skilled, flexible and adaptable. They need a strong foundation of the knowledge, skills and understanding that are developed through general education. And they need vocational competencies. But the ideas of flexibility and adaptability suggest the need for a further ingredient which fuses general education with vocational training — made up of the things that enable people to take an active role in making decisions about the work they do and the way it is done and to make the most of opportunities to learn on the job — the things that enable people to put their general education to work. It is these things that the Committee focused on to identify the Key Competencies.

THE KEY COMPETENCIES

The Committee has concluded that there are seven Key Competencies that all young people need to enable them to participate effectively in the emerging forms of work and work organisation.

Collecting, Analysing and Organising Information
The capacity to locate information, sift and sort information in order to select what is required and present it in a useful way, and evaluate both the information itself and the sources and methods used to obtain it.

Communicating Ideas and Information
The capacity to communicate effectively with others using the range of spoken, written, graphic and other non-verbal means of expression.

Planning and Organising Activities
The capacity to plan and organise one’s own work activities, including making good use of time and resources, sorting out priorities and monitoring one’s own performance.

Working with Others and in Teams
The capacity to interact effectively with other people both on a one-to-one basis and in groups, including understanding and responding to the needs of a client and working effectively as a member of a team to achieve a shared goal.

Using Mathematical Ideas and Techniques
The capacity to use mathematical ideas, such as number and space, and techniques, such as estimation and approximation, for practical purposes.

Solving Problems
The capacity to apply problem-solving strategies in purposeful ways, both in situations where the problem and the desired solution are clearly evident and in situations requiring critical thinking and a creative approach to achieve an outcome.

Using Technology
The capacity to apply technology, combining the physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems.
CONSTRUCTING THE SET OF KEY COMPETENCIES

Starting points for identifying the set of Key Competencies were the six 'Key Areas of Competence' identified in the Rinn Report and agreement on the need for a broad definition of competence.

The meaning of competence
The term competence focuses attention on outcomes. It is about what people can do. The Committee adopted a broad definition of competence which recognises that performance is underpinned not only by skill but also by knowledge and understanding, and that competence involves both the ability to perform in a given context and the capacity to transfer knowledge to new tasks and situations. This definition is consistent with the definition adopted by the National Training Board.

The definition of Key Competencies
The Committee took an inclusive approach to the task of identifying those competencies which are so important they should be acquired by all young people in their preparation for work. The primary focus was the development of clearer links between employment and education and training. Balancing this priority was the need to take a broad view of work to include not only paid employment but also the range of forms of unpaid, voluntary and community work that contribute to the well-being of Australian society. Further, it was recognised that generic work-related competencies — those applying generally to emerging patterns of work and work organisation rather than applying only to particular occupations or industries — are also of value for further education and for participation in adult life as a whole. The definition of Key Competencies adopted by the Committee combines these ideas.

Key Competencies are competencies essential for effective participation in the emerging patterns of work and work organisation. They focus on the capacity to apply knowledge and skills in an integrated way in work situations. Key Competencies are generic in that they apply to work generally rather than being specific to work in particular occupations or industries. This characteristic means that the Key Competencies are not only essential for effective participation in work but are also essential for effective participation in further education and in adult life more generally.

Input
In addition to the expertise of its members, the Committee drew on a wide range of sources in the process of arriving at the set of Key Competencies. These included: reports on the attributes required and valued most highly by industry; analyses of future developments in the nature of work and work organisation; findings of the Preliminary Industry Validation and analysis of the generic elements of industry competency standards; related national projects in the school and training sectors; reports of similar initiatives overseas; and dialogue with curriculum workers and teachers drawn together from different States and Territories and from both the school and training sectors. The process of two rounds of extensive consultation, including the focused consultation on access and equity considerations, provided both a major source of input and an opportunity to test and refine proposals.

Principles for constructing the set of Key Competencies

Part of general education, but not the whole
Key Competencies are essential elements of a general education but do not displace the broader purposes of general education in developing young people as individuals and members of Australian society.

Essential and generic to work in the future
The set of Key Competencies should be confined to those capabilities that are essential for young people entering any sector of work in the future, including both unpaid and volunteer work.

Of value to all young people regardless of postcompulsory pathway
The set of Key Competencies has value for all young people regardless of the pathway they follow in the postcompulsory years.
Cross-curricular
The set of Key Competencies does not constitute a curriculum or set of subjects, nor do individual Key Competencies relate only to particular subject areas. Rather, the Key Competencies can be developed and applied across the range of areas of learning comprising the curricula of school and training programs.

Able to be developed in a wide range of settings
The set of Key Competencies can be taught and learned in the variety of education and training settings and programs currently available to young people in Australia.

Focus on outcomes
The Key Competencies describe outcomes of learning rather than processes by which these outcomes may be achieved.

Assume a foundation of knowledge, skills and understanding
The Key Competencies assume a basis of knowledge, skills and understanding which need to be integrated and applied to achieve a purpose or complete a task.

Focus on application
Central to the concept of competence is the application of knowledge, skills and understanding in an integrated way; competencies do not constitute bodies of knowledge as such.

Integrated in practice
The integrated nature of the Key Competencies and the ways in which they are applied in work activities means that, in practice, they overlap with each other to some extent.

The principles emphasise the Committee's view of the relationship between the Key Competencies and the broader purposes of general education, as expressed in the Common and Agreed Goals for Schooling in Australia. The Key Competencies are consistent with these goals and form an essential part of general education, but the overlap is not complete and is not intended to be.

The Committee adopted a future orientation in constructing the Key Competencies from the set of areas of competence initially proposed in the Finn Report. This orientation was strengthened during development particularly in response to findings of the Preliminary Industry Validation. The set of Key Competencies needs to be reviewed periodically to ensure maintenance of this orientation.

The assumption of foundation knowledge does not mean that knowledge acquisition must necessarily precede development of the Key Competencies. The two should, and in practice usually do, go hand in hand. The Access and Equity Audit pointed out the need for implementation plans to give specific attention to the language and literacy learning implications of the Key Competencies. The Committee recommends that steps be taken to ensure that the national statements and profiles being developed for the eight learning areas identified in the Common and Agreed Goals for Schooling in Australia encompass the foundation knowledge integral to achievement of the Key Competencies.

The Key Competencies emphasise application. The Committee has strongly emphasised the notion that competence is the capacity to 'do' something rather than just 'know' something. The Key Competencies describe the processes through which knowledge and skills are integrated and applied. Knowledge is an essential foundation for competence but bodies of knowledge do not of themselves constitute competencies. The emphasis on application has implications for teaching and learning in both the postcompulsory and compulsory years.

The body of knowledge described in the Finn Report as Cultural Understanding was the subject of extensive discussion during development of the Key Competencies. The descriptions of the Key Competencies incorporate the notion of cross-cultural understanding. The Committee also shares the view expressed strongly through consultation that young people need to have a strong foundation of knowledge of society and culture and that this needs to be recognised as an essential part of the foundation for the Key Competencies. It notes, however, widespread concern that it cannot be assumed that all young people currently have access to this body of knowledge, especially continuing access in
the postcompulsory years of education and training. The Committee recommends that steps be taken to make the required knowledge explicit and provide the necessary access to this knowledge for all young people.

The final proposal for seven Key Competencies is a marked reduction from the initial proposal. This was strongly supported by consultation. In simplifying the set the Committee was guided by general support for the defining characteristics proposed in the Discussion Paper.

Key Competencies must:
• be essential for preparation for employment;
• be generic to emerging patterns of work and work organisation;
• equip individuals to participate effectively in a wide range of social settings and adult life more generally;
• involve integration and application of knowledge and skills;
• be able to be learned;
• be amenable to credible assessment.

Applying these characteristics and taking into account responses to the Proposal for Consultation, the Committee has confirmed its focus on the set of seven Key Competencies. The Committee’s proposal to incorporate the Arts into examples of applications of the Key Competencies and emphasise the concept of creativity in distinguishing between the Performance Levels is reflected in the revised descriptions of the Key Competencies. Family and Household Management, which was proposed for consideration as a Key Competency, has been regarded, together with community and voluntary work, as a work setting in which the Key Competencies can be developed and applied. Information Technology has been built into a number of the Key Competencies, particularly Using Technology.

The Committee has resolved that proficiency in languages other than English does not yet warrant inclusion in the set of Key Competencies but that the possible inclusion of this area should be given specific attention in the first periodic review of the set of Key Competencies.

PERFORMANCE LEVELS

Nationally-consistent assessment and reporting of achievement of the Key Competencies requires the establishment of a common reference point or points as the basis for assessment and reporting. 'Performance Level' is the term the Committee has used to describe such a reference point. The initial proposal to use levels of the Australian Standards Framework as the primary reference point has been modified. The Key Competencies differ from industry competency standards in a number of important respects which make it inappropriate to use the Australian Standards Framework as the sole determinant for setting the Performance Levels. The Key Competencies focus on what a person can do rather than the requirements of jobs, are generic in scope rather than industry specific and are future oriented rather than based on current requirements. The Committee has drawn on a range of considerations in addition to the Australian Standards Framework to develop the Performance Levels, including the achievements displayed by young people at school and the role the levels might play in leading young people into the workplace of the future. The three Performance Levels stand in their own right and do not derive directly from any other framework. The Performance Levels are intended to reflect the competence required for effective performance in work and to identify a range of standards at which it can be described.

Performance Level 1 describes the competence needed to undertake activities efficiently and with sufficient self-management to meet the explicit requirements of the activity and to make judgments about quality of outcome against established criteria.

Performance Level 2 describes the competence needed to manage activities requiring the selection, application and integration of a number of elements, and to select from established criteria to judge quality of process and outcome.

Performance Level 3 describes the competence needed to evaluate and reshape processes, to establish and use principles in order to determine appropriate ways of approaching activities, and to establish criteria for judging quality of process and outcome.
The report includes descriptions of these Performance Levels for each of the seven Key Competencies.

Issues about the range and number of Performance Levels were raised in consultation. It was argued that the range had been pitched too high and not high enough and that there should be more and fewer levels. The Committee believes the three levels, as refined following consultation, capture the range of competence required for successful performance in work at entry levels and that Performance Level 3 is challenging but should be attainable by most young people. Detailed specification of the levels needs to be confirmed through the processes of further validation and reaching agreement on benchmark examples of performance at each of the levels in each of the Key Competencies. This may reveal the need to adjust the range and number of levels. The basis for these decisions must, however, remain the competence required for effective performance in work.

ASSESSMENT AND REPORTING

The second part of the Committee's proposal focuses on means of achieving nationally-consistent assessment and reporting of achievement of the Key Competencies. National consistency is necessary for reasons of portability, consistency in credit transfer arrangements and ease of interpretation by users. Achievement of the Key Competencies will be reported by a wide range of education and training providers across the States and Territories. The capacity of these reports to provide young people with a record of their performance that has currency beyond the setting in which it was produced rests on the confidence that users, and young people themselves, can have in the quality of the information contained in the reports and the ease with which users can interpret reports generated by a wide range of providers.

Achieving nationally-consistent assessment and reporting

A variety of methods will be used to assess the Key Competencies. This variety will stem partly from the varying requirements for assessment of the individual Key Competencies. A further source of variety will be the range of types of programs, settings and modes of program delivery within which assessments of the Key Competencies will need to be made. These include a wide variety of curriculum content and approaches to learning. It needs to be possible to assess the Key Competencies across this range. In light of these factors, the Committee proposes a set of principles for assessment to meet the need for consistency within a framework of flexibility to accommodate this diversity.

Principles for assessing achievement of the Key Competencies

**Common reference for assessment**
- Achievement of the Key Competencies should be assessed against nationally-agreed Performance Levels.

**Validity**
- Assessment methods should be valid; that is, they should assess what they claim to assess.
- Assessment should be undertaken as an holistic process which integrates knowledge and skills with their practical application.
- Achievement of a given Performance Level should be based on assessment at that level in at least two different contexts.

**Fairness**
- To the maximum extent possible, assessment methods should ensure that students/trainees are not disadvantaged by gender, race, ethnicity, disability, socio-economic status or other social circumstance.
- The requirements of the Key Competencies, criteria for judging performance and assessment methods should be made explicit to the student/trainee.
- Assessment procedures should provide for the recognition of Key Competencies, no matter how, where or when they have been acquired. Students/trainees who, for whatever reason, do not take part in the formal learning process associated with development of a Key Competency should have opportunities to demonstrate their performance and obtain an assessment.
Assessment procedures should be designed to provide all students/trainees with opportunities to demonstrate their performance across the full range of Performance Levels.

Where necessary, assessment procedures should provide students/trainees with more than one opportunity to meet the requirements for assessment at a given Performance Level.

Reliability

- Assessment methods should be accompanied by procedures designed to promote and monitor reliability in interpretation and application of the Performance Levels.

Relationship between assessment and learning

- Assessment procedures should be designed to provide maximum coherence between learning and assessment.
- Assessment methods should be designed to inform, and contribute to improvements in, teaching and learning.

Place of assessment in program delivery

- Assessment procedures should be designed so that, as far as possible, assessments of achievement of the Key Competencies are undertaken as part of, or in conjunction with, assessments undertaken for other purposes.
- Record-keeping requirements associated with procedures for assessment of the Key Competencies should be designed so that, as far as possible, these records are integrated with records maintained for other assessment purposes.

Reporting achievement of the Key Competencies

Two types of reporting on achievement of the Key Competencies are proposed. The first involves providing young people with an individual record of performance. The second involves national reporting on achievement of the Key Competencies based on statistical analysis of the achievements of a given cohort of young people. It is proposed that each type of reporting be based on nationally-agreed principles.

Principles for reporting on individual performance

The Committee proposes that records of performance be based on the following principles.

- An individual record of performance showing achievement in the Key Competencies not previously reported should be made available to students and trainees at any point at which they exit from a school program at Years 11-12 level or from a recognised entry-level program of vocational education and training.
- Assessments reported on records of performance should be in accordance with nationally-agreed principles for assessment.
- Records of performance should be based on a common format.
- The issuing of records of performance should be subject to consistent provisions regarding confidentiality and the maintenance of databases of records.

Principles for national reporting on achievement of the Key Competencies

The Committee proposes that the following principles provide the basis for national reporting.

- The collection of data for the purpose of national reporting should be designed to provide a publicly credible means of reporting on the extent to which the Key Competencies are being achieved, to improve the information base for evaluating the effectiveness of education and training programs, and contribute to meeting the needs of public accountability.
- The collection of data for the purpose of national reporting should be undertaken on the basis of sample statistics drawn from databases of individual records of performance.
• Statistical sampling techniques should provide for analyses of participation and achievement by access and equity target groups.

• The collection of data for the purpose of national reporting should incorporate procedures to protect the confidentiality of individuals and the identity of individual schools and training providers.

THE NEXT STEPS

The report concludes by outlining the steps that are needed to implement the Committee's proposal.

Further validation and benchmarking of the Performance Levels
The major developmental tasks remaining involve further validating and reaching agreement on benchmark examples of the Performance Levels in the Key Competencies. These tasks require direct involvement of industry and providers in the school and training sectors. It is proposed that a project be established immediately to undertake these tasks through a coordinated approach.

Field testing implementation
Advice was collected from a range of sources on implications of the Key Competencies for curriculum, teaching, assessment and reporting. It is not expected that introduction of arrangements for assessing and reporting on the Key Competencies will require significant changes to curriculum in school programs. The issues are how to take them up in an effective and manageable way and how to provide a more applied focus for learning to create better opportunities for young people to develop and demonstrate the Key Competencies within school programs. In the training sector the issues of managing assessment and reporting of the Key Competencies are combined with the need to examine ways of ensuring that training modules provide for development of the Key Competencies in ways that reflect their generic character. There is strong support in the training sector for development and assessment of the Key Competencies to be incorporated within training modules rather than provided through stand-alone modules. This approach needs to be examined from the point of view of flexible delivery and the need to be able to identify the Key Competencies explicitly within training modules so as to facilitate credit transfer between school and training programs.

The Committee recommends field tests be undertaken to examine these practical issues, taking into account the implementation issues raised by the Access and Equity Audit. Field tests of ways of providing access to the Key Competencies for young people not undertaking formal education and training are also recommended.

Training and development
Provision of support for teachers and trainers to implement the Key Competencies and associated assessment and reporting arrangements is vital to the success of the proposal. In particular the principles for nationally-consistent assessment depend on teachers and trainers interpreting and applying the Performance Levels in a consistent way. The Committee recommends the use of interactive computer software for a national training and development package to provide the basis for this support.

Developing more flexible pathways through education and training
Nationally-consistent arrangements for assessing and reporting of achievement of the Key Competencies across school and training programs provide the prospect of improved articulation between programs and clear and more flexible pathways between education and training. To realise this potential it will be necessary to examine the relationship of the Key Competencies to credentials in the school and training sectors, their relationship to industry competency standards and links with post-secondary education and training programs.

Timeline and strategy
The Committee proposes that implementation of arrangements for the Key Competencies be coordinated with the proposed introduction of the Australian Vocational Certificate Training System in 1995. A staged strategy for meeting this timeline is outlined, together with a proposal for further development and implementation to be accompanied by an information strategy and managed within a structure to coordinate national initiatives in postcompulsory education and training and to ensure consistent and complementary approaches across the two sectors.
RECOMMENDATIONS

THE PROPOSAL

The Key Competencies

1. The Committee recommends that the AEC and MOVEET agree that the following constitute the set of Key Competencies which are essential for all young Australians:
   - Collecting, Analysing and Organising Information
   - Communicating Ideas and Information
   - Planning and Organising Activities
   - Working with Others and in Teams
   - Using Mathematical Ideas and Techniques
   - Solving Problems
   - Using Technology.

Constructing the set of Key Competencies

2. The Committee recommends that the AEC and MOVEET endorse the following definition:

   Key Competencies are competencies essential for effective participation in the emerging patterns of work and work organisation. They focus on the capacity to apply knowledge and skills in an integrated way in work situations. Key Competencies are generic in that they apply to work generally rather than being specific to work in particular occupations or industries. This characteristic means that the Key Competencies are not only essential for effective participation in work but are also essential for effective participation in further education and in adult life more generally.

3. The Committee recommends that the Key Competencies be reviewed periodically, under the joint auspice of the AEC and MOVEET, to ensure that the set appropriately reflects the generic competencies essential for effective participation in the emerging forms of work and work organisation.

4. The Committee recommends that the AEC and MOVEET request the Curriculum and Assessment Committee to ensure that the national statements and profiles for the eight key learning areas identified in the *Common and Agreed National Goals for Schooling in Australia* encompass knowledge, skills and understanding integral to achievement of the Key Competencies, and to consult with the Australian Committee for Training Curriculum, as appropriate, to ensure a consistent interpretation across the school and training sectors.

5. The Committee recommends that the AEC and MOVEET request the Curriculum and Assessment Committee to examine the implications of assessment and reporting of achievement of the Key Competencies in the postcompulsory years for curriculum and approaches to teaching and learning in the compulsory years of schooling.

6. The Committee recommends that the AEC and MOVEET agree in principle that cultural understanding is an essential part of the knowledge, skills and understanding that forms a foundation for, and needs to be developed in conjunction with, the Key Competencies.

7. The Committee recommends that the AEC and MOVEET request the AEC Standing Committee (Schools) and the Vocational Education, Employment and Training Advisory Committee to take steps to ensure that all young people have continuing access to development of cultural understanding during the postcompulsory years in school programs and their equivalent in vocational education and training.
Performance Levels

8. The Committee recommends that the AEC and MOVEET agree in principle that the Key Competencies be described at three standards-referenced levels of performance.

Descriptions of the Key Competencies

9. The Committee recommends that the AEC and MOVEET endorse the Key Competency descriptions presented in Section 1.4 as the basis for further validation and benchmarking of Performance Levels in the Key Competencies.

Assessing and reporting achievement of the Key Competencies

10. The Committee recommends that the AEC and MOVEET agree in principle to nationally-consistent assessment and reporting of individual achievement of the Key Competencies.

11. The Committee recommends that the AEC and MOVEET agree in principle to the following set of principles for assessment of achievement of the Key Competencies:

Common reference point for assessment
- Achievement of the Key Competencies should be assessed against nationally-agreed Performance Levels.

Validity
- Assessment methods should be valid; that is, they should assess what they claim to assess.
- Assessment should be undertaken as an holistic process which integrates knowledge and skills with their practical application.
- Achievement of a given Performance Level should be based on assessment at that level in at least two different contexts.

Fairness
- To the maximum extent possible, assessment methods should ensure that students/trainees are not disadvantaged by gender, race, ethnicity, disability, socio-economic status or other social circumstance.
- The requirements of the Key Competencies, criteria for judging performance and assessment methods should be made explicit to the student/trainee.
- Assessment procedures should provide for the recognition of Key Competencies, no matter how, where or when they have been acquired. Students/trainees who, for whatever reason, do not take part in the formal learning process associated with development of a Key Competency should have opportunities to demonstrate their performance and obtain an assessment.
- Assessment procedures should be designed to provide all students/trainees with opportunities to demonstrate their performance across the full range of Performance Levels.
- Where necessary, assessment procedures should provide students/trainees with more than one opportunity to meet the requirements for assessment at a given Performance Level.
Reliability
- Assessment methods should be accompanied by procedures designed to promote and monitor reliability in interpretation and application of the Performance Levels.

Relationship between assessment and learning
- Assessment procedures should be designed to provide maximum coherence between learning and assessment.
- Assessment methods should be designed to inform, and contribute to improvements in teaching and learning.

Place of assessment in program delivery
- Assessment procedures should be designed so that, as far as possible, assessments of achievement of the Key Competencies are undertaken as part of, or in conjunction with, assessments undertaken for other purposes.
- Record-keeping requirements associated with procedures for assessment of the Key Competencies should be designed so that, as far as possible, these records are integrated with records maintained for other assessment purposes.

12. The Committee recommends that the AEC and MOVEET agree in principle to the following set of principles for reporting on individual achievement of the Key Competencies:

- An individual record of performance showing achievement in the Key Competencies not previously reported should be made available to students and trainees at any point at which they exit from a school program at Years 11-12 level or from a recognised entry-level program of vocational education and training.
- Assessments reported on records of performance should be in accordance with nationally-agreed principles for assessment.
- Records of performance should be based on a common format.
- The issuing of records of performance should be subject to consistent provisions regarding confidentiality and the maintenance of databases of records.

13. The Committee recommends that the AEC and MOVEET agree in principle to the following set of principles for national reporting on achievement of the Key Competencies:

- The collection of data for the purpose of national reporting should be designed to provide a publicly credible means of reporting on the extent to which the Key Competencies are being achieved, to improve the information base for evaluating the effectiveness of education and training programs, and contribute to meeting the needs of public accountability.
- The collection of data for the purpose of national reporting should be undertaken on the basis of sample statistics drawn from databases of individual records of performance.
- Statistical sampling techniques should provide for analyses of participation and achievement by access and equity target groups.
- The collection of data for the purpose of national reporting should incorporate procedures to protect the confidentiality of individuals and the identity of individual schools and training providers.
THE NEXT STEPS

Further validation and benchmarking of the Performance Levels

14. The Committee recommends that the AEC and MOVEET immediately establish a project to further validate and establish benchmarks for the Performance Levels in the Key Competencies.

Field testing implementation

15. The Committee recommends that the AEC and MOVEET agree that States and Territories should field test nationally-consistent assessment and reporting on achievement of the Key Competencies to develop strategies for managing implementation and identify resource implications of the proposed arrangements.

Staff training and development

16. The Committee recommends that the AEC and MOVEET endorse the development of an interactive computer software package to support staff training and development for implementation of the Key Competencies.

Field testing implementation for young people not in formal education and training

17. The Committee recommends that the AEC and MOVEET request the Youth Ministers Council to arrange for the conduct of a field test of implementation of the Key Competencies for young people not undertaking formal education and training programs, and request that the Council provide a report to the AEC and MOVEET.

Developing more flexible pathways between education and training

18. The Committee recommends that the AEC and MOVEET request the Vocational Education, Employment and Training Advisory Committee to provide recommendations on requirements for achievement of the Key Competencies at each level of the proposed Australian Vocational Certificate Training System.

19. The Committee recommends that the AEC and MOVEET request the Australian Curriculum, Assessment and Certification Authorities to provide advice on the relationship between the Key Competencies and senior secondary school certification.

20. The Committee recommends that the AEC and MOVEET request the National Training Board to establish, as part of the formal procedures for endorsing national core competency standards, procedures for identifying the Key Competencies at ASF levels and recording them in the national register of industry competency standards.

21. The Committee recommends that the AEC and MOVEET request the National Training Board to require Competency Standards Bodies to progressively identify the Key Competencies within industry competency standards at ASF levels and, where possible, industrial classifications.

22. The Committee recommends that the AEC and MOVEET request the National Training Board, in consultation with Competency Standards Bodies, to undertake further work to articulate the principles by which the Key Competencies are to be incorporated into industry competency standards.
23. The Committee recommends that the AEC and MOVEET request the National Board of Employment, Education and Training and the Australian Vice-Chancellors’ Committee to examine methods by which achievement of the Key Competencies could be taken into consideration in processes of admission to higher education.

24. The Committee recommends that the AEC and MOVEET request the Vocational Education, Employment and Training Advisory Committee to examine methods by which achievement of the Key Competencies could be taken into consideration in processes of admission to vocational education and training.

25. The Committee recommends that the AEC and MOVEET request the National Board of Employment, Education and Training and the Australian Vice-Chancellors’ Committee to consider methods by which students who enter higher education programs prior to achieving the highest designated level of performance in all of the Key Competencies may be provided with continuing access to assistance to develop the Key Competencies.

26. The Committee recommends that the AEC and MOVEET request the Vocational Education, Employment and Training Advisory Committee to consider methods by which students who enter vocational education and training prior to achieving the highest designated level of performance in all of the Key Competencies may be provided with continuing access to assistance to develop the Key Competencies.

Timeline and strategy

27. The Committee recommends that implementation of nationally-consistent arrangements for assessment and reporting on the Key Competencies should be coordinated with implementation of the Australian Vocational Certificate Training System. The goal for commencement of nationally-consistent arrangements for assessment and reporting of the Key Competencies should be set for 1995.

28. The Committee recommends that the AEC and MOVEET endorse the immediate development of an information strategy to explain the Key Competencies.

29. The Committee recommends that the AEC and MOVEET immediately establish a joint standing committee of the AEC Standing Committee (Schools) and the Vocational Education, Employment and Training Advisory Committee to coordinate national initiatives in postcompulsory education and training and ensure consistent and complementary approaches across the two sectors. Initial tasks for the joint standing committee should include urgent action on the following matters arising from the Committee's recommendations:

- establishment of a project to further validate and benchmark the Performance Levels in the Key Competencies;
- establishment of a project to develop a computer software package to support staff training and development for implementation of the Key Competencies;
- coordination of field tests of implementation of the Key Competencies;
- coordination of advice arising from investigations of the relationship of the Key Competencies to relevant education and training credentials;
- development of an information strategy to explain the Key Competencies.
INTRODUCTION

THE TASK

In its report, *Young People's Participation in Post-Compulsory Education and Training*, released in July 1991, the Finn Committee concluded that there are certain essential things that all young people need to learn in their preparation for employment. It called these things employment-related 'Key Competencies' and recommended that steps be taken to ensure that all young people are able to develop these Key Competencies regardless of the education or training pathway they follow. The report proposed that the employment-related Key Competencies be identified in the areas of:

- Language and Communication
- Mathematics
- Scientific and Technological Understanding
- Cultural Understanding
- Problem Solving, and
- Personal and Interpersonal Characteristics.

To facilitate development of the Key Competencies, the Finn Committee proposed the design of a 'standards framework' to describe the nature of each Key Competency at a number of levels. This would allow educators in different education and training sectors to focus on the desired outcomes and develop curriculum and teaching approaches to suit. It would also allow a consistent approach to the assessment and reporting of young people's achievement in each of the Key Competencies. Such a framework, the Finn Report argued, would offer new opportunities for creating clearer linkages between education and training and the world of work, and new ways for industry to clarify its expectations of young people and the education and training system.

This Committee's task has been to identify the Key Competencies and to develop a means of describing them that will provide a common reference point for curriculum and teaching in both the school and training sectors and provide the basis for a consistent approach to assessing and reporting achievement. The Committee's terms of reference are included at Appendix 1.

The outcomes of this work have been anticipated in the proposals for the Australian Vocational Certificate Training System contained in the report of the Employment and Skills Formation Council. The Key Competencies are intended to comprise the core component of the Australian Vocational Certificate and the basis for improved articulation between general education and vocational training that is the foundation for the proposed system.

THE APPROACH

The Committee tackled its task in stages. The first of these involved research and Committee discussion leading to the preparation of *Employment-Related Key Competencies: A Discussion Paper*. The paper outlined the Committee's initial proposals for defining the Key Competencies and developing descriptions of the competencies to inform curriculum development and teaching and to provide a basis for nationally-consistent assessment and reporting.

The *Discussion Paper* was published at the beginning of February 1992 for consultation during February and March. A total of 8000 copies of the paper and 10000 copies of the executive summary were distributed within constituencies represented in the membership of the Committee, to organisations and individuals who registered interest in receiving information about the work of the Committee through advertisements placed in national daily newspapers, and in response to direct requests.

Committee members obtained responses to the *Discussion Paper* through extensive consultations conducted within their constituencies. The Chair consulted directly with key national organisations. In addition more than 200 written responses were received.
These responses were considered carefully by the Committee in setting the directions for further developmental work and in the preparation of a second consultation document.

*Employment-Related Key Competencies: A Proposal for Consultation* was published in May 1992. This paper set out a detailed proposal for the set of Key Competencies together with principles for nationally-consistent assessment and reporting and discussion of factors that would need to be taken into account in implementing the proposal. In view of the higher than expected demand for the *Discussion Paper*, the print run for the *Proposal for Consultation* was extended to 25000 copies.

Once again distribution of the paper was supported by briefings and detailed consultations with constituencies.

During the second period of consultation, the Committee placed a particular emphasis on issues of access and equity. An Access and Equity Audit of the *Proposal for Consultation* was conducted on a national basis with representatives and advocates of a number of identified groups. In addition special focus projects were conducted by individual States, Territories and systems. (See Appendix 2 for details of the findings of the Access and Equity Audit.)

A second major project conducted in association with this period of consultation was a Preliminary Industry Validation of the proposed Key Competencies. The report of this project is included at Appendix 3.

A further project involved an investigation of the incorporation of the Key Competencies in industry competency standards. The report of this project is included at Appendix 4.

In addition to a detailed report from each Committee member, the *Proposal for Consultation* generated more than 300 written responses.

A complete list of the sources of written responses to the *Discussion Paper* and *Proposal for Consultation* is provided at Appendix 5.

**THE PRODUCT**

The Committee has produced a set of Key Competencies, together with descriptions of Performance Levels, as the basis for setting nationally-agreed standards. The Committee has also reached agreement on a set of principles to provide for nationally-consistent assessment of achievement of the Key Competencies, principles for reporting to young people on their performance and principles for national statistical reporting on achievement of the Key Competencies.

The Committee has also identified the steps needed to complete development of agreed standards in the Key Competencies and to prepare for take-up of the proposed arrangements.

The principal areas for further work identified in responses to the *Proposal for Consultation* were matters related to access and equity, the description of the Performance Levels, the relationship of the Key Competencies to the Australian Standards Framework and issues relating to implementation. The Committee has attended to these matters in the preparation of this report.
Part 1  THE PROPOSAL

1.1  KEY COMPETENCIES

HOW WORKPLACES ARE CHANGING

Australia's economic success and hence our standard of living depends on a workforce and a work environment that is capable of matching, or improving on, world best practice. Workplaces must become more competitive. They must be committed to continuity of service and quality of outcome, setting and meeting deadlines, and responding to the needs and wishes of clients, individually and collectively. To meet these commitments the focus of work and how work is organised will change.

In many Australian workplaces these changes are underway as the industrial parties agree about the best ways to foster greater productivity. The pace and scale of change will increase over the next five years as the Australian economy becomes even more closely integrated with the economies of the region and our major trading partners. The most obvious change in workplaces is a move away from specialised jobs and separate functions towards more broadly-defined work roles and organisational structures that provide for devolved and shared responsibility for planning and decision making. Greater value is being placed on factors such as creativity, initiative, being entrepreneurial and being able to think critically about how to improve work practices.

At the heart of these changes is the realisation that workplaces that have participative management styles, shared goals, multi-skilled workers and flat management structures ("new workplace cultures") are not only more productive than their converse ("old workplace cultures") but also cannot operate without employees whose personal and social skills are valued as highly as their technical competence.' (Confederation of Australian Industry; 1991a; 6).

The world of work is also being significantly affected by changes in vocational education and training. Enhanced responsiveness of the economy to opportunities and challenges must be underpinned by quality vocational education and training which can deliver reliable outcomes. The National Training Reform Agenda was agreed by all governments and the peak industrial parties in 1989. The cornerstone of the reforms is the introduction of a competency-based approach which reflects the standards required in employment.

WHAT SORTS OF THINGS DO YOUNG PEOPLE NEED TO MAKE THEIR WAY IN THESE CHANGING CIRCUMSTANCES?

The short answer, as the Finn Report concluded, is that they need to be multi-skilled, flexible and adaptable.

Clearly they need a strong foundation of the knowledge, skills and understanding that are developed through general education. And they need vocational competencies. But the ideas of flexibility and adaptability suggest the need for a further ingredient which fuses general education with vocational training — made up of the things that enable people to take an active role in making decisions about the work they do and the way it is done and to make the most of opportunities to learn on the job. In other words, the things that enable people to put their general education to work. It is these things that the Committee has focused on to identify the Key Competencies.

The Committee has arrived at the conclusion that there are seven Key Competencies that young people need to be able to participate effectively in the emerging forms of work and work organisation. This set of Key Competencies is presented in summary form in Figure 1.
The Committee recommends that:

The AEC and MOVEET agree that the following constitute the set of Key Competencies which are essential for all young Australians:

• Collecting, Analysing and Organising Information
• Communicating Ideas and Information
• Planning and Organising Activities
• Working with Others and in Teams
• Using Mathematical Ideas and Techniques
• Solving Problems
• Using Technology.
KEY COMPETENCIES
for effective participation in the emerging forms of work
and work organisation

Collecting, Analysing and Organising Information
The capacity to locate information, sift and sort information in order to select what is
required and present it in a useful way, and evaluate both the information itself and
the sources and methods used to obtain it.

Communicating Ideas and Information
The capacity to communicate effectively with others using the range of spoken,
written, graphic and other non-verbal means of expression.

Planning and Organising Activities
The capacity to plan and organise one's own work activities, including making good
use of time and resources, sorting out priorities and monitoring one's own
performance.

Working with Others and in Teams
The capacity to interact effectively with other people both on a one-to-one basis and in
groups, including understanding and responding to the needs of a client and working
effectively as a member of a team to achieve a shared goal.

Using Mathematical Ideas and Techniques
The capacity to use mathematical ideas, such as number and space, and techniques,
such as estimation and approximation, for practical purposes.

Solving Problems
The capacity to apply problem-solving strategies in purposeful ways, both in situations
where the problem and the desired solution are clearly evident and in situations
requiring critical thinking and a creative approach to achieve an outcome.

Using Technology
The capacity to apply technology, combining the physical and sensory skills needed to
operate equipment with the understanding of scientific and technological principles
needed to explore and adapt systems.

(For a more detailed description of the Key Competencies, see Section 1.4.)
1.2 CONSTRUCTING THE SET OF KEY COMPETENCIES

STARTING POINTS

The starting points for identifying the Key Competencies were the six Key Areas of Competence proposed in the Finn Report and agreement on the need for a broad definition of competence.

FINN KEY AREAS OF COMPETENCE

The Finn Report proposed that the Key Competencies be based on what it described as six Key Areas of Competence: Language and Communication, Mathematics, Scientific and Technological Understanding, Cultural Understanding, Problem Solving and Personal and Interpersonal Characteristics. These were listed in the report with a series of sub-headings as shown in Figure 2.

Figure 2

Key Areas of Competence
(as proposed in the Finn Report)

<table>
<thead>
<tr>
<th>Language and Communication</th>
<th>Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaking</td>
<td>Computation</td>
</tr>
<tr>
<td>Listening</td>
<td>Measurement</td>
</tr>
<tr>
<td>Reading</td>
<td>Understanding mathematical symbols</td>
</tr>
<tr>
<td>Writing</td>
<td></td>
</tr>
<tr>
<td>Accessing and using information</td>
<td></td>
</tr>
</tbody>
</table>

| Scientific and Technological        | Cultural Understanding            |
| Understanding                       | Australia's context               |
| Scientific and technological concepts| Global issues                    |
| Impact of science and technology   | World of work                     |
| Scientific and technological skills|                                   |

| Problem Solving                     | Personal and Interpersonal        |
| Analysis                            | Personal management               |
| Critical thinking                   | Negotiating, team skills          |
| Decision making                     | Initiative, leadership            |
| Creative thinking                   | Adaptability to change            |
| Skills transfer to new contexts     | Self-esteem                       |
|                                     | Ethics                             |

THE MEANING OF COMPETENCE

The term competence focuses attention on outcomes. It is about what people can do.

Competence can be defined narrowly to mean the demonstrated capacity to do a specific task, and even more narrowly by detailed specification of the conditions under which performance on the task is to be demonstrated. When used in this sense, it is usually described in terms of skill and generally distinguished from knowledge and understanding. From the outset, the Committee was united in the view that narrow definitions of this sort would not provide an appropriate foundation for development of the Key Competencies.
The Committee adopted a broad definition of competence which recognises that performance is underpinned not only by skill but also by knowledge and understanding, and that competence involves both the ability to perform in a given context and the capacity to transfer knowledge and skills to new tasks and situations.

The concept of competence adopted by the National Training Board includes these elements: ‘it embodies the ability to transfer and apply skills and knowledge to new situations and environments. This is a broad concept of competency in that all aspects of work performance, not only narrow task skills, are included’ (NTB; 1991a: 18).

This broader definition emphasises that competencies, especially if they are to be transferable, are not automated, ‘trained’ behaviours. They are mindful, thoughtful capabilities. In this sense they cannot be explained or inculcated through the use of behaviourist learning theories which rely on low-level drill and reinforcement. They must incorporate a sense of the learner as one who builds concepts and develops understandings which inform technical applications. Competence requires both ‘heads on’ and ‘hands on’; the capacity to think about performance and also to perform. It goes beyond pure or abstracted thinking to the skilled application of understanding. Because the competent performer has grasped the principles behind actions the possibility of transferability to new contexts is heightened.

**DEFINING KEY COMPETENCIES**

In parallel with this broad definition of competence, the Committee took an inclusive approach to the task of identifying which competencies are so important they should be acquired by all young people. The primary focus of the Committee’s task and a major concern of all Committee members was the development of clearer links between employment and education and training. Balancing this priority was the need to take a broad view of the nature of work that acknowledges changes in the make-up of the Australian workforce and the emerging recognition of domestic, community and other forms of voluntary and unpaid work. Further, as developmental work on identification of the Key Competencies proceeded, it became increasingly apparent that generic employment-related competencies — things applying generally to emerging patterns of work and work organisation rather than applying only to particular occupations or industries — are also of value for further education and adult life in its broadest sense. These notions were combined in the definition of Key Competencies adopted by the Committee.

The Committee recommends that:

The AEC and MOVEET endorse the following definition of Key Competencies:

Key Competencies are competencies essential for effective participation in the emerging patterns of work and work organisation. They focus on the capacity to apply knowledge and skills in an integrated way in work situations. Key Competencies are generic in that they apply to work generally rather than being specific to work in particular occupations or industries. This characteristic means that the Key Competencies are not only essential for effective participation in work but are also essential for effective participation in further education and in adult life more generally.

**INPUT**

In addition to the expertise of its members, the Committee drew on a wide range of sources in the process of arriving at the set of Key Competencies presented in Figure 1.

Reports on the attributes required and valued most highly by industry for entry to the workforce and analyses of future developments in the nature of work and work organisation provided a picture of the directions in which development of the Key Competencies needed to go. More direct and practical input on the generic competencies needed for employment was obtained through the Preliminary Industry
Validation studies and through analysis of the generic elements of industry competency standards under development or endorsed by the National Training Board.

Reports of similar initiatives overseas, in particular work recently completed in the United Kingdom and United States and currently in progress in New Zealand, provided a valuable basis for comparison.

Related national projects underway in the school and training sectors provided a continuing reference point. Of special interest were the project to develop national subject profiles being undertaken by the Curriculum and Assessment Committee of the AEC and the National Communication Skills Project under the auspice of the Australian Committee for Training Curriculum.

Curriculum workers and practitioners drawn together from different States and Territories and from both the school and training sectors generated dialogue about ways of defining and describing generic employment-related competencies in ways that are meaningful both in school and training settings.

Most significantly, the extensive range of discussions and written submissions in response to the Discussion Paper and Proposal for Consultation produced by the Committee, including the focused consultation on access and equity considerations, provided opportunities to test and refine proposals with the school and training sectors, industry and the broader community.

DELBERATIONS

In sifting and appraising this wide range of advice and information, the Committee developed a number of principles to assist in defining the set of Key Competencies. The principles encompass fundamental points in the logic supporting the notion of a set of Key Competencies and issues raised in consultation and submissions, including the consequences of Key Competencies for the concept of general education and the meaning and scope of the notion of 'competence'. These principles are as follows.

| Part of general education, but not the whole |
| Key Competencies are essential elements of a general education but do not displace the broader purposes of general education in developing young people as individuals and members of Australian society. |

| Essential and generic to work in the future |
| The set of Key Competencies should be confined to those capabilities that are essential for young people entering any sector of work in the future, including both unpaid and volunteer work. |

| Of value to young people regardless of postcompulsory pathway |
| The set of Key Competencies has value for all young people regardless of the particular pathway they follow in the postcompulsory years. |

| Cross-curricular |
| The set of Key Competencies does not constitute a curriculum or set of subjects, nor do individual Key Competencies relate only to particular subject areas. Rather, the Key Competencies can be developed and applied across the range of areas of learning comprising the curricula of school and training programs. |

| Able to be developed in a wide range of settings |
| The set of Key Competencies can be taught and learned through the variety of education and training settings and programs currently available to young people in Australia. |

| Focus on outcomes |
| The Key Competencies describe the outcomes of learning rather than processes by which these outcomes may be achieved. |
Assume a foundation of knowledge, skills and understanding
The Key Competencies assume a basis of knowledge, skills and understanding which need to be integrated and applied to achieve a purpose or complete a task.

Focus on application
Central to the concept of competence is the application of knowledge, skills and understanding in an integrated way; competencies do not constitute bodies of knowledge as such.

Integrated in practice
The integrated nature of the Key Competencies and the ways in which they are applied in work activities means that, in practice, they overlap with each other to some extent.

A number of aspects of these principles require elaboration.

SCOPE OF THE KEY COMPETENCIES

The first is the need to emphasise the Committee's view of the relationship between the Key Competencies and the broader purposes of general education as set out in the Common and Agreed Goals for Schooling in Australia (see Appendix 6). Responses to the Discussion Paper reflected widespread concern that the definition of Key Competencies would lead to a narrowing of the purposes of general education. The Committee has sought to make clear its view that the Key Competencies need to be consistent with these goals and should form an essential part of general education, but the overlap is not complete and is not intended to be.

FUTURE ORIENTATION

Second, and most significant, is the future orientation of the Key Competencies. The Committee, drawing particularly on the results of the Preliminary Industry Validation, has looked to emerging and likely future patterns of work and work organisation in constructing the set of Key Competencies. This is a substantial departure from initial proposals which were based to a large degree on existing approaches to establishing industry competency standards. This forward looking approach is more in keeping with the Committee's task and the objectives the Committee adopted for the work. It is also more consistent with the basic rationale of future economic competitiveness that underpins wider reform agendas for education and training.

A future orientation is also predicated on the fact that education and training are preparation for the future. The Committee's proposals are designed to assist young people currently in primary school and the early years of secondary school to enter further education and training and work in five years time and into the next century. The Key Competencies proposed here take this into account.

The Committee has also been mindful of the expectation that the nature of work and work organisation will continue to evolve and develop as industrial processes change and new personnel structures are found to be more productive and efficient. These developments may change the nature and scope of the Key Competencies essential for effective participation in emerging patterns of work and work organisation. Accordingly, the Committee proposes that the set of Key Competencies be reviewed periodically.

The Committee recommends that:

The Key Competencies be reviewed periodically, under the joint auspice of the AEC and MOVEET, to ensure that the set appropriately reflects the generic competencies essential for effective participation in the emerging forms of work and work organisation.
FOUNDATION KNOWLEDGE

The Key Competencies do not attempt to describe 'required knowledge'. But they do assume a foundation of knowledge to be applied. There is some debate about the desirability of making this assumed knowledge explicit. One danger of being explicit is that it is easiest to express the required knowledge in conventional terms based on institutionalised knowledge or the most common educational pathway, thus devaluing alternative routes to that knowledge. On the other hand, leaving the assumed foundation knowledge implicit restricts the opportunities of those following alternative pathways to match their experience with the required knowledge, further reinforcing the centrality of the most common or most esteemed pathway. The ideal is to express the foundation knowledge in a way which is both explicit about what is required and inclusive of differing experience and routes to learning.

It needs to be emphasised that the assumption of foundation knowledge does not mean that knowledge acquisition must necessarily precede development of the Key Competencies. The two should, and in practice usually do, go hand in hand. Literacy in English, for example, is assumed in each of the set of Key Competencies and could be developed in conjunction with any and all of them. The Access and Equity Audit revealed the need for specific attention to be paid to the English language learning implications of the Key Competencies in plans for implementation.

With these points in mind, the Committee proposes that steps be taken to ensure that the national statements and profiles currently under development for the eight key learning areas identified in the Common and Agreed National Goals for Schooling in Australia (English, Mathematics, Science, Studies of Society and Environment, Languages other than English, Health, Technology and the Arts) encompass the knowledge, skills and understanding integral to achievement of the Key Competencies.

The Committee recommends that:

The AEC and MOVEET request the Curriculum and Assessment Committee to ensure that the national statements and profiles for the eight key learning areas identified in the Common and Agreed National Goals for Schooling in Australia encompass knowledge, skills and understanding integral to achievement of the Key Competencies, and to consult with the Australian Committee for Training Curriculum, as appropriate, to ensure a consistent interpretation across the school and training sectors.

APPLICATION

A further observation about these principles is the emphasis on application. The six Key Areas of Competence proposed in the Finn Report comprise a selection of curriculum areas combined with a rudimentary concept of competence. If the Committee had adopted this half-way house it would have described competencies by sifting out those elements of the curriculum perceived to be 'relevant' to preparation for employment. Instead, the Committee has chosen to base the Key Competencies on a description of the processes through which knowledge and skills are applied. The underlying premise is that knowledge and skills need to be fused with application to create the notion of competence.

The need to explore the implications of an applied approach for teaching and learning in postcompulsory education and training is taken up in the Committee's proposals for the next steps in development and implementation of the Key Competencies (see Section 2.2). The Committee believes that this matter also needs to be examined in relation to approaches to teaching and learning in the compulsory years.
The Committee recommends that:

The AEC and MOVEET request the Curriculum and Assessment Committee to examine the implications of assessment and reporting of achievement of the Key Competencies in the postcompulsory years for curriculum and approaches to teaching and learning in the compulsory years of schooling.

Central to the emphasis on application is the distinction between Key Competencies and bodies of knowledge. The Committee has strongly emphasised the idea that competence means the capacity to 'do' something rather than just 'know' something. This does not deny the importance of bodies of knowledge in education and training nor the value placed on acquisition of knowledge by the community and industry. But it does mean that bodies of knowledge do not of themselves constitute competencies. The body of knowledge that comprises Scientific and Technological Understanding which was included in the Finn recommendations on Key Areas of Competence, for example, forms an essential part of the foundation knowledge for the set of Key Competencies, while the application of scientific knowledge and skills finds specific expression in the Key Competency of Using Technology.

CULTURAL UNDERSTANDING

The body of knowledge described by the Finn Committee as Cultural Understanding warrants specific comment. As the findings of the Access and Equity Audit indicate, a number of interpretations of this area emerged during the course of the Committee's deliberations. Two views were particularly evident. The first was the view that the nature of Australian society and the increasingly international context of the Australian economy makes it imperative that cross-cultural understanding be incorporated among the Key Competencies. The Committee has sought to reflect this interpretation of cultural understanding in the refinement of the Key Competency descriptions.

The second was broadly-based and strongly-expressed support for the need for young people to have a firm foundation of knowledge of society and culture, at least of Australia and the Asia-Pacific region, and the need for this knowledge to be recognised as an essential part of the foundation for the Key Competencies. This view was combined with concern that it cannot necessarily be assumed that all young people have access to this body of knowledge, especially continuing access during the postcompulsory years. The Committee agrees that knowledge of society and culture needs to be given specific recognition as an essential part of the foundation for the Key Competencies. It also proposes that the place of such cultural understanding in postcompulsory school and training programs should be examined with the aim of making explicit the required knowledge and ensuring continuing access to its acquisition during the postcompulsory years.

The Committee recommends that:

The AEC and MOVEET agree in principle that cultural understanding is an essential part of the knowledge, skills and understanding that forms a foundation for, and needs to be developed in conjunction with, the Key Competencies.

The Committee recommends that:

The AEC and MOVEET request the AEC Standing Committee (Schools) and the Vocational Education, Employment and Training Advisory Committee to take steps to ensure that all young people have continuing access to development of cultural understanding during the postcompulsory years in school programs and their equivalent in vocational education and training.
KEEPING IT SIMPLE

In addition to the principles for conceptualising the set of Key Competencies, there were practical concerns to be taken into account. It was clear from initial work on defining the Key Competencies that this task could not be divorced from consideration of the practical consequences for curriculum, teaching, assessment and reporting on the one hand or from consideration of the consequences for users of the information on the other. This matter was among the major outcomes of consultation on the Discussion Paper. The message from all concerned was loud and to the point. The number of things to be assessed and reported on in the Key Competencies had to be kept to a minimum.

CONCLUSIONS

The final proposal for seven Key Competencies is a marked reduction from the proposal set out in the initial Discussion Paper. In simplifying the proposal the Committee was guided by the general support for the list of defining characteristics proposed in the Discussion Paper and confirmed in the Proposal for Consultation.

Key Competencies must:

- be essential to preparation for employment;
- be generic to the kinds of work and work organisation emerging in the range of occupations at entry levels within industry rather than occupation- or industry-specific;
- equip individuals to participate effectively in a wide range of social settings, including workplaces and adult life more generally;
- involve the application of knowledge and skill;
- be able to be learned; and
- be amenable to credible assessment.

Applying these characteristics and taking into account responses to the Proposal for Consultation, the Committee has confirmed its focus on the set of seven Key Competencies. The conclusions drawn in the Proposal for Consultation about the areas proposed for consideration as Key Competencies in addition to the six Key Areas recommended by the Finn Committee have also been confirmed. The proposal to incorporate the Arts into examples of applications of the Key Competencies and subjects fostering their development has been adopted as far as possible in this report. The concept of creativity has been identified as a significant factor in distinguishing between the Performance Levels across the set of Key Competencies (see Section 1.3). Family and Household Management, which was also put forward for consideration as a Key Competency, has been regarded, together with community and voluntary work, as a work situation in which the Key Competencies can be developed and applied. Separate consideration was also given to Information Technology. It has been built into a number of the Key Competencies, in particular Using Technology.

LANGUAGES OTHER THAN ENGLISH

The Committee reconsidered its approach to languages other than English, acknowledging the growing importance of languages in many occupations and industries. The increasing interdependence of all economies but particularly those of the Asia-Pacific make competence in a second language a very valuable tool for many young Australians. While endorsing moves to increase second language learning, the Committee notes that proficiency in a second language is not yet, and is not likely to be in the next
few years, generic to all industries and occupations. Hence, it is not included in this set of Key Competencies. The Committee believes, however, that this area is one which warrants specific attention in the first and subsequent periodic reviews of the set of Key Competencies.

VALUES AND ATTITUDES

Both the principles and characteristics the Committee has used to construct the set of Key Competencies preclude the inclusion of values and attitudes. Personal qualities such as punctuality, initiative and honesty are a vital part of education and training and fundamental to work and community life. Many groups, particularly industry and parent groups, argued in consultations and submissions that the Key Competencies should encompass such values and attitudes. The Committee acknowledges and shares this commitment to the importance of values and attitudes. In doing so, however, it maintains the view that a set of Key Competencies can only contain those things which can be developed by education and training, which do not require some innate predisposition or adherence to a particular set of values and which are amenable to credible assessment. On these tests and, in some cases, the test of conceptual coherence, the Committee considers that attitudes and values fall outside the field of the Key Competencies. There is, however, an ethical dimension to the Key Competencies and, given the way in which they are embedded in context, their development is likely to support the development of the attitudes seen as desirable. While work ethics such as 'a fair day's work for a fair day's pay' are not identified among the Key Competencies, other dimensions of personal and work ethics are evident. Working with Others and in Teams, for example, includes contributing to the good of the group or organisation and being ethical in one's dealings with others. In short, while attitudes are not competencies per se they are a function of particular work place settings which will be reflected in the development and application of Key Competencies.

CONSISTENCY WITH INTERNATIONAL DEVELOPMENTS

The processes and principles the Committee has applied to construct the set of Key Competencies have an internal logic and a strong connection with the task at hand and with the context in which it has been produced. The product, however, is neither novel nor idiosyncratic. The set of Key Competencies bears marked similarities to developments in other countries.

Born of similar concerns about economic productivity and competitiveness and the smooth and effective transition of young people into the workforce, national governments in the United Kingdom, United States of America and New Zealand initiated the development of their own equivalents of employment-related Key Competencies at approximately the same time as this country.

In the United States this work has been carried out by the Secretary of the Department of Labour's Commission on Achieving Necessary Skills (SCANS) and in the United Kingdom by a group working under the aegis of the National Council for Vocational Qualifications (NCVQ). In New Zealand it has formed part of development of the National Curriculum.

The 'Key Competencies' are referred to as 'Core Skills' (CS) in the United Kingdom, 'Workplace Know-How' (WKH) in the United States and 'Essential Skills' (ES) in New Zealand. In each case the initiatives have resulted in a set of statements about skills/know-how/competencies which are:

• not specific to any particular subject area, educational program, qualification or awarding body nor to any specific vocational task or career path, but which focus on generic attributes that can be learned through formal processes and that apply generally to working life;

• common to both general education and vocational education and training;

• concerned with outcomes, in each case defined as precisely as possible with various levels to indicate the variety of individual attainment.

In each case also an initial tentative listing was followed by a process of consultation, testing and refinement. In the case of the New Zealand Essential Skills this process is currently in train. The most
notable differences among the results are the inclusion of competence in a modern foreign language in the UK Core Skills and the breakdown of the US Workplace Know-How into Workplace Competencies (Resources, Interpersonal Skills, Information, Systems and Technology) and Foundation Skills (Basic Skills, Thinking Skills, Personal Qualities).

There are more similarities than differences. The Key Competencies of Collecting, Analysing and Organising Information and Communicating Ideas and Information are paralleled by 'Communication' (CS-UK), 'Information Skills' and 'Communication Skills' (ES-NZ) and 'Information' (WKH-US) — acquiring and evaluating data, organising and maintaining files, interpreting and communicating, using computers to process information.

Planning and Organising Activities has many features in common not only with the draft New Zealand Essential Skills area of 'Self-management Skills' but also the 'learning to learn'-type skills identified in 'Work and study Skills' (ES-NZ) and 'Personal skills: Improving own learning and performance' (CS-UK). It also bears similarities to 'Resources' (WKH-US) — allocating time, money, materials, space and staff. The elements of Working with Others and in Teams are found in 'Interpersonal skills' (WKH-US) — working on teams, teaching others, serving customers, leading, negotiating, working well with people from culturally diverse backgrounds, 'Personal Skills: Working with others' (CS-UK) and 'Social Skills' (ES-NZ).

Using Mathematical Ideas and Techniques is described as 'Numeracy: Application of number' in the UK Core Skills, 'Numeracy Skills' in the draft New Zealand set, and is found under the general section concerned with 'Basic skills' in the US material.

Solving Problems appears as 'Problem Solving' in the UK Core Skills and 'Problem-solving and Decision-making Skills' in the draft New Zealand Essential Skills and is included under the heading 'Thinking Skills' in the US plan.

Using Technology is directly paralleled by 'Technology' (WKH-US) — being able to select equipment and tools, applying technology to specific tasks, and maintaining and trouble-shooting equipment. The draft New Zealand Essential Skills include elements of Using Technology within both 'Information Skills' and 'Communication Skills'. The UK Core Skills also focus more explicitly on 'Information Technology'.

This high degree of consistency is maintained at more detailed levels of definition.

The UK Core Skills, US Workplace Know-How and draft New Zealand Essential Skills have been mapped against the Key Competencies in Figure 3. This comparison of similarities and the relatively few differences suggest that the Committee’s analysis of what young people require to participate effectively in the emerging forms of work and work organisation in a restructuring economy is accurate. The challenge to be economically competitive is common to these countries and the education and training reforms to foster that competitiveness are also common to them. This similarity reinforces the Committee’s belief in the importance of the Key Competencies and the validity of the proposed set.
<table>
<thead>
<tr>
<th>Key Competencies</th>
<th>UK (NCVQ) Core Skills</th>
<th>US (SCANS) Workplace Know-How</th>
<th>NZ Essential Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Collecting, Analysing and Organising Information</td>
<td>• Communication</td>
<td>• Information</td>
<td>• Information Skills</td>
</tr>
<tr>
<td></td>
<td>• Personal Skills: Improving own learning and performance</td>
<td>• Foundation Skills: Basic skills</td>
<td></td>
</tr>
<tr>
<td>• Communicating Ideas and Information</td>
<td>• Communication</td>
<td>• Information</td>
<td>• Communication Skills</td>
</tr>
<tr>
<td></td>
<td>• Personal Skills: Improving own learning and performance</td>
<td>• Foundation Skills: Basic skills</td>
<td></td>
</tr>
<tr>
<td>• Planning and Organising Activities</td>
<td>• Personal Skills: Improving own learning and performance</td>
<td>• Resources</td>
<td>• Self-management Skills</td>
</tr>
<tr>
<td></td>
<td>• Numeracy: Application of number</td>
<td>• Foundation Skills: Personal qualities</td>
<td>• Work and Study Skills</td>
</tr>
<tr>
<td>• Working With Others and in Teams</td>
<td>• Personal Skills: Working with others</td>
<td>• Interpersonal Skills</td>
<td>• Social Skills</td>
</tr>
<tr>
<td></td>
<td>• Numeracy: Application of number</td>
<td>• Foundation Skills: Basic skills</td>
<td>• Work and Study Skills</td>
</tr>
<tr>
<td>• Using Mathematical Ideas and Techniques</td>
<td>• Problem Solving</td>
<td>• Problem-solving and Decision-making Skills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Numeracy: Application of number</td>
<td>• Foundation Skills: Thinking skills</td>
<td></td>
</tr>
<tr>
<td>• Solving Problems</td>
<td>• Numeracy: Application of number</td>
<td>• Technology</td>
<td>• Information Skills</td>
</tr>
<tr>
<td></td>
<td>• Problem Solving</td>
<td>• Systems</td>
<td>• Communication Skills</td>
</tr>
<tr>
<td>• Using Technology</td>
<td>• Numeracy: Application of number</td>
<td>• Technology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Information Technology</td>
<td>• Systems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Modern foreign language</td>
<td>• Information Skills</td>
<td></td>
</tr>
</tbody>
</table>

Note: Where the UK Core Skills, US Workplace Know-How and NZ Essential Skills are comparable with more than one Key Competency they have been repeated.
1.3 PERFORMANCE LEVELS

The development of arrangements to provide for nationally-consistent assessment and reporting on achievement of the Key Competencies requires the establishment of a common reference point or points as the basis for assessment and reporting.

'Performance Level' is the term the Committee has used to describe such a reference point. It requires the description of performance in a given Key Competency in such a way that it is capable of being interpreted and applied in a consistent way to arrive at judgments about individual performance in different settings and over time.

ESTABLISHING LEVELS OF PERFORMANCE

As there were no existing reference points which could simply be adopted, the Committee developed an initial set of Performance Levels by drawing on information and experience that was available, both locally and overseas, and consulting with major stakeholders and the community. The iterative process of testing and refining reference points for establishing the Performance Levels, through the Discussion Paper and Proposal for Consultation, provided the basis for progressively and systematically arriving at the establishment of explicit reference points for the Performance Levels and descriptions of the Performance Levels in each of the Key Competencies. These are now refined to the point at which they are appropriate for further validation in a wider range of settings and for the collection of examples of performances that will provide benchmarks for interpreting the Performance Levels in practice.

In reaching this position, the Committee explored the possibilities of using levels from the Australian Standards Framework as primary reference points for the Performance Levels in the Key Competencies. It is critical that Performance Levels in the Key Competencies are able to be articulated with industry competency standards that are aligned with the Australian Standards Framework and thus provide a basis for articulation between school and training programs (see Section 2.4 for discussion of the means by which this can be achieved). However, the Committee has resolved that it would not be appropriate to use the Australian Standards Framework as the sole determinant of the reference points for establishing the range of Performance Levels.

The reasons for this lie in the essential differences between industry competency standards and the Key Competencies. Industry competency standards are:

- described in terms of the requirements of jobs rather than the competencies an individual brings to the job;
- developed by industries and express agreed common workplace requirements;
- mainly current in their orientation, though industries are encouraged to be forward looking in the development of standards and to be somewhat in advance of the typical level of work organisation existing at the time the standards are developed.

These standards are aligned with the Australian Standards Framework. The Framework is a set of eight competency levels (i.e. common reference points) which broadly describes the full range of jobs that people do, above entry level into the workforce. It starts at level 1, the base level for a competent worker. It ends at level 8, which encompasses senior professionals and managers. The levels are intended to provide impartial benchmarks against which jobs can be aligned. The purpose of the Framework is to ensure that standards relate properly to the range of competencies required for particular occupations and classifications on the one hand and to formal vocational education and training qualifications on the other. Industry competency standards are endorsed by the National Training Board.
The Key Competencies, on the other hand, are intended to describe an individual's performance in a range of broad employment-related competencies which will provide the basis for:

- effective participation in emerging forms of work and work organisation;
- access to a range of education and training pathways, both initially and subsequent to entering employment;
- improved flexibility and mobility in employment;
- effective participation in adult life more generally.

Industry competency standards and the Key Competencies thus differ in three important respects: focus, scope and orientation.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Industry Competency Standards</th>
<th>Key Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>Describe requirements of jobs</td>
<td>Describe what a person can do</td>
</tr>
<tr>
<td>Scope</td>
<td>Generally industry specific</td>
<td>Generic to industries and jobs</td>
</tr>
<tr>
<td>Orientation</td>
<td>Mainly current, but encouraged to be forward looking</td>
<td>Future</td>
</tr>
</tbody>
</table>

These differences and wider considerations about the context to be captured by the Performance Levels in the Key Competencies led the Committee to develop a specific set of reference points for establishing them.

The Committee was guided in its work by principles which it believed were important in the establishment of Performance Levels. In the first instance, the range of the levels needed to recognise that achievement would occur at varying levels, and that competence is not a static attribute but may develop over time. Further, the Preliminary Industry Validation studies indicated that requirements for levels in the Key Competencies will vary between industries. That is, a single reference point was unlikely to be adequate. Secondly, the differences between the levels needed to allow for meaningful descriptions of performance at each level, and implementation across a wide range of school and training settings. That is, a smaller number rather than a larger number of levels was needed.

A major input to establishing the initial levels was the observed competencies across a variety of work settings, including paid, unpaid, community and voluntary work. Here, it was noticeable that no matter what activity was involved or at what level, it was essential that the person displayed responsibility and initiative. In a work setting this includes setting up conditions for effective work, proficiency, maintaining focus, undertaking the activity in a timely manner, and checking the quality of the outcome. These, together with the application of knowledge and skills, were important at all levels. Beyond this, there emerged capacities which were highly valued and which helped distinguish higher levels of performance. Some of these focused on the organisational capacities involved in selecting and bringing
together disparate elements into a coherent process. Others involved the evaluative and reflective capacities used in improving what exists, in moving across into new areas, and in being innovative and applying creative capacities. Across these latter capacities the knowledge base grew in depth and breadth, leading to the point where generalisations and the broader principles of the knowledge base were brought to bear on the activity.

THREE LEVELS OF PERFORMANCE

The Committee has included the Australian Standards Framework in its broad considerations of development of Performance Levels. In addition it has drawn on the achievements displayed by young people in subjects at school, the social contexts within which young people live, and the contexts of further and higher education. The Committee has also been aware of the role the Performance Levels might play in leading young people into the workplace of the future.

These considerations have led to the establishment of three levels of performance in the Key Competencies. These levels stand in their own right. They do not derive directly from any other framework. In ascending order they are:

Performance Level 1 describes the competence needed to undertake activities efficiently and with sufficient self-management to meet the explicit requirements of the activity and to make judgments about quality of outcome against established criteria.

Performance Level 2 describes the competence needed to manage activities requiring the selection, application and integration of a number of elements, and to select from established criteria to judge quality of process and outcome.

Performance Level 3 describes the competence needed to evaluate and reshape processes, to establish and use principles in order to determine appropriate ways of approaching activities, and to establish criteria for judging quality of process and outcome.

See Section 1.4 for descriptions of these Performance Levels for each of the seven Key Competencies.

The Committee believes that these levels capture the range of competence required for successful participation in work at entry level and that Performance Level 3 is challenging but should be attainable by most young people. It is recognised, however, that the detailed specification of these levels needs to be confirmed and may be refined, through the processes of further validation and the establishment of benchmarks of the Performance Levels (see Section 2.1).

THE RANGE AND NUMBER OF PERFORMANCE LEVELS

The Committee received some expressions of concern about the range embraced by the Performance Levels, particularly that Performance Level 3 is too high. Some respondents to consultation also expressed the view that Performance Level 1 is too demanding. The Committee accepts these as legitimate concerns, but has maintained its current position for three primary reasons. First, the Performance Levels have been established on the best available information about the competencies needed in the workplace not only at present but also into the future. Second, the processes of further validation and benchmarking of the Performance Levels, and some experience of implementation will generate new insights into the appropriate range of performance to be covered by the Performance Levels. It is the Committee's view that the current range is tenable but that the periodic review of the
Key Competencies should include review of the range encompassed by the Performance Levels. Third, the notion of establishing some challenge for young people to achieve high levels of performance received considerable support within the Committee, and from professional educators, industry and the community.

The Committee also received suggestions about increasing the number of levels. Some of the arguments presented were based on the assumption that the Key Competencies need to discriminate between young people in a norm-referenced sense, and that more levels are needed to perform this function. The Performance Levels are standards-referenced; that is, the requirements for achieving each level are specified. Their purpose is to establish and describe what is needed to participate effectively in work. Progression through the levels is based on achievement and there is no expectation that performance across the levels will occur according to a predetermined distribution. However, the Committee accepts that, in the light of the proposed developmental processes and the experience of implementation, the question of whether one or two extra levels are needed should be considered. For example, extra levels may be needed to capture performance higher than Performance Level 3 or lower than Performance Level 1, or it may emerge that a further level is discernible within the current range. The Committee reiterates, however, that the basis for these decisions must remain the competence required for effective performance in work.

NAMING THE PERFORMANCE LEVELS

The Committee has resolved that numbers should be used to name the Performance Levels. This matter received a good deal of attention in consultation. Two main arguments were advanced against the use of numbers. The first is the risk that the range of Performance Levels may be erroneously interpreted to correspond directly with the first three levels of the Australian Standards Framework. The second is that the use of numbers may encourage the impression that assessments of achievement of the various Key Competencies are amenable to some kind of aggregation to produce an overall 'score' for Key Competency performance.

The Committee accepted these as good reasons for avoiding the use of numbers, but was unable to find a satisfactory alternative. The use of letters, A, B, C, to denote the Performance Levels would overcome the first of these concerns, if not the second. But, in the Committee's view, this would only lead to a further set of problems arising from the widespread use of letters to describe grade ranges for assessment systems in schools and, particularly, the common tendency to assume that particular letters denote a 'pass' grade. An alternative suggestion that the Performance Levels be described by apparently neutral labels, such as K, V, P or by reference to some system other than numbers or letters, was also viewed as unsatisfactory on the grounds that it would be likely to baffle users and lead to yet another set of problems of interpretation.

The Committee recommends that:

The AEC and MOVEET agree in principle that the Key Competencies be described at three standards-referenced levels of performance.
1.4 DESCRIPTIONS OF THE KEY COMPETENCIES

This section contains detailed descriptions of the seven Key Competencies. Each description comprises six parts.

The first part is an overview, including an indication of applications of the Key Competency, particularly in work settings.

The second explains the major ideas which underpin the Key Competency and which provide a basis for establishing Performance Levels.

The third part describes the main features of the set of Performance Levels.

The last three parts describe the Key Competency at each of the three Performance Levels, including some applications of the Key Competency. These applications present situations in which the Key Competency, at the given Performance Level, is needed in order for the activity to be completed successfully.

While the Key Competencies have a future orientation, the descriptions presented here convey a sense of ‘present’. This is to simplify the language used in the descriptions and present them as goals for young people currently in education and training.

The Committee recommends that:

The AEC and MOVEET endorse the Key Competency descriptions presented in Section 1.4 as the basis for further validation and benchmarking of Performance Levels in the Key Competencies.
COLLECTING, ANALYSING AND ORGANISING INFORMATION

RATIONALE

One of the catchphrases to emerge in recent years refers to an 'information explosion'. This represents much more than a catchy cliche, for it is firmly rooted in reality. It underscores the dominance that information has across the spectrum of work and life more generally. Much of this information is contained in oral communication and it is conventional to think of information as being contained in text. But information is rendered also in statistical, graphical, pictorial and tabular forms, in spreadsheets, databases, diagrams, formulae and equations, and ledgers. Material, whether it is spoken, written or visual, can become information when a person recognises it as relevant to his or her work purposes. In this definition such things as the names and telephone numbers of colleagues or neighbours can assume the status of information. Even the particular interests of colleagues and friends could provide a relevant information base for an adult who wants to organise an after-work, volunteer or community activity. Similarly the physical features and interactions of worksites become information for people who have a disability and for their co-workers.

Growth in the capacities to store and access information, to collect and present it in many and varied forms, and to apply to it techniques of analysis and research has led to work practices and organisational structures which now depend on these capacities. For example, many organisations, including some 'leading edge' organisations, use a structure based on a network of small units, perhaps in separate locations. This structure must be underpinned by the effective use and management of information. Further, as technology becomes more sophisticated greater proportions of the total work effort are being devoted to generating, managing and using information. Similarly, learning in further and higher education requires the ability to sift, select and present information as a critical part of the educative process. The processes for gathering and managing information are now more important to effective participation in work and education than at any time in history.

MAJOR IDEAS

Collecting, Analysing and Organising Information focuses on the capacity to locate information, sift and sort information in order to select what is required and present it in a useful way, and evaluate both the information itself and the sources and methods used to obtain it. It is about the processes by which information is managed. Of particular importance in this Key Competency is responsiveness to the nature and expectations of those who might receive the information, those who might be affected by the information and the purposes to which the information might be put. It includes the notion of social, cultural and ethical responsibility in the use and management of information. At lower levels this might mean clarifying the nature and expectations of the audience and the purpose of the information, or fulfilling responsibilities for maintaining the integrity of the information source. It might involve following guidelines for confidentiality, privacy, a Freedom of Information Act, or other guidelines which provide the format, routines and protocols specific to the organisation. At higher levels it might mean reflecting upon and evaluating the processes by which information is collected, analysed and organised or identifying and using principles for the responsible use and management of information.

Another of the important ideas in this Key Competency is the application of the techniques of information access and retrieval. This can be as straightforward as accessing a library book which is known to contain the factual information sought, asking someone for directions or taking data from a graph. But it can also be more complex, perhaps drawing on the investigative skills of searching and researching.

In the simplest sense, the analysis and organisation of information amounts to extracting factual information and organising it into a predetermined format. In the more complex sense the variety of theoretical approaches to some information gives rise to many different themes, categories and ways of viewing the information. This may require the creation of categories or organising structures which are unique to that information but which provide a strong basis for public presentation.
The Key Competency also includes the evaluation of information. At lower levels this might mean checking that factual information is as complete as can be expected, has been correctly allocated to categories, and is free of error. At higher levels it might mean establishing or clarifying criteria for judging the validity, quality, and salience of information, and using those criteria judiciously in the process of collecting, analysing and organising information.

In summary, Collecting, Analysing and Organising Information involves:

- responsiveness to purposes of the information, the nature of the sources and the audience;
- application of access and retrieval techniques and principles;
- analysis and organisation of information;
- evaluation of quality and validity of information.

PERFORMANCE LEVELS

At Performance Level 1, the primary focus of Collecting, Analysing and Organising Information is the retrieval and reporting of specific information. The applications at this level require accuracy, clarity and adherence to specific guidelines. Performance Level 2 moves beyond this to management of the information within a broader work process. It includes the selection of management techniques and the identification of relevant sources of information. At Performance Level 3 the emphasis broadens again to the establishment and application of principles that underpin information retrieval and organisation. The applications at this level require searching and selecting information from sources in which it may be embedded within other material, and from sources which may not be immediate and obvious. It also requires the capacity to create ways of organising information for new situations.
PERFORMANCE LEVEL 1

At this level a person:

• follows existing guidelines for the collection, analysis and organisation of information; and
• accesses and records information from given sources; and
• organises information into predetermined categories; and
• checks information for completeness and accuracy.

Some applications of Collecting, Analysing and Organising Information at this level are:

• accessing routine personnel information from a computerised database;
• filing invoices using file numbers and names;
• determining tolerances from a book of technical specifications;
• updating a telephone and address index;
• determining from committee members an optimum meeting date;
• finding examples of the music of a particular composer.

PERFORMANCE LEVEL 2

At this level a person:

• clarifies the needs of the audience and the purposes of the information; and
• accesses and records information from a variety of sources; and
• selects categories or structures by which to organise information; and
• assesses information for relevance, accuracy and completeness.

Some applications of Collecting, Analysing and Organising Information at this level are:

• establishing requirements of members of a group tour;
• preparing a training plan;
• establishing an information base for selecting a child car restraint;
• establishing requirements for materials and equipment from building specifications.

PERFORMANCE LEVEL 3

At this level a person:

• defines the needs of the audiences and the purposes of the information; and
• critically investigates sources to identify and distil relevant information; and
• identifies within information the main organising categories and structures; and
• evaluates the quality and validity of information.

Some applications of Collecting, Analysing and Organising Information at this level are:

• establishing a database of decisions, agenda papers and information for a committee which meets regularly;
• using records such as profitability, consumer demand and seasonal variations to plan offerings in a cafe;
• establishing an information base of travel services in an overseas location;
• undertaking a literature search on family patterns in Australian society.
COMMUNICATING IDEAS AND INFORMATION

RATIONALE

Being able to communicate ideas and information is essential to all forms of work and human activity. It may involve spoken, written or visual language and may involve sign or gesture. Young people entering adult life and work need access to all forms of communicative competence, from the most ordinary and everyday, such as simple requests for advice, to the most prestigious, such as formal speeches. The applications of Communicating Ideas and Information may range across the design and messages of leaflets, answering and initiating telephone calls, writing an essay or a report, or demonstrating a task or procedure.

To be successful the purpose of the communication must be recognised and the message must be understood by its recipients. This means that the communicator must anticipate the interests and needs of audiences, including an audience of one. The communicator must also be able to choose the best form and style of expression to get the message across to recipients, who could be community or family members, clients, managers, fellow workers or fellow students. The ideas involved could range from concepts to be explained or data to be interpreted, to opinions to be voiced. Information could involve the provision of background, directions, costs or procedural matters.

How people apply the competency in paid work can be part of the work process and its goal. Knowing how to explain, describe, respond to questions, justify and argue assists the worker's confidence and efficiency. Being able to explain or recommend prices, services or goods to a customer underlies a productive approach and tailors communication to the perceived needs and interests of the customer.

In unpaid, community or voluntary work, communicating ideas and information to others in speech, writing and visual language is the basis of ongoing activity between and among participants. Explanations of infringements to the rules of a game, recording and presentation of minutes of a meeting, filling in forms, making speeches or reports, formulating suggestions, responding to requests or demands call on this competency in all its forms.

This Key Competency is the foundation for further education and lifelong learning. To be able to explain, argue and discuss with others enables a person to clarify, build on and share ideas and exchange information and consequently enlarge their knowledge and understanding.

MAJOR IDEAS

Communicating Ideas and Information focuses on the capacity to communicate with others using the range of spoken, written, graphic and other non-verbal means of expression. It is built on four main ideas. The first idea involves the identification of the function of a communication and of its recipients. This will determine the choice of mode and style of the communication. Thus, the communicator needs to know what forms and styles to choose from and how to choose combinations that will achieve the best effect for a particular purpose. In some cases the communicator will need to use technology to communicate effectively.

The second idea includes the communicator's response to the social and cultural dimensions of the context and audience. These may affect the purpose, function, form and mode of communication. In modern workplaces, for example, effectiveness of the communication could be diminished by telling racist and sexist jokes. An important feature here is the emphasis placed on the communicator's flexibility in communicating across a variety of social and cultural contexts.

The third idea relates to the effectiveness with which the intended communication is conveyed, and involves the clarity and coherence of the communication. Clarity of communication depends on the use and adaptation of conventions particular to the mode of communication. In writing, for example, effective communicators not only know how to use formal grammatical conventions, but when to apply them and when not to. In oral communication, knowing how to modulate the voice is an important part
of communication, and in visual communication, knowing how to place charts or diagrams will increase the effectiveness of the communication. Coherence of communication depends on putting ideas and information into formats that are appropriate to the contexts and the audience.

The fourth idea relates to the revisions and corrections made to the communication. This may take place in response to feedback from others or require the communicator to change course during composition or presentation. For instance, a speaker, sensing that an audience is becoming bored, may introduce an anecdote or shorten the talk.

In summary, Communicating Ideas and Information involves:

- identification of and response to audience and purpose of communication;
- selection of forms and styles;
- carriage of intended meaning;
- revision and correction of communication.

PERFORMANCE LEVELS.

At Performance Level 1, the emphasis of Communicating Ideas and Information is on communicating certain established and predetermined forms and styles, and in single modes, such as speech or writing. The forms would be those most used within the particular context, such as the essay in a school context, or the list in an office. At Performance Level 2 the emphasis is on communicating in situations and to audiences where there are a number of formal and stylistic options or choices. For example, conveying directions using a hand drawn sketch map and spoken discourse which highlights landmarks familiar to the recipient. Performance Level 3 focuses on the ability to use, adapt and transfer communicative forms and modes to meet a variety of demands.
PERFORMANCE LEVEL 1

At this level a person:
• adapts the form of the communication to the anticipated contexts and audiences; and
• communicates using prescribed forms and styles; and
• communicates clearly and coherently so that prescribed information is organised for the purpose; and
• checks the communication for accuracy and effectiveness.

Some applications of Communicating Ideas and Information at this level are:
• interviewing a person and filling out a structured form on his or her behalf;
• explaining a procedure so that others can carry it out successfully;
• suggesting items for a meeting agenda;
• sketching a seating plan.

PERFORMANCE LEVEL 2

At this level a person:
• adapts ideas and information to anticipated contexts and audiences; and
• communicates by choosing from set alternative modes and styles the most appropriate to a particular context and audience; and
• establishes and conveys coherence between disparate ideas and information; and
• revises communication in the light of feedback.

Some applications of Communicating Ideas and Information at this level are:
• giving directions on the best ways to get to a meeting venue;
• writing an accident report;
• preparing a maintenance report for a piece of equipment;
• communicating a hazardous situation on a building site;
• making cross-sectional sketches to describe internal structures.

PERFORMANCE LEVEL 3

At this level a person:
• chooses the mode and form appropriate to a context and audience; and
• revises and evaluates the communication in the light of feedback; and
• varies style of presentation to suit a variety of contexts; and
• uses ideas to interpret and represent information in a variety of contexts; and
• adapts ideas and information to unanticipated responses from audiences.

Some applications of Communicating Ideas and Information at this level are:
• using and adapting appropriate technologies to enhance communication;
• writing a critique of a concert;
• answering questions put by an audience at the end of a speech or talk;
• revising a leaflet to remove sexist or racist language;
• demonstrating a recipe to an audience from different cultural backgrounds;
• translating an idea into another language.
PLANNING AND ORGANISING ACTIVITIES

RATIONALE

In work, whether it is paid, unpaid or voluntary, individuals are expected to accept responsibility for planning and organising their own work activities. All organisations rely on their members to carry out functions and tasks in a way that contributes to defined and desired outcomes. In some cases, this means responding to a clear and simple instruction to complete a routine task. In others, it includes initiating, planning and monitoring the activity, and evaluating one's own performance. Planning and Organising Activities encompasses the capacities applicable across the range of such activities.

The competency incorporates the capacity to be responsible for completion of an activity, or some element of an activity. It involves monitoring one's own performance to ensure that it is in keeping with guidelines or instructions. It also involves ensuring that the work is linked with other work being done through effective communication, reporting and recording.

Applications of this Key Competency can be found in all forms of work. Some work settings are highly structured with lines of responsibility, authority positions and supervisory roles. Organisational structures of other settings are much less formal and are determined by continuing processes of negotiation and collaboration between participants. However, across this range of settings individuals must accept responsibility for the management of their work.

In further and higher education the capacities encompassed by this Key Competency are particularly applicable. Being able to plan and organise one's own study, undertake tasks independently and maintain the integrity of one's own work among competing demands are likely to lead to enriched and satisfying learning experiences.

MAJOR IDEAS

Planning and Organising Activities focuses on the capacity to plan and organise one's own work activities, including making good use of time and resources, sorting out priorities and monitoring one's own performance. One of the major ideas in the Key Competency is the management of an activity with a degree of independence. The term 'independence' is not used to mean 'alone'. It relates more to the individual's capacity for autonomy of thought and action, a capacity which is applied when working alone or in team or group settings. Managing an activity includes being able to clarify the purpose and objectives of an activity, set up the conditions for effective work, maintain focus on the task and complete a task or activity. It usually involves determining priorities and appropriate process. In some instances what constitutes a well managed activity, effective work practices or a complete activity is reasonably explicit and tangible. For example, it is quite clear when the activity, 'delivering newsletters to everyon on a mailing list', is complete. In other situations this is not the case, and the individual is responsible for monitoring work flow within more broadly established boundaries. For example, effective planning and organisation in a busy office requires continuous monitoring of the efficiency of the work flow.

The ability to reflect upon and evaluate one's own work performance, particularly in terms of work quality, is another important emphasis in this Key Competency. In some instances this means checking the quality of work against predetermined criteria. But it also includes evaluation of the use of time and self in relation to completing an activity. For example, in manufacturing, tolerances, rate of production and error rates are some of the criteria by which outcomes are judged. In other instances it means the capacity to reflect on what constitutes 'good work' and to establish criteria by which 'good work' is judged. Also included here is the ability to cope with contingencies. In some instances this means recognising when the limit of the process has been reached and there is a need for wider assistance to be sought. In other instances it may mean maximising the outcomes within the given circumstances.

This Key Competency also encompasses the effect of broader social and ethical considerations on how work is planned and organised. This includes the personal responsibilities which apply to self and self
management. In some instances, such as occupational health and safety and some aspects of equality of opportunity, there are guidelines which may be applicable. More specifically, within a corporation the requirements of strategic plans and mission statements need to be translated into work priorities. Other instances require the capacity to establish or interpret the principles which underpin these broader aspects of work and to use them to determine how work should be planned, organised, conducted and evaluated. For example, in the emerging context of work, accommodation of differing perspectives arising from cultural background forms an essential component of planning and organising activities.

In summary, Planning and Organising Activities involves:

- management of priorities and process;
- evaluation of performance and process in planning and organising activities;
- responsiveness to factors which affect priorities.

PERFORMANCE LEVELS

At Performance Level 1, the primary focus of Planning and Organising Activities is the completion of activities which are guided by explicit instructions or by procedures for which common usage provides strong guidance. It includes the full process of planning and organising for effective completion. Performance Level 2 focuses on the completion of work processes which incorporate several related activities and require coordination and management. It includes taking action to enhance the efficacy of the processes and to ensure the quality of the outcomes. At Performance Level 3, the primary focus is the establishment and use of principles of effective work organisation in the planning and organising of work processes. A theme which underpins all levels is the management of self in relation to the activity, its planning and its organisation.
PERFORMANCE LEVEL 1

At this level a person:
• establishes and maintains focus in completing a defined activity; and
• checks process and outcomes against predetermined criteria for quality and completion; and
• clarifies and uses established priorities.

Some applications of Planning and Organising Activities at this level are:
• undertaking piecework production in clothing manufacture;
• undertaking routine maintenance on a boundary fence;
• maintaining the stocks in a brochure rack;
• establishing and maintaining a personal study schedule.

PERFORMANCE LEVEL 2

At this level a person:
• coordinates and manages processes to achieve defined objectives; and
• maximises quality of outcomes and process; and
• establishes effective work priorities.

Some applications of Planning and Organising Activities at this level are:
• managing a variety of clerical responsibilities;
• installing a ducted vacuum system;
• organising the rehearsal schedule for a band;
• establishing family and caregiving schedules;
• preparing a series of ticket stock payments;
• planning and maintaining a personal daily work schedule.

PERFORMANCE LEVEL 3

At this level a person:
• incorporates strategic goals into the planning and organisation of own work; and
• incorporates criteria for quality and efficacy of outcome into the planning and organisation of own work; and
• incorporates goals, plans and priorities of a strategic nature into planning and organisation of own work.

Some applications of Planning and Organising Activities at this level are:
• managing competing demands when working for several people;
• designing and installing curtains to enhance energy efficiency;
• establishing and reviewing routines for home-based care for children;
• establishing a distribution system for promotional information about a resort.
WORKING WITH OTHERS AND IN TEAMS

RATIONALE

Working with Others and in Teams is essential to all aspects of work and adult life. Working with others can encompass working with another individual, working with groups or in teams, and working with clients or customers.

Efficient, productive and smoothly functioning workplaces of the 1990s are relying increasingly on individuals' thoughtful and cooperative contributions at staff meetings, work meetings and in formally structured teams. Similarly, a customer or client orientation, whether the client is external to the enterprise in counter or sales service or a member of another section of the same organisation, is recognised as central to achieving the competitive edge.

Each of these contexts requires the skills to work with others to ensure that personal interactions are consistent with the goals of the organisation and that individuals are able to make appropriate judgments and apply an appropriate mix of courtesy and assertiveness in their workplace and service interactions. In all cases, the needs and aspirations of others as well as one's own contribution need to be considered to achieve the desired outcomes.

In unpaid, voluntary and community work the focus may be on less formal applications. The skills developed through domestic, voluntary and community work are of growing importance in client-oriented and service employment and team-based work structures.

In further and higher education, including lifelong learning, people working with others and in teams is also valued. It is an integral way of learning in these sectors and provides people with the capacity to create knowledge by discussing ideas and insights with others and working through problems cooperatively. These skills characterise the emerging patterns of work and work organisation.

MAJOR IDEAS

Working with Others and in Teams focuses on the capacity to interact effectively with other people both on a one-to-one basis and in groups, including understanding and responding to the needs of a client and working effectively as a member of a team to achieve a shared goal. It has been based on three main ideas. The first idea involves the clarification of purpose and objectives of working with others. Sometimes this will take the form of a simple transaction, such as selling a product over the counter, with someone who specifies what they want. Sometimes it will be involve a complex collaborative process, with outcomes negotiated and subject to compromise over time, in which the ability to represent a certain interest or point of view effectively is an essential component.

The second idea relates to awareness of different roles and perspectives and how these are taken into account. These roles and perspectives may derive from social, gender or cultural differences, or from the nature and structure of workplaces. The capacity to see a product or service from the perspective of the client is vital to customer satisfaction, whether that customer is within or outside the organisation. In community, voluntary and domestic work there is an equivalent need to be able to 'step into another's shoes' in order to better achieve shared objectives or to assert a point of view.

The third idea involves working with others towards agreed timeframes and objectives. In one situation this could mean working with others where objectives are clearly defined. In another, it could mean negotiating objectives from the start and monitoring tasks to ensure their continued relevance.
In summary, Working with Others and in Teams involves:

- clarification of purpose and objectives of working with others;

- identification and taking into account different roles and perspectives;

- achievement of objectives.

PERFORMANCE LEVELS

At Performance Level 1 the emphasis of Working with Others and in Teams is on interactions that have established roles and follow established patterns of procedure. Performance Level 2 focuses on collaborative planning and completion of processes to achieve agreed results. This may involve agreeing on the processes, procedures and objectives that the people in the pair, group or team are going to use. At Performance Level 3 the emphasis is on defining and redefining interactions, processes and objectives.
PERFORMANCE LEVEL 1

At this level a person:
• clarifies defined purposes and objectives to be achieved by working with others; and
• identifies and responds to defined roles and perspectives; and
• works with others to achieve agreed objectives within agreed timeframes.

Some applications of Working with Others and in Teams at this level are:
• selling pastries in a cake shop;
• working with a partner to improve goal shooting in netball;
• working as a member of a team in a fast food outlet;
• working as a chaser in conjunction with a crane driver.

PERFORMANCE LEVEL 2

At this level a person:
• interprets purposes and objectives to be achieved by working with others; and
• organises procedures and timeframes to take account of different roles and perspectives; and
• works with others to achieve agreed objectives.

Some applications of Working with Others and in Teams at this level are:
• assisting with caregiving for children;
• recognising and including the abilities of fellow workers, including those who have disabilities;
• preparing tables and waiter stations for service;
• establishing improved morale in a team after serious defeat or disappointment.

PERFORMANCE LEVEL 3

At this level a person:
• defines purposes and objectives to be achieved by working with others; and
• establishes roles, procedures and timeframes taking into account different perspectives; and
• negotiates with others to define objectives and, where necessary, to monitor and redefine them.

Some applications of Working with Others and in Teams at this level are:
• directing a play;
• working in a sales representative team for travel firms;
• leading a work team on a building site;
• representing a point of view in a debate.
USING MATHEMATICAL IDEAS AND TECHNIQUES

RATIONALE

Mathematical ideas and techniques are used in a wide variety of work activities and in everyday life. In some instances their use is explicit and requires deliberate and considered selection and application. For example, installing a ducted heating system in a house requires the explicit application of mathematical ideas and techniques to specifications and costs so that comparisons can be drawn between alternative systems. Mathematical ideas and techniques also are applied explicitly in designing the system, planning the stages of installation and estimating quantities. But in other instances the extent to which mathematical ideas and techniques are involved may be obscure. In part, this arises because of the common perceptions that mathematical ideas and techniques are about basic number skills. Although basic number skills and operations are essential, mathematical ideas and techniques also involves the 'know how' of being able to choose efficient ways of doing things or judging when a particular outcome represents an appropriate answer or solution.

In the contemporary world the use of mathematical ideas and techniques is an important part of the functioning of organisations. It is integral to the process of making judgments and of ensuring the quality of a product or service. Many organisations, as they seek to establish themselves and to prosper in highly competitive world markets, rely on careful analysis of market trends, projections of growth and feedback from customers or clients. Analysing work flows and pinpointing areas for more efficient production techniques also draw upon the use of mathematical ideas and techniques. As work organisation changes, the need for Using Mathematical Ideas and Techniques exists not only for technical experts but is required by more people and shared between work units. Consequently, there is a demand for the use of mathematical ideas and techniques by a broader range of people.

MAJOR IDEAS

Using Mathematical Ideas and Techniques focuses on the capacity to use mathematical ideas, such as number and space, and techniques, such as estimation and approximation, for practical purposes. One of the major ideas in this Key Competency involves the clarification of the purposes and objectives of the activity so that the most appropriate mathematical ideas and techniques may be selected. This can be illustrated by the way a shop assistant needs to be clear about the kind of account a customer requires before selecting, say, addition as the appropriate mathematical process. At a more complex level it may involve selecting the appropriate ideas and techniques to identify the factors to be taken into account in designing the shape, durability and cost of a container, including measuring and comparing lengths and calculating costs and quantities.

Another important idea in this Key Competency involves the application of mathematical procedures and techniques. For example, in making a garment, mathematical procedures and techniques underpin the laying and cutting of the fabric. At another level, mathematical procedures and techniques are needed to adapt a pattern to incorporate the design requirements of a client.

The Key Competency also involves making judgments about precision and accuracy. This can be demonstrated by the way in which a store hand will comply with the instructions to complete a stocktake. Also it encompasses the capacity to judge when an estimate is sufficient for the situation. For example, when estimating the materials required, a fencing contractor only needs to be accurate to the nearest two or three metres. But the estimate must be on the upper limit to allow for losses due to cutting and attaching and shaping.

A further important idea in this Key Competency is the interpretation and evaluation of outcomes and solutions. This means, for example, checking that the bill is reasonable for the order taken in a restaurant. It also involves evaluating the methods used in achieving a solution.
In summary, Using Mathematical Ideas and Techniques involves:

- clarification of the purposes and objectives of the activity;
- selection of mathematical ideas and techniques;
- application of mathematical procedures and techniques;
- judgment of level of precision and accuracy needed;
- interpretation and evaluation of solutions.

PERFORMANCE LEVELS

At Performance Level 1, the primary focus of Using Mathematical Ideas and Techniques is the efficient and reliable use of mathematical techniques in everyday situations which are clearly defined. Performance Level 2 focuses on the sequencing and application of mathematical ideas and techniques in situations which require the selection of appropriate methods. At Performance Level 3, the primary focus is the selection, sequencing and application of mathematical ideas and techniques in situations where the best strategy requires the evaluation and adaptation of the method and the solution.
PERFORMANCE LEVEL 1

At this level a person:
• clarifies the nature of the outcomes sought; and
• selects the ideas and techniques for a task; and
• uses mathematical ideas and techniques reliably and efficiently; and
• meets accuracy requirements; and
• checks that the answer makes sense in the context.

Some applications of Using Mathematical Ideas and Techniques at this level are:
• preparing an itemised account in a retail shop;
• extracting data from a specifications chart or spreadsheet;
• estimating the amount of cement required for a bricklaying task;
• using a street directory to establish a delivery route;
• managing own Austudy finances;
• calculating and measuring medicine doses.

PERFORMANCE LEVEL 2

At this level a person:
• clarifies the purposes of the activity and the nature of the outcomes sought; and
• identifies the mathematical ideas and techniques which are applicable; and
• selects, sequences and applies the mathematical ideas and techniques reliably and efficiently; and
• judges the level of accuracy required; and
• checks that the answer makes sense in the context.

Some applications of Using Mathematical Ideas and Techniques at this level are:
• providing a quote for construction of a fence given the types of materials to be used and a regular area to be enclosed;
• calculating the number of bars of music required to provide backing for a film sequence;
• making a garment from a commercial pattern;
• estimating the amount and cost per annum of fertiliser for a garden;
• managing food quantities and nutritional balance in a childcare centre.

PERFORMANCE LEVEL 3

At this level a person:
• defines the purposes and objectives of the activity; and
• recognises the assumptions which need to be made in order to apply an idea and technique; and
• adapts the idea and technique to fit the constraints of the situation; and
• makes decisions about the level of accuracy needed to resolve competing demands; and
• interprets and evaluates methods and solutions.

Some applications of Using Mathematical Ideas and Techniques at this level are:
• designing and making a feed container to hold a specified amount and fit in a given location;
• making a piece of furniture having produced a design brief which includes the working drawings and a summary of the quantities and costs;
• constructing a spreadsheet to calculate wages, tax, and the required denominations of notes and coins for pay packets based on the input of hours worked and rate of pay;
• designing the lighting plan for a play;
• modifying a commercial pattern to the design requirements of a client;
• managing household finances.
SOLVING PROBLEMS

RATIONALE

Some of the essential attributes for successful participation in work are the capacities to frame questions, to identify the sources and contexts in which problems arise and to work through dilemmas and ideas in a coherent way. Solving Problems captures these capacities. It is not only about the capacity to respond to problems as they present themselves, but also the capacity to anticipate problems and devise suitable response strategies. It is about the nature of solving problems as a process, including the control that is exerted over the process.

The term 'problem' is used generally, encompassing several interpretations including a practical difficulty or a social situation where something is obviously wrong, a challenge to accomplish a specific result, perhaps under prescribed conditions, an invitation to investigate something and a situation in which there is no obvious problem requiring immediate attention, only a perception that something could be improved. Thus, Solving Problems can range from resolving difficulties or dilemmas through to capitalising on opportunities to explore ideas.

Applications of Solving Problems may be found in work, whether it is paid, unpaid or voluntary work, where processes rarely operate without the need for continuous anticipation and resolution of problems. Problems arise which require judgments and decisions. For example, judgments about the scope of the problem, the priority to be allocated to its resolution and whether it is within the responsibility of the individual concerned; decisions about courses of action and referral of the problem to another place. If it is within the domain of the individual, the problem must be dealt with effectively and efficiently.

Problems also arise for which it is necessary to work through a range of possible responses, perhaps leading to innovative approaches or creative outcomes. Some applications entail routine and known issues which have standardised responses. Others include the unusual or less predictable problems which require initiative and innovation to identify and define the problem and find possible responses. These observations also apply to participation in community, home and further and higher education settings.

MAJOR IDEAS

Solving Problems focuses on the capacity to apply problem-solving strategies in purposeful ways, both in situations where the problem and the desired outcomes are clearly evident and in situations requiring critical thinking and a creative approach to achieve an outcome. One of the major ideas relates to the clarification and framing of problems. At lower levels this might involve locating the source of a problem by matching symptoms against known sources. For example, the appearance of spotting on photocopies might suggest marks on the glass stage, a damaged roller or a leaking toner cartridge. The problem is framed by established approaches to repair and maintenance. At higher levels the links between symptoms and conditions are much less defined, and require clarification of the major factors involved. For example, frequent and unexplained weariness in a colleague or friend is a problem for which there is no 'routine maintenance' style of solution. It requires sensitivity to the range of factors which might contribute to such a problem, and the framing of the problem in developmental and exploratory terms.

A second important idea relates to the notion of 'completion'. It involves the process of working through a problem-solving strategy to achieve appropriate outcomes. In some instances this means that the outcome sought is achieved. But, in other instances, achievement of that outcome is tempered by judgments about what constitutes appropriate completion. For example, a decision might be made to refer the problem elsewhere, a cost-benefit assessment may indicate that the process should cease or the need for a solution to the problem may have passed. Under all of these conditions, it is essential that focused and coherent effort be expended until appropriate achievement has been attained. At one level this may involve using a recognised strategy to resolve a problem, for example, following one of the designated procedures to have a photocopier repaired. At another level it may mean drawing on a range of processes, and adapting and manipulating them to achieve appropriate completion.
Solving Problems also relates to anticipating problems and the contexts and sources from which problems arise. At lower levels this amounts to accepting that problems can arise and that they must be addressed and resolved. This applies as much to technical faults in machines as to issues and difficulties which arise personally or for colleagues, all of which are realities of the workplace. At the higher levels, being able to anticipate problems means also being able to anticipate the conditions which generate problems. It includes being able to manipulate the conditions to avoid difficulties or to make the most of opportunities to improve or innovate.

Evaluation of the processes by which problems are solved and the outcomes which are achieved is another important concept in this Key Competency. At lower levels this means checking that the outcomes are accurate and that they are in accord with what was intended. And it means checking that the process used to solve the problem is used efficiently and in socially responsible ways. At higher levels it means being able to reflect on the processes of solving problems and to make judgments about efficiency of process and validity and usefulness of outcomes.

In summary, Solving Problems involves:

• clarification and framing of problems;
• achievement of appropriate completion;
• anticipation of problems, sources and contexts;
• evaluation of outcomes and processes.

PERFORMANCE LEVELS

At each level of performance, all of the interpretations of the terms 'problem' and 'completion', noted earlier, are applicable. Each level also involves accepting that problems arise, working them through to completion, and evaluating the process and outcomes. However, the performance emphasis changes across the levels. At Performance Level 1, the primary focus of Solving Problems is responsiveness to problems as they arise. It requires that the problem be clarified, framed by an appropriate problem-solving process, and pursued through to an appropriate completion, and that the process and the outcomes are checked for accuracy and utility. The primary focus of Performance Level 2 is the selection of appropriate processes, clarification of the relationship between the processes available and the desired outcomes, and the effective use of those processes to achieve completion. It includes maintaining and enhancing the efficiency of the processes and the validity of the outcomes. At Performance Level 3, the primary focus of Solving Problems is anticipation of conditions under which problems arise and the use of judgment in the approach to problem solving. It requires that the major characteristics and parameters of the problems and processes be established, and that a range of problem solving processes be available, adapted and managed to achieve appropriate completion.
PERFORMANCE LEVEL 1

At this level a person:
- clarifies desired outcomes and processes; and
- maintains focus through to appropriate completion; and
- responds to faults and difficulties as they arise; and
- checks the accuracy of outcomes and utility of the process.

Some applications of Solving Problems at this level are:
- following procedures to have a photocopier repaired;
- arranging food for a group's overnight hike;
- receiving a complaint from a guest in a hotel;
- creating access up steps for concrete delivery.

PERFORMANCE LEVEL 2

At this level a person:
- clarifies the desired outcomes, and the relationship between those outcomes and the available processes for solving the problem; and
- draws on a range of processes to achieve appropriate completion; and
- takes opportunities to improve or enhance processes and outcomes; and
- assesses efficiency of processes and outcomes.

Some applications of Solving Problems at this level are:
- monitoring the repair rate of a photocopier and providing alternative solutions;
- generating alternatives in the provision of food for a group's overnight hike;
- establishing a route for cabling a concrete wall;
- identifying options for a client in resolving a complaint;
- reducing hazards on a worksite.

PERFORMANCE LEVEL 3

At this level a person:
- establishes major factors affecting processes and outcomes; and
- adapts and manipulates processes to achieve appropriate completion; and
- anticipates problems and opportunities, and the conditions under which they arise; and
- establishes and uses criteria for judging effectiveness of processes and outcomes.

Some applications of Solving Problems at this level are:
- investigating photocopying needs and developing alternative proposals and action plans;
- achieving innovations in the provision of food for a group on an overnight hike;
- resolving continued quarrelling between two children in a preschool;
- designing sets for a stage that has limited depth;
- adapting work priorities to accommodate new orders;
- generating teamwork among work colleagues;
- creating options for street beautification.
USING TECHNOLOGY

RATIONALE

One of the most significant variables influencing the nature of the workplace and, in a wider sense, society is technology. The structures of workplace settings, the ways in which people interact and the outcomes achieved are affected profoundly by the technological circumstances which prevail. Successful participation in work and in society depends, at least in part, on the capacities involved in managing technological systems, processes and equipment, and Using Technology focuses on these capacities.

Applications of this Key Competency can be found in the workplace where production and service depend on the proficient use of technology, where practices such as multi-skilling require unprecedented levels of use of technology, and where market advantage depends on the ability to use technology to customise products and services. The competency also is applied in further and higher education where access to learning and the learning process itself require technological competence. In personal daily life competence in the use of technology reflects some of the basics of living independently.

MAJOR IDEAS

Using Technology focuses on the capacity to use technology, combining physical and sensory skills needed to operate equipment with the understanding of scientific and technological principles needed to explore and adapt systems.

The notion of 'technology' is an integral part of Using Technology. Views vary about its definition. At one extreme technology is defined simply as equipment or, perhaps, 'high tech' equipment. At the other extreme, the definition extends so widely that its significance as a definition becomes lost. The position adopted here draws on three dominant interpretations of 'technology':
- technology as equipment and materials;
- technology as a pattern of operations forming a process;
- technology as a system of principles and ideas.

The notion of 'using technology' extends from the manipulative and sensory skills required to operate basic hand tools through to the scientific and technological principles required to explore, to innovate, and to adapt. It is from these interpretations that the Key Competency, including its Performance Levels, is constructed.

A component of the definition of competence is that performance is underpinned not only by skill but also by knowledge and understanding. Using Technology draws on knowledge and skills from a variety of areas, but particularly from scientific and technological understanding and problem solving. The focus of this knowledge and skills lies more in how technology is used than in how it is made. Another component of the definition of competence involves the capacity to transfer knowledge and skills to new tasks and situations. It is here that views vary about what constitutes competent performance in Using Technology. In part, the multiplicity of definitions of 'technology' contributes to this problem, but it also derives from concern for the extent to which competent use of one form of technological equipment can be taken to imply competent use of other forms of technological equipment; that is, concern for cross-technology transfer rather than transfer between contexts. The position taken here is that competent performance relates to the ability to use appropriate technology, including the foundation knowledge and understanding, in a given context and the capacity to use that technology in another context; that is, the application of technology to a new situation or task. It does not imply that competence in using a particular technology necessarily translates into competence in using a completely different technology.

Using Technology acknowledges that much of the demand for competence in the area relates to the capacity to have a feel for the application of technology; that is, not only competence in the use of technological systems, processes and equipment but also confidence in approaching and using
technology. It would appear that such confidence derives from at least three factors:
• success in the use of technology, even if it is in basic forms;
• awareness of the extent to which technology is in use;
• the ability to form generalised understanding about the use of technology, again even at rudimentary levels.

In summary, Using Technology involves:

• interpretation and use of the goals of using technology;
• use of scientific and technological principles and practices;
• social and ethical responsibility in the use of technology;
• accommodation to surrounding environs and personal physical capacity.

PERFORMANCE LEVELS

Each level of performance draws on all three components of the definition of technology noted above. The relative emphasis, however, changes across the levels. At Performance Level 1, the primary focus of Using Technology is the use of technological equipment and materials, and application of the related knowledge base. This includes facility in the functional use of equipment and materials, interpretation of the senses as sources of information and feedback, the use of technological codes and other representations, and the use of instructions to achieve specified outcomes. At Performance Level 2, the primary focus broadens to include being able to configure and manage a series of operations into a process. It incorporates the proficient use of technological equipment and materials, and application of the related knowledge base. But it also includes selecting technology, using technologies in combination and enacting plans to achieve given objectives. At Performance Level 3, the primary focus of Using Technology broadens again to include being able to adapt a system of technological principles and ideas to a new situation. It incorporates the proficient use of technological equipment and materials, the configuration and management of a process and application of the related knowledge base. Further, it incorporates the processes of using scientific and technological principles to explore, to innovate and to speculate. The applications of Using Technology at this level are many and varied, but of particular note are those which relate to capturing good ideas and customising products and services to produce unique and, perhaps, unconventional outcomes.
PERFORMANCE LEVEL 1

At this level a person:
- clarifies the objectives for the use of technology; and
- uses technological practices within the guidelines for health and safety, environmental impact and ethical practice; and
- uses technological equipment and materials proficiently for the prevailing environs and physical capacity.

Some applications of Using Technology at this level are:
- entering and retrieving data from a computer software package;
- using an overlocker to close and finish straight seams;
- using hand tools to sharpen a plane blade;
- sorting waste materials by their second-use capacity;
- using a pretimer system on a microwave oven.

PERFORMANCE LEVEL 2

At this level a person:
- interprets the purposes and objectives for the use of technology; and
- configures and manages a series of operations as a process; and
- selects technological practices to conform with the guidelines for health and safety, environmental impact and ethical practice, and uses them within those guidelines; and
- uses technological equipment and material proficiently for the prevailing environs and physical capacity.

Some applications of Using Technology at this level are:
- assembling a kit-form fitness machine to full operating condition;
- constructing a fitted, panel line skirt using a commercial pattern;
- monitoring the safety and operating condition of equipment and facilities;
- using electronic databases to conduct a literature search for a given area of investigation;
- making repairs to a windmill using on-site materials.

PERFORMANCE LEVEL 3

At this level a person:
- defines the purposes and objectives for the use of technology; and
- transfers technological principles to a new situation; and
- configures and manages a series of operations as a process; and
- selects technological practices to maximise socially and ethically responsible use of technology; and
- uses technological principles to reduce constraints presented by environs and physical capacity.

Some applications of Using Technology at this level are:
- customising applications software for the financial management of a community group acting as client;
- preparing clothing design options for the technical and management staff of a city restaurant;
- designing, constructing and trialing a prototype for a system to manage the complex of cables emanating from a cluster of electronic stage entertainment equipment;
- preparing options, organised by cost-benefit outcomes, for upgrading the energy efficiency of a dwelling of simple design;
- preparing design options for the modification of a house to accommodate a person with a wheelchair.
NEED FOR A NATIONALLY-CONSISTENT APPROACH

Reporting to individuals on their achievement in education and training programs has two broad purposes: providing progressive feedback on performance to contribute to further learning and providing a summative assessment, usually on completion of a program, as evidence of achievement for presentation to a third party, such as a potential employer or another education and training provider.

The Committee has confined its focus to the second of these purposes.

This should not be taken as implying disregard for the importance of providing young people with progressive feedback on their achievement of the Key Competencies. Reporting of this sort is an essential means of contributing to further learning by enabling learners to reflect on their performance and set goals for improvement. But there are no grounds for suggesting the need for a nationally-consistent approach to reporting for this purpose. Different school and training systems have different approaches to providing progressive feedback to individuals. Even within particular systems, it is not uncommon to find that individual providers have different approaches to reporting on progress. There is no reason why this variety should not extend to approaches used to report to individuals on their progress towards achieving the Key Competencies.

There are, however, strong grounds for adopting a nationally-consistent approach to reporting for the purposes of providing evidence of achievement to another education and training provider or a potential employer. In reporting for these purposes, national consistency is necessary for reasons of portability, consistency in credit transfer arrangements and ease of interpretation by users. Achievement of the Key Competencies will be reported by a wide range of education and training providers across the States and Territories. The capacity of these reports to provide young people with a record of their performance that has currency beyond the setting in which it is produced rests on the confidence that users, and young people themselves, can have in the quality of the information contained in the reports and the ease with which users can interpret reports generated by a wide range of providers.

The proposal for an Australian Vocational Certificate Training System adds a further dimension to the need for national consistency. Plans for the system hinge on the existence of nationally-consistent arrangements that will provide improved articulation between education and training pathways by enabling young people to obtain credit towards the award of the Australian Vocational Certificate for their achievement of the Key Competencies within school programs.

The Committee recommends that:

The AEC and MOVEET agree in principle to nationally-consistent assessment and reporting of individual achievement of the Key Competencies.

It is worth noting that the idea of national consistency drew little criticism during the process of consultation. The need for more flexible pathways between education and training was widely supported. And the logic underpinning moves to achieve greater consistency of arrangements across States and Territories was generally recognised. What was more frequently at issue was the focus on assessment and reporting itself.

Throughout the Committee’s work, some commentators questioned the focus on assessment and reporting, dubbing the exercise ‘assessment driven’ and arguing that the emphasis would have been better placed on curriculum and approaches to teaching and learning. This response reflects longstanding debates among educators about the purposes of assessment and the methods used to assess achievement. As the Finn Report observed, these issues 'stir more passion and professional debate than
any other area of education in Australia. This is not surprising, as the way one approaches and reports achievement can profoundly influence curriculum, pedagogy and broader social justice outcomes.' (Finn; 1991; 65).

The Committee considers this focus both appropriate and warranted for a number of reasons. In particular, it does not accept the view that a focus on outcomes, and on assessing and reporting on those outcomes, implies neglect of the importance of focusing attention on teaching and learning. Rather, being clear about the outcomes to be achieved is essential to success both in teaching and learning. It is also both possible and appropriate to establish shared and public goals for achievement. But, effective ways of teaching and learning to achieve those outcomes vary widely according to individual styles and needs and contexts. Attention to approaches to teaching and learning needs to be focused at a level that is appropriate for responding to those factors. The next steps proposed in the second part of this report include recommendations for field testing implementation of the Key Competencies with particular reference to the need for individual systems and schools and training providers to examine the implications for teaching and learning.

There is little argument that assessment has a major influence on curriculum and on the teaching and learning process. There is also ample evidence to suggest that those outcomes which are subject to assessment can be expected to receive the greatest attention from both teachers and learners, especially in the postcompulsory years. In short, teachers and learners value most what is assessed. This, in the Committee's view, is a powerful reason for focusing on the assessment and reporting of achievement of the Key Competencies. The need to make provision to ensure that the Key Competencies receive attention in curriculum and approaches to teaching and learning is reinforced by the poor record of success of educational initiatives that have not been linked with assessment. This is particularly evident in the case of initiatives with a cross-curricular focus which by their nature have no automatic 'home' within the curriculum.

As indicated in the discussion of Performance Levels in Section 1.3, the focus on outcomes also provides for the establishment of explicit standards as the basis for assessment. This is consistent with recent developments both within Australia and overseas towards providing a more meaningful basis for reporting achievement. Linked with this has been recognition of the need for assessment to capture a wider range of outcomes than has traditionally been the case. The descriptions of the Key Competencies in Section 1.4 clearly reflect this need. The Committee believes that assessment and reporting of achievement of the Key Competencies has the potential to assist the process of adoption and further exploration of these approaches to assessment and to contribute to the stock of knowledge about methods of assessment that link more directly to the ways in which knowledge and skills are used at work and in adult life more generally.

Finally, some of the concern expressed about assessment and reporting related to the nature of reporting. It is important to make a clear distinction between the two kinds of reporting proposed in the following discussion. The first involves reporting to individuals on their achievement of the Key Competencies. The Committee has used the term 'record of performance' to describe this type of report. The second involves public reporting based on statistics of achievement of the Key Competencies by a given cohort of young people. The Committee has used the term 'national report' to describe this type of report.
ASSESSING ACHIEVEMENT OF THE KEY COMPETENCIES

National consistency in reporting achievement of the Key Competencies rests fundamentally on the adoption of nationally-consistent approaches to assessment.

ACHIEVING NATIONAL CONSISTENCY

It is sometimes assumed that national consistency in assessment can only be achieved by the use of uniform methods, if not common instruments, for assessment. The Committee was agreed, from the outset, that this would be neither feasible nor appropriate for assessing the Key Competencies.

In the first place it must be expected that a variety of methods will be used to assess the Key Competencies. In part, this variety will stem from the variety among the competencies themselves. Some, such as Working with Others and in Teams, will need to be assessed on the basis of practical demonstrations of performance. Others will be amenable to assessment in a number of ways, ranging from more direct methods of observation of performance to less direct methods of inferring performance from a written test. No single method of assessment can be regarded as the most appropriate for assessing the Key Competencies.

A second and significant source of variety will arise from the range of types of programs, settings and modes of program delivery within which assessments of the Key Competencies will need to be made. The Key Competencies do not constitute a curriculum in their own right. Rather, it is intended that they will be developed and assessed through the curricula of school and training programs. For the majority of young people, development and assessment of the Key Competencies will take place within school programs. Even among these, however, there is a wide variety. Not only do these programs differ between States and Territories, but at the postcompulsory level the range of subject choice and program type, even within individual systems, produces a very wide variety of curriculum content and approaches to learning. It needs to be possible to assess the Key Competencies within this range.

Added to this is the range of content of vocational education and training programs which will also provide a base for development and assessment of the Key Competencies.

A further factor to be taken into account is the variety of modes of delivery of education and training, including part-time, combinations of school and training programs and the expanding use of open learning modes of delivery.

PRINCIPLES FOR ASSESSMENT

In light of these factors, the Committee resolved to focus on establishing a set of principles for assessment which meets the need for consistency in approaches to assessment but provides the necessary flexibility to accommodate the diversity of programs and settings in which assessment will take place.

This approach and the reasons for its adoption has a parallel in the training sector with the current development of principles for assessment of competency-based training by the Competency Based Training Working Party of the Vocational Education, Employment and Training Advisory Committee. The Committee has taken account of that work in progress in developing a set of principles for assessment of the Key Competencies.

Consideration of principles of assessment has included the basic principles of validity, reliability, fairness and feasibility that apply to all assessment, together with principles deriving more specifically from the notion of competence and principles of a more operational nature arising from the particular characteristics of the Key Competencies and the nature of the settings within which they will be assessed.
A draft of the following set of principles was included in the *Proposal for Consultation*. Responses generally indicated support for the principles as presented. They have, however, been refined in light of specific comments.

**COMMON REFERENCE POINT FOR ASSESSMENT**

Achievement of the Key Competencies should be assessed against nationally-agreed Performance Levels.

The use of agreed standards as the basis of assessment is the foundation for a set of principles for nationally-consistent assessment. The descriptions of the Performance Levels in the Key Competencies in Section 1.4 provide the basis for reaching agreement on the standards against which assessments of the Key Competencies will be reported. These will need to be confirmed through the process of further validation and establishment of benchmarks for the Performance Levels outlined in Section 2.2. This process will provide assessors with a common reference point for assessment.

**VALIDITY**

Assessment methods should be valid; that is, they should assess what they claim to assess.

This is a general principle applying to all assessment. In the case of the Key Competencies, it implies the need to pay careful attention to the differing requirements for valid assessment of the various Key Competencies.

It also implies the need to consider the characteristics of the notion of competence and their implications for the methods used to assess it. The Key Competencies are based on a concept of competence which focuses on what people can do, recognises that performance is underpinned not only by skill but also by knowledge and understanding, and includes the idea of transferability. This concept implies the need for two further principles relating to validity.

Assessment should be undertaken as an holistic process which integrates knowledge and skills with their practical application.

This principle underlines the focus on performance and the need for assessment methods which will provide valid measures of performance, incorporating foundation knowledge and skills, rather than methods which assess the elements of knowledge and skill separately.

The notion of transferability was the subject of a good deal of discussion during consultation. Making judgments about the capacity to transfer competencies to new tasks and situations inevitably involves making inferences from what is known about performance to what might be expected of learners in situations they have yet to encounter. The question is on what basis such inferences might be made.

The Committee is aware of research findings which suggest that learning is bound by context and that, when presented with a fundamentally similar but unfamiliar situation, learners are often unable to recognise the similarities in order to call up the necessary knowledge and skills to enable them to succeed. Everyday experience also indicates that people usually experience a degree of ‘de-skilling’ when they move into new situations. But it also suggests that the firmers one’s grasp of the principles that underpin knowledge and skills and the broader the range of experience of application of the knowledge and skills, the speedier the process of ‘re-skilling’, as familiarity with the new context becomes established.
During consultation, the Committee aired the possibility of seeking to reflect the notion of transferability in the principles for assessment of the Key Competencies by requiring that assessment at a given Performance Level be based on demonstrated performance at that level in a range of contexts. Such a requirement needs to be balanced with its feasibility for implementation. The following principle seeks to strike such a balance.

Achievement of a given Performance Level should be based on assessment at that level in at least two different contexts.

Different contexts might be defined as different subjects or physical settings. Rather than attempt to reach a firm definition of difference in context at this stage, however, the Committee believes that the operational implications of this principle should be explored through the process of field testing implementation of the Key Competencies that is proposed in Section 2.2.

FAIRNESS

Fairness is a fundamental principle applying to all assessment arrangements.

To the maximum extent possible, assessment methods should ensure that students/trainees are not disadvantaged by gender, race, ethnicity, disability, socio-economic status or other social circumstance.

Responses obtained through the Access and Equity Audit emphasised not only the need for this principle but also the need for it to be given explicit attention in training for teachers and trainers in assessment techniques. Groups which participated in the Audit universally regarded assessment methods as among the most significant potential barriers to access and equity. This matter is taken up in the proposal for development of a training and development package to support implementation of the Key Competencies (see Section 2.2).

Two further aspects of fairness arise from the concept of competence and standards-referenced approaches to assessment.

The requirements of the Key Competencies, criteria for judging performance and assessment methods should be made explicit to the student/trainee.

The importance of this principle was also emphasised in responses to the Access and Equity Audit. Being explicit about standards and the requirements for achieving them not only provides for more meaningful assessment and reporting but also has the potential to improve access to achievement of the standards. When the requirements for success are explicit, learners are better able to set goals for achievement and monitor their progress towards achieving them, and are thus better placed to take greater responsibility for their learning.

Assessment procedures should provide for the recognition of Key Competencies, no matter how, where or when they have been acquired. Students/trainees who, for whatever reason, do not take part in the formal learning process associated with development of a Key Competency should have opportunities to demonstrate their performance and obtain an assessment.
This principle is essential to the focus on outcomes that underpins the concept of competence and the recognition that while formal learning provides a systematic means of developing the Key Competencies, the nature of these competencies is such that they may be acquired in a wide range of less formal ways. The importance of this principle in recognising alternative routes to learning was also emphasised in responses to the Access and Equity Audit.

It will be necessary to supplement this principle with guidelines for recognition of prior learning. The guidelines already established within the training sector will provide a significant foundation for this.

Two further principles relate more specifically to the particular characteristics of the Key Competencies.

Assessment procedures should be designed to provide all students/trainees with opportunities to demonstrate their performance across the full range of Performance Levels.

The goal for development of the Key Competencies is for all young people to achieve the highest Performance Level in the full set of Key Competencies. It is critical that young people's opportunities for achievement are not restricted arbitrarily by assumptions about their potential achievement or by the procedures used to assess their level of performance. This does not mean that each student/trainee will need to undertake extensive programs of assessment to ensure that they have been given the opportunity to demonstrate their performance at the full range of Performance Levels. The Performance Levels are cumulative; each successive level builds on the previous one. Refinements to the basis for constructing and describing the Performance Levels have also ensured that it is possible to conceive of tasks and activities that are not specific to a particular Performance Level but, rather, provide the opportunity for learners to perform at the full range of levels and, furthermore, provide the opportunity to increase the level of demand as each Performance Level is progressively achieved.

Where necessary, assessment procedures should provide students/trainees with more than one opportunity to meet the requirements for assessment at a given Performance Level.

Consistent with the goal for all young people to achieve the highest Performance Level in the full set of Key Competencies is the principle that their opportunities for achievement should not be restricted arbitrarily by the number of opportunities for assessment.

The Committee is aware of the loose meaning of the term 'more than one' and the possible need to define the upper limits for practical purposes of implementation. At this stage, however, any further definition would be entirely arbitrary. Again, the Committee considers it would be more appropriate to explore the operational implications of this principle through the process of field testing implementation of the Key Competencies proposed in Section 2.2.

RELIABILITY

In the case of the Key Competencies, reliability refers to the need to adopt procedures to provide the necessary degree of confidence that Performance Levels are being interpreted and applied consistently.

Assessment methods should be accompanied by procedures designed to promote and monitor reliability in interpretation and application of the Performance Levels.

This principle is essential to the credibility of assessments of achievement of the Key Competencies. In examining the means by which it might be achieved, it is worth noting the parallels between approaches to achieving reliable assessments and methods of quality assurance in industry. As in industry, approaches to achieving reliable assessments have traditionally taken the form of quality control.
measures focusing on standardised procedures for assessment and a variety of methods for checking the production of assessments to identify 'faults'. The more recent moves towards the adoption of quality assurance systems in industry also have their parallels in assessment with an increasing emphasis on the establishment of explicit standards and a focus on improving the quality of assessment practice and decisions through the provision of training in assessment procedures and interpretation of standards. In some areas of education and training this development has led to the introduction of accreditation of assessors.

The Committee believes that efforts to promote and monitor reliability of assessments of the Key Competencies should be invested primarily in the training of assessors. This will be assisted by the provision of exemplars of performance at each level which have been judged as meeting the requirements of the Performance Level and which will serve as benchmarks for assessment. However, teachers and trainers will need to be given opportunities to practise applying the Performance Levels and to check that they are applying them consistently. Meeting this need is a primary purpose of the training and development package proposed in Section 2.2.

The achievement of consistency in interpretation and application of the Performance Levels across the school and training sectors is critical to the credibility of Key Competency assessments. The proposal for benchmarking the Performance Levels emphasises the need for benchmark examples of assessment to reflect the range of types of programs and contexts in which the Key Competencies will be developed and assessed. The need to ensure consistent approaches across the two sectors is also a primary concern of the proposed training and development package. It will be necessary, however, to consider ways of periodically monitoring the effectiveness of these strategies. This matter is included among the items suggested for field testing implementation of the Key Competencies in Section 2.2.

THE RELATIONSHIP BETWEEN ASSESSMENT AND LEARNING

Assessment procedures should be designed to provide maximum coherence between learning and assessment.

A direct relationship between the objectives and content of programs and assessment procedures is necessary to ensure that assessment procedures properly reflect the intended outcomes.

Assessment methods should be designed to inform, and contribute to improvements in, teaching and learning.

This principle has implications for the development of practices which provide opportunities for young people to obtain feedback on their performance. Similarly, assessment practices should be designed to assist teachers and trainers to monitor and improve their practice by reflecting on outcomes.

THE PLACE OF ASSESSMENT IN PROGRAM DELIVERY

Assessment procedures should be designed so that, as far as possible, assessments of achievement of the Key Competencies are undertaken as part of, or in conjunction with, assessments undertaken for other purposes.

It is intended that the Key Competencies should be incorporated within school and training programs rather than be developed through separate add-on programs. This is clearly desirable on both educational and practical grounds. It is also sensible given that many existing programs already incorporate development of some if not all of the Key Competencies. Likewise, it is desirable that
assessment of the Key Competencies is integrated, where possible, with assessments undertaken for
other purposes.

In some cases this might mean that assessment of the Key Competencies is subsumed within existing
assessment procedures which are consistent with this set of assessment principles. In other cases this
principle might be met by rationalising the assessment procedures associated with a particular school or
training program to allow for assessment of the Key Competencies.

The need for this principle was reinforced strongly in responses to the Proposal for Consultation as was
the need to minimise the record-keeping demands associated with assessment of the Key Competencies.

Record-keeping requirements associated with procedures for assessment of the Key Competencies
should be designed so that, as far as possible, these records are integrated with records maintained
for other assessment purposes.

Again, in some cases this might be achieved by subsuming record-keeping demands for assessment of
the Key Competencies within arrangements for existing assessment procedures; in others it might be
achieved by some rationalisation of existing requirements.

The Committee recommends that:

The AEC and MOVEET agree in principle to the following set of principles for assessment of the Key
Competencies.

Common reference point for assessment
• Achievement of the Key Competencies should be assessed against nationally-agreed
  Performance Levels.

Validity
• Assessment methods should be valid; that is, they should assess what they claim to assess.
• Assessment should be undertaken as an holistic process which integrates knowledge and
  skills with their practical application.
• Achievement of a given Performance Level should be based on assessment at that level in at
  least two different contexts.

Fairness
• To the maximum extent possible, assessment methods should ensure that students/trainees
  are not disadvantaged by gender, race, ethnicity, disability, socio-economic status or other
  social circumstance.
• The requirements of the Key Competencies, criteria for judging performance and assessment
  methods should be made explicit to the student/trainee.
• Assessment procedures should provide for the recognition of Key Competencies, no matter
  how, where or when they have been acquired. Students/trainees who, for whatever reason, do
  not take part in the formal learning process associated with development of a Key
  Competency should have opportunities to demonstrate their performance and obtain an
  assessment.
• Assessment procedures should be designed to provide all students/trainees with
  opportunities to demonstrate their performance across the full range of Performance Levels.
• Where necessary, assessment procedures should provide students/trainees with more than
  one opportunity to meet the requirements for assessment at a given Performance Level.
Reliability
- Assessment methods should be accompanied by procedures designed to promote and monitor reliability in interpretation and application of the Performance Levels.

Relationship between assessment and learning
- Assessment procedures should be designed to provide maximum coherence between learning and assessment.
- Assessment methods should be designed to inform, and contribute to improvements in, teaching and learning.

Place of assessment in program delivery
- Assessment procedures should be designed so that, as far as possible, assessments of achievement of the Key Competencies are undertaken as part of, or in conjunction with, assessments undertaken for other purposes.
- Record-keeping requirements associated with procedures for assessment of the Key Competencies should be designed so that, as far as possible, these records are integrated with records maintained for other assessment purposes.

RECORDS OF PERFORMANCE

The Committee has used the term 'record of performance' to refer to a report on individual achievement of the Key Competencies. The purpose of a record of performance is to provide individuals with evidence of their achievement to present to a third party, such as another education and training provider or a potential employer. As was outlined earlier, the Committee believes that nationally-consistent approaches to the provision of records of performance are necessary for reasons of portability, consistent credit transfer arrangements and ease of interpretation by users.

Two points need to be borne in mind in this regard.

The first is that there is no expectation that a record of performance in the Key Competencies will of itself constitute a qualification. The purpose for providing records of performance is to provide young people with a record of their achievement and to assist articulation between school and training programs, not to create a separate and additional credential. In school programs, at least, it is becoming increasingly common for reporting to include a range of information presented in a variety of ways. It is envisaged that the record of performance on the Key Competencies will form a common element within this range of 'reporting packages'.

The second is the need to recognise the range of possible consequences of introducing a record of performance in the Key Competencies. Access to a record of their performance is intended to benefit young people and can be expected to benefit the majority. An inevitable corollary of this, however, is that for those who for whatever reason do not receive a record of performance, it may become yet another 'piece of paper' they do not have and thus a further obstacle in their path. The Committee has sought to minimise the potential for this to eventuate through the proposed principles for assessment and through proposals for examining flexible means of providing access to achieving the Key Competencies (see Section 2.3). Nevertheless, the fact remains.

PRINCIPLES FOR REPORTING INDIVIDUAL PERFORMANCE

The Committee has developed a set of four principles for reporting to individuals on their achievement of the Key Competencies. Like the principles for assessment this set of principles was tested in the Proposal for Consultation. The principles were confirmed by the Committee in light of this consultation and the discussion of particular principles reflects points raised in responses.
An individual record of performance showing Performance Levels in the Key Competencies not previously reported should be made available to students/trainees at any point at which they exit from a school program at Years 11-12 level or from a recognised entry-level program of vocational education and training.

The provision of records of performance at the point of exit is consistent with the purpose of these records. Responses to consultation also reflected a clear preference for this option over options based on age or year levels.

It should be noted that the targeting of programs at the post-compulsory level as the basis for nationally-consistent arrangements does not preclude the possibility of individual school systems electing to make provision for records of performance to be issued to young people exiting from school programs prior to Years 11-12. Nor does it preclude the possibility of individual systems choosing to report on performance in the Key Competencies at points other than exit.

The reference in the proposed principle to students and trainees generally rather than those within a particular age group reflects a number of responses to consultation which drew attention to the fact that participants in post-compulsory school and entry-level training programs not only include young people in the 15-19 age group but also adults who would benefit from developing the Key Competencies and from having access to a record of their performance. This factor was also emphasised in the findings of the Access and Equity Audit.

The provision of records of performance at any point of exit implies that students and trainees should be provided with a record on exit regardless of whether they exit at the completion of a program or at any other stage. It also implies that a student or trainee may receive a record of performance on more than one occasion, depending on the pathway followed through school education and entry-level vocational education and training. The Committee considers that inclusion of this provision is essential to the aim of providing more flexible pathways through education and training.

It is intended, however, that each successive record of performance should be confined to recording assessments of Performance Levels not previously reported. Hence, for example, a young person who enrolls in an entry-level vocational education and training program having already achieved Performance Level 3 in each of the Key Competencies would not receive another record of performance on exit from that program. On the other hand, a young person who leaves school during Year 11 having achieved Performance Level 2 in each of the Key Competencies and returns later to complete Year 12, during which time he or she is assessed as having achieved Performance Level 3 in four of the Key Competencies, would receive a record of performance on exit reporting these assessments.

Further consideration needs to be given to ways by which young people might seek to upgrade their record of performance while not currently participating in a formal program of education and training. It is proposed that this should be taken up through field tests of implementation of the Key Competencies through community-based programs (see Section 2.3).

Assessments reported on records of performance should be in accordance with nationally-agreed principles for assessment.

The credibility of records of performance depends on the degree of confidence which can be placed in the assessments on which those records are based. This principle is necessary to establish the essential relationship between the provision of records of performance and the proposed set of principles for assessment.

Records of performance should be based on a common format.
This principle is necessary to support the purposes of portability, consistency of credit transfer arrangements and ease of interpretation by users. The adoption of a common format for records of performance would help users to make sense of records being generated by a wide range of providers. It would also overcome the need for each school or school system and each training system or public and private training provider to design its own format.

The adoption of a common format would not preclude the possibility of different systems choosing to incorporate the record of performance within their reporting package in different ways as appropriate to their other reporting arrangements.

The issuing of records of performance should be subject to consistent provisions regarding confidentiality and the maintenance of databases of records.

It is understood that like any other record containing personal information, a record of performance would be the property of the student or trainee to use as he or she sees fit and would not be provided to any other person without explicit permission.

It is not the Committee’s intention that the issuing of records of performance should entail the establishment of elaborate procedures for database management. However, the development of credit transfer arrangements to assist articulation between school and training programs will make it necessary to ensure that arrangements are in place to enable young people to retrieve lost records and to provide a means for users to check the authenticity of records. Arrangements of this sort are already well-established for programs at Years 11-12 level in the school sector. The Committee is also aware that work on a nationally-consistent approach to the management of records of assessment is underway in the training sector in association with implementation of the National Framework for Recognition of Training. It is expected that these arrangements will be able to accommodate the database management needs for records of performance in the Key Competencies.

The Committee recommends that:

The AEC and MOVEET agree in principle to the following set of principles for reporting on individual achievement of the Key Competencies:

- An individual record of performance showing achievement in the Key Competencies not previously reported should be made available to students and trainees at any point at which they exit from a school program at Years 11-12 level or from a recognised entry-level program of vocational education and training.

- Assessments reported on records of performance should be in accordance with nationally-agreed principles for assessment.

- Records of performance should be based on a common format.

- The issuing of records of performance should be subject to consistent provisions regarding confidentiality and the maintenance of databases of records.
NATIONAL REPORTING

The Committee has used the term 'national report' to refer to a public report on achievement of the Key Competencies based on statistical analysis of the achievements of a given cohort of young people.

PURPOSES

The Committee believes that reporting to individuals on their achievement of the Key Competencies needs to be complemented by national reporting on the achievements of the cohort as a whole. The information provided through such reporting will contribute to meeting needs for public accountability about the nature of the education and training being provided to young people and about the effectiveness and efficiency of that provision. In particular, national reporting will provide an improved information base for evaluating the effectiveness of education and training programs.

These purposes are the substance of the first of four principles the Committee proposes as the basis for national reporting on the Key Competencies.

The collection of data for the purpose of national reporting should be designed to provide a publicly credible means of reporting on the extent to which the Key Competencies are being achieved, to improve the information base for evaluating the effectiveness of education and training programs, and contribute to meeting the needs of public accountability.

Just as the Key Competencies are an important part of the outcomes of general education, but not the whole, so national reporting on the Key Competencies needs to be seen as contributing to improving the information base for evaluating programs and meeting the needs of public accountability more generally. It is not assumed that national reporting on outcomes in the area of Key Competencies alone will satisfy the need for information to meet these purposes.

As with all the principles in this set, this principle is intended to establish an agreed basis for reporting nationally on achievement of the Key Competencies. It does not preclude the possibility of individual States or Territories expanding on these purposes for their own reporting arrangements.

METHODS OF COLLECTING DATA FOR NATIONAL REPORTING

Much of the discussion about national reporting has focused on methods of collecting data for national reporting. The issues include the relative merits of possible approaches from the point of view of providing a credible basis for reporting on a national basis and their feasibility for application in both the school and training sectors. To date, proposals for national reporting on educational outcomes have been concentrated in the school sector. Consideration of methods of collecting data to provide the basis for reporting on outcomes achieved across the school and training sectors needs to take particular account of the differing structure and organisation of the two sectors. A further distinctive feature of this proposal is the intention that national reporting on achievement of the Key Competencies should complement the provision of individual records of performance on a nationally-consistent basis. The Committee has sought to maintain a clear distinction between these two types of reporting. Nevertheless, the proposal to adopt a nationally-consistent approach to reporting to individuals on their achievement needs to be taken into account in considering methods of collecting data for the purposes of national reporting.

One aspect of the discussion of methods of collecting data has been the relative merits and feasibility of basing national reporting on sample or census data. The Committee considers that national reporting should be based on a sample of the cohort. The major reason for this is efficiency in terms of the amount of data to be processed. Providing appropriate sampling techniques are used, analysis of the achievements of the full cohort will provide no more information than could be obtained from a relatively small sample.
A further consideration is the possibilities sampling offers for cross-referencing data on achievement of the Key Competencies with a range of other measures of educational achievement and characteristics of the cohort, such as those included in the Australian Youth Survey, and thus expanding the basis for interpreting patterns of achievement of the Key Competencies. Detailed information of the sort needed to provide for this level of analysis can only be collected on a sample basis.

A third factor is the relative feasibility of sampling and census statistical collections. Either would be feasible for the school sector. Assessment information is currently collected for all students in Years 11 and 12 and each State and Territory has a single database containing this information. Providing information on achievement of the Key Competencies is included in these databases, information for national reporting could be extracted on a sample or census statistical basis, as required. This is not the case for the training sector. As was noted earlier, work is underway to provide national consistency in the management of records of assessment as part of implementation of the National Framework for Recognition of Training. Given the range of courses and types of providers that will need to be accommodated within these arrangements, however, it is unlikely this will lead to the existence of databases comparable with those in the school sector. In these circumstances, census collection of data on young people participating in recognised entry-level programs of vocational education and training, despite the relatively small numbers by comparison with those in school programs, would involve a major expenditure of effort and resources. Sampling is a more feasible approach to collecting data in the training sector.

During the second period of consultation, the Committee commissioned advice on approaches to collecting data for national reporting. Two options were proposed for investigation. The first was to extract data for national reporting from databases of individual records of performance. The second was to collect data for national reporting by means of 'standard assessment tasks' administered to a sample of young people specifically for that purpose. The term 'standard assessment tasks' was used to refer to tasks which are defined more broadly than standardised paper and pencil tests. In the case of the Key Competencies, it was understood that these would need to include performance-based assessments.

Advice was sought on the capacity of each approach to provide valid and reliable measures of performance on the Key Competencies for the purpose of statistical analysis on a national basis. Consideration was also given to the costs associated with the two approaches and their feasibility for implementation, taking into account the range of school and training programs, types of providers and modes of program delivery, and the structures that would need to be put in place to support national reporting. The two options provided a means of exploring these critical factors in proposing an appropriate approach to collecting data for the purpose of national reporting.

The main issue shaping the advice received was the degree of confidence that will be able to be placed in the comparability of information reported on individual records of performance. If the comparability of this information can be subject to a reasonable degree of confidence there is little reason to justify the effort and expense involved in establishing an additional and separate method of collecting data for national reporting. If, on the other hand, the quality assurance associated with assessments reported on records of performance does not provide grounds for a reasonable level of confidence in their comparability, national reports would need to be based on data collected in a way that would allow for meaningful comparisons, such as by the use of standard assessment tasks administered to a national sample of students and trainees. However, while this would allow for the necessary comparability of data collected for the purpose of national reporting, it would do little to improve confidence in the comparability of information reported on individual records of performance. At best it would allow for monitoring the correlation between achievement reported on records of performance and achievement recorded on standard assessment tasks for the sample selected for national reporting. It was argued that if, as is proposed, individual records of performance are to provide a nationally-consistent approach to reporting and thus allow for portability of achievements and consistent credit transfer arrangements, the emphasis needs to be placed on providing confidence in the comparability of those records in the first instance. Given such confidence, the data on which records of performance are based will also meet the needs of national reporting.

Accordingly, the Committee proposes the following principle for methods of collecting data for the purpose of national reporting.
The collection of data for national reporting should be undertaken on the basis of sample statistics drawn from databases of individual records of performance.

Support for this principle was reflected strongly in responses to the Proposal for Consultation.

It follows from this principle that issues about the comparability of data used as a basis for national reporting need to be dealt with in conjunction with issues about the comparability of records of performance. These were referred to in connection with the assessment principle relating to reliability. That discussion advocated a systematic approach to developing the capacity of assessors to interpret and apply the Performance Levels appropriately and consistently as the primary focus of efforts to promote and monitor the reliability of assessments of the Key Competencies. This is a major purpose of the training and development program proposed in Section 2.2 to support introduction of the Key Competencies. The earlier discussion also identified the need to examine ways of periodically monitoring consistency of interpretation and application of the Performance Levels across sectors. This is included among the items suggested for field testing implementation of the Key Competencies in Section 2.2. The use of ‘standard assessment tasks’ devised especially for the purpose of monitoring cross-sectoral comparability of interpretation and application of Performance Levels could be included among the strategies examined through field testing.

REPORTING ON PARTICIPATION AND ACHIEVEMENT BY ACCESS AND EQUITY TARGET GROUPS

Among the matters attracting most discussion in relation to national reporting was the identification of access and equity target groups within such reporting. Two main points of view were evident. On the one hand, it was argued that these groups should not be identified within national reporting on the grounds that this would only serve to reinforce assumptions about poor achievement on the part of groups that have traditionally been disadvantaged in education and training. The alternative position presented strong support for identifying access and equity target groups in national reporting on the grounds that information of this sort is needed to determine the extent of disadvantage and to monitor the effectiveness of programs intended to redress inequalities. Those advocating the latter position emphasised the need for information on achievement, noting that much of the information currently available is confined to participation rates and that participation alone provides an inadequate basis for evaluating the effectiveness of initiatives to combat disadvantage.

The Committee was persuaded by the arguments presented in support of the need for national reporting to provide for the analysis of participation and achievement by access and equity target groups.

Statistical sampling techniques should provide for analyses of participation and achievement by access and equity target groups.

A consequence of adopting this principle, in conjunction with the previous principle on methods of collecting data for national reporting, is the need to ensure that databases of records of performance provide the means of sampling access and equity target groups. Related to this is the need to ensure that common criteria are used for identifying these groups both across sectors and within States and Territories. These matters are taken up in the proposal for field testing implementation of the Key Competencies in Section 2.2.

CONFIDENTIALITY

Among the responses to the Discussion Paper in which possible approaches to national reporting were initially aired, were numerous expressions of the need for any approach to national reporting to include assurances of confidentiality. In the first place these referred to the need to protect the confidentiality of information relating to individuals. In addition many responses, particularly from the school sector,
indicated willingness to support the purposes for national reporting expressed in the first principle set out above but sought assurance that national reporting on achievement of the Key Competencies would not be used as the basis for making comparisons between individual schools and training providers. The fourth principle deals with these matters of confidentiality.

The collection of data for the purpose of national reporting should incorporate procedures to protect the confidentiality of individuals and the identity of individual schools and training providers.

In proposing this last principle, the Committee is agreed that confidentiality for the purposes of national reporting should extend to the identity of schools and providers, but recognises that this would not preclude individual States and Territories from determining otherwise in approaches they adopt to public reporting on achievement of the Key Competencies.

The Committee recommends that:

The AEC and MOVEET agree in principle to the following set of principles for national reporting on achievement of the Key Competencies:

- The collection of data for the purpose of national reporting should be designed to provide a publicly credible means of reporting on the extent to which the Key Competencies are being achieved, to improve the information base for evaluating the effectiveness of education and training programs, and contribute to meeting the needs of public accountability.

- The collection of data for the purpose of national reporting should be undertaken on the basis of sample statistics drawn from databases of individual records of performance.

- Statistical sampling techniques should provide for analyses of participation and achievement by access and equity target groups.

- The collection of data for the purpose of national reporting should incorporate procedures to protect the confidentiality of individuals and the identity of individual schools and training providers.
Part 2  THE NEXT STEPS

2.1  FURTHER VALIDATION AND BENCHMARKING OF THE PERFORMANCE LEVELS

Completing validation and establishing benchmarks for the Performance Levels is the most significant development task remaining.

Validation of the Performance Levels is the process of confirming the appropriateness of the criteria for performance at each level within the Key Competencies.

Benchmarking is the process of identifying examples of students' and trainees' 'work' that is judged as meeting the requirements of each Performance Level.

The establishment of nationally-agreed standards in the Key Competencies depends on the existence of standards which are soundly based and which are capable of being interpreted in a comparable and consistent way by a wide range of users. As was noted in Section 1.3. the descriptions of the Performance Levels need to be refined. The descriptions set out in Section 1.4 have been developed through extensive discussion and debate among people with relevant experience and expertise in schools, TAFE and industry. Their development has also benefited from the Preliminary Industry Validation studies and the investigation into the incorporation of the Key Competencies in industry competency standards. But they are not yet sufficiently developed for full implementation.

The Performance Level descriptions at their various stages of development have provided the necessary foundation for debate about:

- the definition and scope of the Key Competencies
  What are the essential elements these should encompass?

- the criteria for performance at each level of the Key Competencies
  What are the essential aspects of performance at each level?

- the range encompassed by the performance levels
  What is the appropriate range of Performance Levels that should be identified for each of the Key Competencies?

The Committee has responded to matters raised in discussion of these issues at each point of the development process through redrafting and refinement of the descriptions. Nevertheless, a number of questions remain about the criteria for performance at each level of the Key Competencies and range encompassed by the Performance Levels. Some argue that Performance Level 3 is generally too high; others argue that it should be higher. Similarly, some argue that the current description of Performance Level 1 for some of the Key Competencies is too low and others argue it is too high. Differences of view also exist about whether Performance Level 2 is appropriate for the various Key Competencies. The answers to these questions depend largely on interpretation of the Performance Levels as they are currently described.

The development of clear descriptions of the Performance Levels is essential therefore, not only to provide for consistent interpretation and application of the standards, but also to establish agreement in the first place about the standards at which the Performance Levels should be set.

Research on the description of standards (see, for example, Sadler, 1987) indicates that differences of interpretation will always exist while the meaning of a standard depends on a verbal description alone. Verbal descriptions have the advantage of drawing explicit attention to the criteria that have been used to define the standards, but they are limited by the extent to which their interpretation rests on reference to experience. The use of 'Range of Variables Statements' (as in industry competency standards) appears to facilitate this and is recommended.
standards) or 'Evidence Specifications' (as in the UK National Vocational Qualifications) to overcome such problems would not be practical in the context of the Key Competencies. The generic nature of the Key Competencies would render it virtually impossible to produce such statements or specifications. An alternative approach is to represent the standards by means of exemplars of 'work' judged as being typical of the designated level of performance — in other words, to represent the standards in practice. Exemplars have the advantage of providing a concrete, common basis for reference. The problem with this approach, however, is that a large number of exemplars is required to provide sufficient reference points to obtain a clear 'fix' on the standard implicit in them. This is particularly so when the standards are based on a number of interrelated criteria as is the case with the Performance Levels in the Key Competencies. The research suggests that the respective advantages of the two approaches can be maximised, and their drawbacks minimised, by using a combination of verbal descriptions and exemplars.

The Committee believes that this combined approach should be adopted for the description of the Performance Levels in the Key Competencies.

FURTHER VALIDATION

The Preliminary Industry Validation studies reported in Appendix 3 provided an initial check on the appropriateness of the criteria identified as requirements for achievement of the Key Competencies at each Performance Level. This generated feedback that contributed significantly to the refinement of the Key Competencies leading to the descriptions presented in Section 1.4. Further industry validation studies are needed to test the refined Key Competency descriptions, particularly the criteria used to establish the three Performance Levels generally and for the individual Key Competencies. Further industry validation is also needed to extend the range of industries participating in the validation process and the range of involvement in the process within individual industries. This is important both to ensure that the criteria established for achievement of the Performance Levels properly reflect emerging patterns of work and work organisation across the range of industries, and thus can properly be claimed to be both 'key' and 'generic', and to enhance industry awareness and understanding of the Key Competencies. It is essential that further validation of the Performance Levels in the Key Competencies is undertaken in association with key industry representatives, such as through direct involvement of Competency Standards Bodies within participating industries.

BENCHMARKING

The process of benchmarking is necessary to identify exemplars of work produced by students and trainees that are judged as meeting the requirements of each Performance Level in each of the Key Competencies. It will be necessary to identify examples that collectively have meaning which not only crosses 'subject' boundaries, but also crosses State and Territory boundaries and the sectoral boundaries between school education and vocational education and training.

The need for broad applicability of the benchmarks also makes it imperative that the process is undertaken on a collaborative basis with participation from both school and training systems in each State and Territory, and in consultation both with industry and with the reference groups established through the Access and Equity Audit.

A COORDINATED APPROACH

The processes of further validation and benchmarking of the Performance Levels need to go hand in hand. There is little to be gained from further discussion of the standards to be established for the Performance Levels in the Key Competencies without reference to exemplars of students' and trainees' work to provide a concrete basis for discussion. At the same time, the collection of exemplars needs to reflect the outcomes of further validation of the Performance Levels. It is likely, therefore, that the process will require at least two cycles of collection of exemplars followed by analysis to arrive at agreement on both the descriptions of the Performance Levels and the collection of exemplars that will provide common reference points for interpretation of the descriptions.
This process will not involve the identification of additional or different Key Competencies. As indicated by the recommendation in Section 1.1, from the work done to date, the Committee is confident that the proposed set represents the Key Competencies essential for effective participation in emerging forms of work and work organisation. However, it is possible that further validation and benchmarking of the Performance Levels may lead to some refinements of the definition and scope of the Key Competencies as industry examines the criteria for the Performance Levels and teachers, trainers and assessors attempt to make the descriptions operational.

The Committee recommends that:

The AEC and MOVEET immediately establish a project to further validate and develop benchmarks for the Performance Levels in the Key Competencies.
2.2 IMPLICATIONS FOR CURRICULUM, TEACHING, ASSESSMENT AND REPORTING

Adopting the goal that all young Australians should acquire the Key Competencies and have their achievements assessed and recognised has implications for existing practice in the school and training sectors. The consequential effects on curriculum, teaching, assessment and reporting were recurring themes in responses to the Proposal for Consultation. The findings of the Access and Equity Audit also emphasised matters relating to implications for these areas.

During the second period of consultation, the Committee:

- invited school systems to make preliminary examinations of implications for curriculum, teaching, assessment and reporting;
- arranged for a group of coordinators of national training curriculum projects to investigate the implications of implementing the Key Competencies for training curriculum;
- sought advice from people with expertise in staff training and development on the implications for teachers and trainers of the introduction of the Key Competencies;
- invited experts in assessment to comment on assessment and reporting implications; and
- convened a meeting of people with expertise in initial teacher education and the education of trainers to discuss the effect of the Key Competencies on programs in these areas.

The contributions of the members of these groups are acknowledged in Appendix 9.

The specialist advice from these sources and the many constructive comments and insights from consultations and submissions contributed to refinements made to the proposal for the set of Key Competencies and associated arrangements for assessment and reporting. They also provided direct assistance to the Committee in reaching the conclusions reflected in the following recommendations for field testing implementation in the school and training sectors and for the production of a training and development package to support teachers and trainers to implement the Key Competencies.

IMPLEMENTING THE KEY COMPETENCIES IN THE SCHOOL SECTOR

The advice provided through the processes listed above indicates that the introduction of arrangements for assessment and reporting of achievement of the Key Competencies in the school sector will not require significant changes to the curriculum. Consultation emphasised that opportunities to develop the Key Competencies exist within current curriculum. The issue is how to take up those opportunities in an effective and manageable way and how to provide a more applied focus for learning to create the necessary opportunities for young people in school settings to develop the Key Competencies more effectively and to provide for valid methods of assessing their achievement.

To support this shift in emphasis, teacher education and professional development programs will need to address ways of assisting teachers to recognise and capitalise on opportunities to develop the Key Competencies and to integrate development and assessment of the Key Competencies with subject-related curriculum and assessment. Teachers will need to become familiar with the standards defined by the Performance Levels and develop the expertise to apply them appropriately and consistently.

Teachers would also benefit from opportunities to expand their repertoire of assessment strategies to include methods appropriate to assessment of the range of types of performance embraced by the Key Competencies.
In addition, there is a need to identify the management implications of the Key Competencies for systems and schools. These include:

- how the Key Competencies will be made explicit in the curriculum and in assessment requirements; and
- the methods that will be used to assess the Key Competencies.

Record-keeping and arrangements for the issuing of records of performance are also issues for further investigation. The Chief Executive Officers of the Australian Curriculum, Assessment and Certification Authorities have advised the Committee that they are confident that it will be possible to manage assessment and reporting of Key Competencies within certificate programs and also that it will be possible to manage the issuing of records of performance to students who exit school programs other than at prescribed reporting points. There is, however, agreement that there needs to be more detailed examination of matters such as:

- how information will be managed at the school level;
- where responsibility for authorising the issue of records of performance will be located;
- how records will be managed within the 'reporting packages' for senior secondary school certification;
- how the issuing of records for students who exit during the year will be managed; and
- how information will be managed at the system level?

The principles for assessing achievement of the Key Competencies and the principles for the provision of records of performance and for national reporting need to be tested in conjunction with analysis of these management issues.

In the examination of these issues it is essential that specific attention is given to the implications of proposed arrangements for managing implementation of the Key Competencies for young people within the groups identified for the Access and Equity Audit. The findings of the Audit include references to the potential for creation of barriers to access and equity through the arrangements made for implementation or, as often, the provisions overlooked in the establishment of arrangements for implementation.

IMPLEMENTING THE KEY COMPETENCIES IN THE TRAINING SECTOR

As in the school sector, opportunities for development of the Key Competencies exist within vocational education and training curriculum, especially in those areas currently under development. But there are few instances in which the Key Competencies are the subject of explicit attention within curriculum programs and even fewer in which they are the subject of explicit assessment and reporting. There is also strong support for the view that development and assessment of the Key Competencies should be incorporated within training modules rather than provided through the development of separate modules. In these circumstances, the principal issues for implementing the Key Competencies within training curriculum are:

- the need to ensure that training curriculum modules provide for development of the Key Competencies in ways that reflect their generic character;
- the need to provide for explicit assessment and reporting of achievement of the Key Competencies in conjunction with an integrated curriculum approach to their development;
- the need to develop strategies that provide for flexible delivery of the Key Competencies within the proposed model of integration within training modules.
Particular account also has to be taken of the need to be able to identify the Key Competencies explicitly within training modules so as to facilitate credit transfer for students entering training.

The training sector is faced with essentially the same staff training and development and management issues identified for the schools sector, although it has the additional challenges of:

- reaching a large part-time workforce;
- identifying those responsible for assessing and reporting achievement of the Key Competencies, especially in relation to workplace delivery;
- meeting the training and development needs of teachers and trainers in both public and private providers;
- establishing and maintaining databases on student performance, particularly in the context of a diverse range of training providers and in circumstances in which students enter and exit training at various points;
- requiring, and where necessary assisting, registered providers to issue records of performance and maintain data on student performance; and
- meeting the needs of adults who may also request records of performance in the Key Competencies in order to enrol in training or apply for a job.

RESOURCE IMPLICATIONS

There are resource implications flowing from the proposed arrangements for the Key Competencies. The majority of these relate, however, to specific set-up costs rather than recurrent costs of operation. The Committee believes that there is no feature of its proposal which would necessitate net additional recurrent expenditure for successful implementation.

Effective implementation for managing assessment and reporting of the Key Competencies and the provision of effective training and development for teachers and trainers to support implementation will be fostered by identifying the Key Competencies as priorities in the application of resources currently allocated to staff training and development, curriculum development and materials production and assessment and reporting. Careful staging of implementation will make this a viable funding strategy.

In those areas where additional up-front expenditure is necessary, costs will be contained and the quality of the product improved if the work is done on a cooperative basis, and in a consistent way. This cooperation should be sought nationally, where appropriate, and across sectors within States and Territories.

It is envisaged that some of this work could be undertaken in conjunction with pilots associated with the Australian Vocational Certificate Training System.

FIELD TESTING

The management implications of the Key Competencies and the issues identified above for both the school and training sectors need to be clarified through field testing. This form of practical trialing would include both sectors, as well as representatives from industry and access and equity groups. It is envisaged that field testing would involve the relevant agencies at system level, including those responsible for curriculum, assessment and certification and those responsible for staff development and training, working cooperatively with schools and training providers to identify the implications of implementation of the Key Competencies and develop effective and resource-efficient strategies for managing implementation.
Field testing would also provide a means of testing the efficacy of the principles for assessment and reporting set out in Section 1.5. In particular it would enable examination of:

- the operational implications of basing assessment in at least two different contexts;
- the operational implications of making provision for students/trainees to be given more than one opportunity to meet the requirements for assessment;
- the guidelines required to provide for the recognition of prior learning;
- ways of periodically monitoring consistency in interpretation of the Performance Levels across the school and training sectors.

The Committee recommends that:

The AEC and MOVEET agree that States and Territories should field test nationally-consistent assessment and reporting of achievement of the Key Competencies to develop strategies for managing implementation and identify resource implications of the proposed arrangements.

**STAFF TRAINING AND DEVELOPMENT**

Successful implementation of the Key Competencies will rest largely on the quality and consistency of staff training and development support. Effective reform cannot be mandated. If meaningful and effective change is to occur, those directly involved in the delivery must be adequately supported. Teachers and trainers need to be provided with substantial training and professional development to ensure that they understand the purposes for implementing the Key Competencies and have the expertise to implement them effectively.

The need for a comprehensive strategy of training and development to support implementation of the Key Competencies was a consistent theme in consultations and submissions to the Committee. This was confirmed by a preliminary analysis of the potential impact of the Key Competencies on teachers' work (see Appendix 7).

The Committee believes that these development needs will be met most effectively and efficiently through a staff training and development package developed nationally.

While systems and sectors will need the flexibility to ground staff training and development in the Key Competencies in their own curriculum, assessment and reporting arrangements, it is essential that the approach adopted provides for the establishment of a common and consistent understanding of the Key Competencies. This will be facilitated greatly by the use of a single core set of training and development materials.

Secondly, the production of staff development and training material involves a considerable investment of resources. The use of available resources will be maximised by avoiding unnecessary duplication of effort.

At the same time, however, it is recognised that methods of delivery of staff training and development vary considerably between the school and training sectors and across States and Territories. Any proposed strategy for take-up on a cross-sectoral and national basis needs to be able to accommodate this range.

Experience of models of staff training and development of the scale, scope and flexibility required is limited. Examples which provided the Committee with some guidance included the approach being used to support the introduction of the Victorian Certificate of Education and the package developed to support the introduction of national recognition of prior learning in the training sector.
The Committee believes that the most effective way to promote a consistent understanding of the Key Competencies while maintaining the required flexibility in terms of methods of delivery of staff training and development across sectors and systems is to produce an interactive computer software package as the core component of the staff training and development strategy adopted within each sector and in each State and Territory.

Details of the rationale for adopting this approach and the detailed specifications for such a package are provided in Appendix 7.

The Committee recommends that:

The AEC and MOVEET endorse the development of an interactive computer software package to support staff training and development for implementation of the Key Competencies.
2.3 ACCESS TO THE KEY COMPETENCIES FOR YOUNG PEOPLE NOT IN FORMAL EDUCATION AND TRAINING

PARTICIPATION TARGETS, KEY COMPETENCIES AND YOUNG PEOPLE AT RISK

In emphasising that the Key Competencies are essential for effective participation in emerging patterns of work and work organisation, the Committee is conscious that it is advocating a general increase in achievements for all young people completing postcompulsory education and training. It is also acutely aware that not all young people are currently covered by school and training programs.

The proposal for the Key Competencies fits in with initiatives endorsed by Ministers to increase participation in postcompulsory education and training to the point where 95% of 19 year olds will have completed Year 12 or an initial post-school qualification or will be participating in formally recognised education or training. The growth in the proportion of the population served by school and training providers implied by these initiatives has been taken into account both in the formulation of the Key Competencies and in the Committee’s analysis of implementation needs.

Part of this consideration has been identification of the characteristics of those people who currently are unlikely to be undertaking formal programs of study that would help them develop the Key Competencies. Recent Australian Youth Survey data show that young people who leave school early are characterised by conditions associated with educational disadvantage; that is, the low educational achievement of their parents, low socio-economic status (SES) of their parents and some degree of family dislocation. Compared with the total cohort, these young people are:

- more likely to come from a low socio-economic background; indeed low SES background in the group which left school earliest is almost double that of the total cohort; and nearly twice as likely to come from a sole parent family;
- much less likely to have at least one parent with a post-secondary education and about four times less likely to have a parent with a university education; and
- more likely to be disabled and, on the whole, less likely to be from a non-English speaking background.

DIVERSITY OF PROVISION

While there is a variety of education and training providers and pathways now available to young people, different learning settings may be required to satisfy the needs of the range of young people who must be accommodated in education and training if the 95% participation target is to be achieved. Over recent years, and with the assistance of initiatives such as the Students At Risk Program, Disadvantaged Schools Program and Participation and Equity Program, schools and training providers have improved the access of a more diverse population of young people to education and training. But the school and training sectors are not alone in providing for this group. Traditionally, both the community sector and providers of youth specific programs have played a critical role in providing relevant learning opportunities for many young people for whom more structured school and training environments have proven inappropriate.

The involvement of community-based programs which are articulated with mainstream providers could complement mainstream provision of the Key Competencies by developing innovative practice models for schools and training providers and by providing an initial point of access to re-entry for young people who would otherwise remain totally outside of the education and training system. These models need to encompass flexible arrangements between providers, so that all young people have the opportunity to undertake study through mixed, but coordinated and formally recognised units; e.g. joint school/community/training provider/university/business projects. They should also provide for
clear pathways across sectors; e.g. community-based pre-vocational program to TAFE certificate courses; and for the possibility of attaining postcompulsory credentials through part-time work/study.

**BARRIERS TO ACHIEVING THE KEY COMPETENCIES**

In addition to the broad socio-economic factors that put young people ‘at risk’ and reduce their likelihood of participation in formal education and training there are many other circumstances that limit participation. The Access and Equity Audit and related submissions and consultation drew attention to the possibility that a significant proportion of the following groups of young people may not have adequate opportunities to acquire the Key Competencies:

- young people with limited levels of literacy, numeracy and self-esteem;
- young people of non-English speaking background, particularly those poorly represented in education, training and the labour market;
- young women, particularly those in non-traditional areas of education, training and employment;
- young mothers;
- young Aboriginal and Torres Strait Islander people;
- geographically isolated young people;
- young people with disabilities;
- young people in institutions;
- young people who are homeless or ‘at risk’ of homelessness;
- young people who are on protective or corrective orders;
- young people who display behavioural problems and are difficult to manage; and
- other young people ‘at risk’ of leaving school.

The Committee believes that the desirable, general response to all of these circumstances is to provide greater flexibility within education and training programs so that they cater for people of all levels of experience, background and ability. This is ideally supported by program content relevant to disadvantaged young people and programs that allow for different learning styles. These strategies need to be explored more thoroughly through field testing of implementation of the Key Competencies.

Similarly, analyses of the assessment and reporting implications of the Key Competencies need to take into account the needs of disadvantaged young people. Issues such as the feasibility of introducing mechanisms to provide credit for learning undertaken in non-traditional education and training settings are priorities in this area.

Assessment techniques and mechanisms which take into account the special needs of some groupings of young people, including those for whom assessment in conventional, structured written English may be a barrier to participation, also warrant further investigation. Additional matters requiring investigation in accommodating the needs of the full range of young people include the possibilities for creating mechanisms which allow young people to easily access their records of performance and to cater for young people who participate in formal programs for relatively short periods of time.

Analytical work of this kind should not be confined to the implications for practice in mainstream provision. The practical implications of the Key Competencies and associated assessment and reporting for the wide array of youth programs also need investigation. The Committee is aware that the Youth Ministers Council has already established mechanisms for exploring these and related matters. It is proposed that the Council be requested to undertake field testing of implementation of the Key Competencies for young people not undertaking formal education and training in parallel with the field tests proposed for the education and training sectors.

The Committee recommends that:

The AEC and MOVEET request the Youth Ministers Council to arrange for the conduct of a field test of implementation of the Key Competencies for young people not undertaking formal education and training, and request that the Council provide a report to AEC and MOVEET.
2.4 DEVELOPING ARTICULATION BETWEEN GENERAL EDUCATION AND POST-SCHOOL PATHWAYS

The proposal to incorporate the Key Competencies within school programs at the postcompulsory level and entry-level programs of vocational education and training and to introduce nationally-consistent arrangements for assessment and reporting on achievement of the Key Competencies across the two sectors provides the prospect of improved articulation between programs and clearer and more flexible pathways between education and training. The realisation of this prospect, however, requires exploration of the relationship between the Key Competencies and credentials, their relationship to industry competency standards and their links with education and training programs at post-secondary level.

RELATIONSHIP OF THE KEY COMPETENCIES TO CREDENTIALS

The Key Competencies are the things which fuse general education with vocational education and training — a third ingredient in preparation for effective participation in work enabling young people to combine the foundation of knowledge, skills and understanding developed through general education with the vocational competencies required for work in particular industries and jobs. It is not intended, therefore, that the Key Competencies should comprise a credential in their own right: achievement of a given Performance Level in the Key Competencies will not of itself qualify an individual for a particular job or for entry to a particular program of further education and training. Rather, it is expected that they will form a part of, or be delivered in conjunction with, programs leading to credentials at the postcompulsory level of schooling and at entry levels of vocational education and training.

The nature of the relationship between achievement of the Key Competencies and these credentials has significant implications for the role of the Key Competencies in preparation for work and for their role in the development of improved articulation between education and training. Depending on the ways in which these relationships are established, the Key Competencies could provide an effective bridge between general education and vocational education and training and greater flexibility of movement between education and training pathways or they could lead to the construction of further barriers to flexibility.

A significant aspect of these relationships is the place of the Key Competencies in the proposed Australian Vocational Certificate Training System. Plans for the system already identify the Key Competencies as a core component at each of the three levels proposed for the certificate. It will be necessary to determine, however, the requirements for achievement of the Key Competencies for award of the certificate at each of these levels. While recognising the need for further validation and the establishment of benchmarks for the Performance Levels in the Key Competencies, the Committee believes that all young people should acquire the set of Key Competencies at Performance Level 3 to equip them properly for work in a changing world. Assuming acceptance of this position, a decision will need to be made as to whether achievement of Performance Level 3 in all of the Key Competencies should be established as the standard required for the Key Competencies component of the award of the Australian Vocational Certificate at the third level or whether a less demanding standard would be acceptable. If the former position is adopted, priority will need to be given to ensuring participants in the proposed system are given the necessary support to achieve the required standard across the set of Key Competencies.

If it is resolved that a less demanding standard should be set, further questions will emerge. Should such a standard be set uniformly across the Key Competencies, say at least Performance Level 2 in all of the Key Competencies? Alternatively, should the standard take the form of a required profile of achievement — say, at least Performance Level 1 in all of the Key Competencies, at least Performance Level 2 in five of the Key Competencies and Performance Level 3 in at least three of the set? If so, what are the consequences of assuming that achievement in the individual Key Competencies is interchangeable? On the other hand, would it be more appropriate to set the required standard in terms of minimum Performance Levels to be achieved in specific Key Competencies? If so, might these vary
depending on the particular industry base which forms the vocationally-specific component of the
certificate? What would be the consequences of setting varying requirements for achievement of the Key
Competencies for the award of the same credential?

Each of these possible approaches to setting requirements for achievement of the Key Competencies as
part of the award of Australian Vocational Certificates has ramifications for the overall shape of the
proposed system and the way in which the Key Competencies might contribute to the development of
more flexible pathways through education and training. There may also be other ways of approaching
the setting of Key Competencies requirements. Moreover, once the Key Competencies requirements for
the third level of the certificate are established, it will be necessary to determine the requirements for the
first and second levels. While the basis on which the Key Competencies requirements for the third level
of the certificate are established will have an important influence on shaping the requirements for the
first and second levels, it will not be the only consideration. Decisions about these requirements will also
need to take account of the purpose of the proposed certificate at each of the lower levels.

These matters require careful consideration and the Committee does not consider it appropriate to
propose a solution at this stage. In the first place it would be premature to do so without reference to the
outcomes of the process of further validation and benchmarking of the Performance Levels.
Furthermore, the decisions should not be made in isolation from decisions about the requirements for
the vocationally-specific components of the certificates. Accordingly, the Committee proposes that
recommendations on the Key Competencies requirements for award of the certificates proposed within
the Australian Vocational Certificate Training System be referred to the Vocational Education,
Employment and Training Advisory Committee.

The Committee recommends that:

The AEC and MOVEET request the Vocational Education, Employment and Training Advisory
Committee to provide recommendations on requirements for achievement of the Key Competencies
at each level of the proposed Australian Vocational Certificate Training System.

Of equal importance is the need to consider the relationship between the Key Competencies and
credentials related to school programs at the postcompulsory level. For a large majority of young
people, these school programs will provide the base for development of the Key Competencies and the
source of assessments of their achievement.

In this case, unlike the proposal for the Australian Vocational Certificate Training System, the primary
question is whether the Key Competencies should form part of the requirements for award of these
credentials. One possibility is that records of performance in the Key Competencies should simply form
part of the reporting packages associated with these programs but not contribute to the award of the
credentials themselves. There are precedents for this. It is increasingly common for reporting on
achievement at postcompulsory level in schools to include reporting for a range of purposes in addition
to the particular requirements of the credential. If this direction were adopted, records of performance in
the Key Competencies would provide the basis for granting credit into vocational education and
training programs and possibly for other purposes as determined by the range of users of information
reported from school programs at postcompulsory level, but it would be possible to acquire a senior
secondary school credential without achieving any given standard in the Key Competencies.

Alternatively, it can be argued that if the Key Competencies are to be recognised as essential for effective
participation in emerging patterns of work and work organisation, their achievement should form a
necessary part of acquiring credentials associated with school programs at the postcompulsory level.

These alternative positions imply different views of the place of broad vocational preparation within
credentials at the postcompulsory level. While reiterating the view that all young people should acquire
the set of Key Competencies at Performance Level 3 to equip them properly for work in a changing
world, the Committee recognises that translating this expectation in terms of requirements for
credentials is not a straightforward matter. The demands placed on these credentials are becoming
increasingly complex as participation in schooling at the postcompulsory level increases and the
associated credentials are broadening to accommodate a wider range of purposes. The effects of these changes are reflected in the range of developments taking place in curriculum, assessment and certification arrangements at the postcompulsory level across the country. The Committee is also aware that responsibility for the credentials rests with separate statutory authorities in each State and Territory.

It is essential, however, that careful consideration be given to the implications of the alternative positions outlined above for the place of the Key Competencies within postcompulsory school credentials.

In addition to the primary question of the status to be accorded to achievement of the Key Competencies within these credentials, there is a need to examine implications for articulation with the proposed Australian Vocational Certificate Training System and more broadly the implications for providing more flexible pathways through education and training. It is vital also that consideration be given to the possible consequences of differences emerging in the relationship of the Key Competencies to requirements for senior secondary school certification both within and between systems.

The Committee recommends that:

The AEC and MOVEET request the Australian Curriculum, Assessment and Certification Authorities to provide advice on the relationship between the Key Competencies and senior secondary school certification.

COORDINATION OF ADVICE ON RELATIONSHIPS BETWEEN THE KEY COMPETENCIES AND CREDENTIALS

In order to ensure parity of esteem, flexible pathways and an appropriate level of recognition of prior learning, including achievement of the Key Competencies, it is important that there be coordination of proposals for relating the Key Competencies to credentials in the school and training sectors. This is one of the matters identified as requiring attention in the Committee's proposal for a coordinated approach to national initiatives in postcompulsory education and training in Section 2.5.

The Committee also notes that the AEC and MOVEET have recently established a working party to examine the feasibility of developing a single framework of credentials from postcompulsory education and training to higher education. The deliberations of this working party will need to be taken into account in establishing the relationship of the Key Competencies to education and training credentials.

INCORPORATING THE KEY COMPETENCIES IN INDUSTRY COMPETENCY STANDARDS

Critical to the development of improved articulation between school and training programs is the incorporation of the Key Competencies within industry competency standards. The Committee's investigation of this matter is reported in Appendix 4.

The investigation underlined the need for proposals for incorporation of the Key Competencies in industry competency standards to proceed from an understanding of the essential differences between them. As was outlined in Section 1.3, industry competency standards are:

- developed by industries and express their agreed common workplace requirements;
- endorsed by the National Training Board;
- aligned with the eight levels of the Australian Standards Framework;
- described in terms of the requirements of jobs rather than the competencies an individual brings to the job.
In contrast, the Key Competencies describe an individual’s performance in a range of broad employment-related competencies which will provide an improved basis for:

- effective participation in emerging forms of work and work organisation;
- access to a range of education and training pathways, both initially and subsequent to entering employment;
- improved flexibility and mobility in employment;
- participation in adult life more generally.

While every encouragement is given for industry competency standards to be forward looking and to be somewhat in advance of the typical level of work organisation existing in an industry at the time the standards are developed, a fundamental difference is that the Key Competencies focus on the needs of the future workforce whereas industry competency standards must cater for the whole workforce, both future and current.

The Key Competencies are those which will be required in employment generally and are expected to be transferable across all industries. It follows that in any specific set of industry competency standards, and in any specific workplace, the range of applications of the Key Competencies within occupations at the lower levels of the Australian Standards Framework will reflect only a part of that breadth. Thus an individual who has acquired the Key Competencies may not necessarily be expected to apply them in their complete form in any single industry setting.

These differences need to be recognised. At the same time, however, attention needs to be directed towards recognising, and obtaining the maximum value from, the capacity for the Key Competencies to provide for improved articulation between general education and vocational education and training and progression through vocational education and training. Acquisition of the Key Competencies will enhance the range of choices and opportunities available to individuals entering the workforce. The Key Competencies will also provide a foundation for acquisition of the more vocationally-specific competencies that comprise industry core standards. It can be expected that acquisition of the Key Competencies will increase the speed with which individuals are able to acquire vocationally-specific competencies and can be assessed as competent against industry core standards. This has benefits for individuals and for industry. Access to these benefits will be enhanced if the relevant Key Competencies and their required Performance Levels can be located within national industry core competency standards.

The Committee recommends that:

The AEC and MOVEET request the National Training Board to establish as part of the formal procedures for endorsing national core competency standards, procedures for identifying the Key Competencies at Australian Standards Framework levels and recording them in the national register of industry competency standards.

The Committee recommends that:

The AEC and MOVEET request the National Training Board to require Competency Standards Bodies to progressively identify the Key Competencies within industry competency standards at Australian Standards Framework levels and, where possible, industrial classifications.

The investigation into the incorporation of the Key Competencies in industry competency standards examined two approaches to process of incorporation: an 'integrated model' in which the Key Competencies would be incorporated within the elements and performance criteria of Units of Competency and an 'adjunct model' in which the Key Competencies would be represented within
industry competency standards as a set of separate or supplementary units. The Committee was attracted to the adjunct model on the basis of its capacity to maintain the identity and prominence of the Key Competencies, anticipate and foster development of a future orientation and facilitate recognition of prior learning and credit transfer. It is recognised, however, that both models are being used for the incorporation of more generic elements within industry competency standards and that a single approach is unlikely to suit the preferences of all Competency Standards Bodies. In light of this, it would appear more appropriate to focus on the principles by which the Key Competencies are incorporated into industry competency standards rather than the particular model through which the relationship is established. An initial listing of such a set of principles is included in Appendix 4. But further work is required to explore and test the relationship between the Key Competencies and industry competency standards and to articulate the principles that should guide establishment of this relationship in the development of competency standards for individual industries.

The Committee recommends that:

The AEC and MOVEET request the National Training Board, in consultation with Competency Standards Bodies, to undertake further work to articulate the principles by which the Key Competencies are to be incorporated into industry competency standards.

LINKS TO POST-SECONDARY EDUCATION AND TRAINING

A third area for consideration in the development of more flexible pathways is links with post-secondary education and training.

Implementation of the proposed arrangements for the Key Competencies will mean that all young people exiting from Years 11 and 12 will receive a record of performance reporting their achievement in relation to each of the Key Competencies against the standards established at three Performance Levels.

One aspect of the potential for the Key Competencies to assist the development of clearer and more flexible pathways between general education and post-secondary education and training is the possibility of achievement in the Key Competencies being taken into consideration in processes of admission to higher education and vocational education and training.

There are a range of ways by which this information might form part of the information taken into account in decisions about admission. The Committee notes increasing use of a range of additional information to supplement tertiary entrance scores based on assessment at Year 12 level in processes of admission to higher education for students exiting Year 12. A survey recently conducted by the Australian Vice-Chancellors' Committee to identify the range of ways universities admit students by means other than standard Year 12 entry also indicates that a significant proportion of university admissions are based on information other than Year 12 tertiary entrance scores.

The National Board of Employment, Education and Training, through its Higher Education Council, is currently responding to a reference on competency-based approaches to university entry and selection, and credit transfer. This reference would provide a valuable opportunity for the Board, in conjunction with the Australian Vice-Chancellors' Committee to examine ways by which achievement of the Key Competencies might be taken into account in admission to higher education.

The Committee recommends that:

That the AEC and MOVEET request the National Board of Employment, Education and Training and the Australian Vice-Chancellors' Committee to examine methods by which achievement of the Key Competencies could be taken into consideration in processes of admission to higher education.
Consideration of achievement of the Key Competencies in processes of admission is equally relevant to processes of admission to programs of vocational education and training with entry post-Year 11 and post-Year 12.

The Committee recommends that:

The AEC and MOVEET request the Vocational Education, Employment and Training Advisory Committee to examine methods by which achievement of the Key Competencies could be taken into consideration in processes of admission to vocational education and training.

Attention also needs to be given to methods by which students who enter post-secondary education and training prior to achieving Performance Level 3 in all of the Key Competencies may be provided with continuing access to assistance to develop the Key Competencies. This is an important aspect of the development of more flexible pathways between general education and post-secondary education and training.

The Committee recommends that:

That the AEC and MOVEET request the National Board of Employment, Education and Training and the Australian Vice-Chancellors’ Committee to consider methods by which students who enter higher education programs prior to achieving the highest designated level of performance in the Key Competencies may be provided with continuing access to assistance to develop the Key Competencies.

The Committee recommends that:

The AEC and MOVEET request the Vocational Education and Training Advisory Committee to consider methods by which students who enter vocational education and training prior to achieving the highest designated level of performance in all of the Key Competencies may be provided with continuing assistance to develop the Key Competencies.
2.5 SUGGESTED TIMELINE AND STRATEGY

TIMELINE AND CONTEXT

The Committee considered a range of factors affecting the timeline for commencement of nationally-consistent arrangements for assessment and reporting of the Key Competencies.

The first of these was the work that remains to be done to complete development of the proposed arrangements and to prepare for take-up within the school and training systems in each State and Territory (as discussed in Sections 2.1 - 2.4). A second set of factors involved the relationship between this and other initiatives in the school and training sectors, both nationally and within individual States and Territories.

At the national level, the major initiative in the school sector is development of the national statements and profiles for each of the eight key learning areas identified in the National Goals for Schooling which are scheduled for completion by mid-1993. In the training sector, implementation of competency-based training is proceeding in conjunction with the development of national competency standards by industries and in line with the agreement among State, Territory and Commonwealth Ministers that substantial progress should be achieved by 1993. This process has been assisted by the recently completed agreement on a National Framework for Recognition of Training.

In the school sector, particularly, individual State and Territory initiatives also need to be taken into account. Most States and Territories are either in the process of implementing substantial changes in curriculum, assessment and certification arrangements at the postcompulsory level, or have recently done so, or are in the process of planning changes. A number of States and Territories are also in the process of introducing profile-type reporting arrangements based on statewide standards, either in parallel with or in anticipation of the national subject profiles.

A third factor is the proposal for the Australian Vocational Training Certificate System contained in the report of the Employment and Skills Formation Council. It needs to be recognised that the proposed arrangements for the Australian Vocational Certificates anticipate both the definition of the Key Competencies and the existence of nationally-agreed standards in them. The Key Competencies are intended to comprise the core component of the Australian Vocational Certificate at each level and the basis for articulation between general education and vocational training that provides the foundation for development of the new system.

While recognising the range of existing pressures on school and training systems, the Committee considers it essential that implementation of arrangements for the Key Competencies be coordinated with the introduction of the Australian Vocational Certificate Training System. To do otherwise would lead to needless duplication of development work in order to provide the Key Competencies component of the proposed system.

In this context, the Committee was encouraged by the number of expressions of interest in participating in further development and trial implementation of the Key Competencies which were included in responses to the Proposal for Consultation. These came from systems and individual schools and training providers, and from education and training organisations. In the case of some individual school and training providers these expressions of interest were based simply on interest in the concept of the Key Competencies. More often, however, they were based on the view that there are limits to the amount of further development that can be achieved without the benefit of experience of the Key Competencies in practice, and on the belief that, providing appropriate planning processes are put in place, implementation of the Key Competencies can be coordinated effectively with other local and national initiatives.

The next steps identified by the Committee, constitute a substantial program of work that must precede the implementation of Key Competencies. At the May 1992 meeting of the AEC and MOVEET, Ministers noted that the Committee had adopted 1995 as the planning date for implementation of the proposed
arrangements for the Key Competencies. The Committee has maintained its support for that timeline because it is the earliest date that allows for the necessary development work and field testing to take place, and for individual States and Territories to consult sufficiently widely in the process of planning implementation within systems. Above all, the date is consistent with the recommendation of the Finn Committee on the timeline for implementation of the Key Competencies.

The Committee recommends that:

Implementation of nationally-consistent arrangements for assessment and reporting on the Key Competencies should be coordinated with implementation of the Australian Vocational Certificate Training System. The goal for commencement of nationally-consistent arrangements for assessment and reporting on the Key Competencies should be set for 1995.

INFORMATION

Public discussion and debate about the work of the Committee has been extensive, yet the need for information remains. Successful implementation will rest on careful sequencing and coordination of the steps outlined in Sections 2.1 - 2.4 and a broad-based information strategy which clearly explains the nature and context of this initiative.

Information about the set of Key Competencies, together with an explanation of their relationship to general education, needs to be supported by an explanation of the context which includes:

- economic and social imperatives;
- the National Training Reform Agenda
- the background of award restructuring and workplace reform;
- the convergence of general and vocational education;
- the value of the Key Competencies for all young people;
- the means by which development and assessment and reporting of the Key Competencies will be incorporated into school and training programs; and
- the means by which the Key Competencies will provide a foundation for articulation between general education and vocational educational and training, with particular reference to the proposed Australian Vocational Certificate Training System.

This information could be provided by means of a core package for national distribution designed to provide for inclusion of customised elements to cover information specific to individual States and Territories.

The Committee is of the view that a successful information strategy will need to employ both print and audio-visual media. The print material will need to target the various age and sector groupings and should be supported by a well-produced general video which demonstrates the nature and context of the proposals. It is essential that this strategy is in place as soon as possible following the release of this report.

The Committee recommends that:

The AEC and MOVEET endorse the immediate development of an information strategy to explain the Key Competencies.
A STAGED APPROACH

Consultations and submissions showed that many people were concerned that implementation of the Key Competencies be well planned, resourced and systematic. The Committee agrees and believes that implementation should be done in manageable stages to avoid overloading schools and training providers. There is a logical and desirable sequence to the next steps. This sequence of four overlapping stages is as follows.

Stage 1 (October 1992 - April 1993)

• Further validate and benchmark the Performance Levels
• Field test implementation
• Develop prototype of training and development package
• Information strategy

Stage 2 (1993)

• Conduct extended field tests of implementation
• Complete production of training and development package
• Trial pathways

Stage 3 (1994)

• Preparation for take-up — pilot implementation arrangements and deliver staff training and development

Stage 4 (1995)

• Take-up

MANAGING THE PROCESS

A staged and systematic implementation program of the scale and kind envisaged requires careful management. The nature of the Committee's proposal, particularly its emphasis on national consistency, and the need for a coordinated approach to implementation across sectors suggest the need for a management structure that is both national and cross-sectoral. There are also some efficiencies to be achieved by States and Territories cooperating in the necessary development work.

There is no existing cross-sectoral structure nationally that could take on the coordination and management tasks. The Committee considered and rejected the idea that it continue, in some capacity, to initiate and oversee the most immediate tasks.

The most persistent and forthright theme in consultations and submissions was the urgent need for greater coordination and consistency in the implementation of changes and reforms in postcompulsory education and training. There was also some criticism of the lack of complementary approaches across sectors. These issues were raised by schools, colleges, private providers, employers, unions, teacher and trainer organisations, Competency Standards Bodies and parents. The Committee discussed this matter on a number of occasions, observing that the challenge was more than simply providing more, and more accessible, information more quickly. It was also a challenge to address the structural problem of responsibility for national initiatives in postcompulsory education and training being divided between different bodies.
To overcome this problem and to provide a forum in which policy advice can be shaped cooperatively between the sectors and more integrated approaches can be taken to common problems, the Committee proposes that the Ministerial Councils establish a joint standing committee to coordinate national initiatives in postcompulsory education and training. The Committee believes this group should be established immediately and have as one of its first tasks urgent action on the next steps to be taken towards implementation of the Key Competencies.

The Committee recommends that:

The AEC and MOVEET immediately establish a joint standing committee of the AEC Standing Committee (Schools) and the Vocational Education, Employment and Training Advisory Committee to coordinate national initiatives in postcompulsory education and training and ensure consistent and complementary approaches across the two sectors. Initial tasks for this committee should include urgent action on the following matters arising from the Committee's recommendations:

- establishment of a project to validate and benchmark the Performance Levels in the Key Competencies;
- establishment of a project to develop a computer software package to support staff training and development in the Key Competencies;
- coordination of field tests of implementation of the Key Competencies;
- coordination of advice arising from investigations of the relationship of the Key Competencies to relevant education and training credentials;
- development of an information strategy to explain the Key Competencies
Appendix 1  TERMS OF REFERENCE

At their August 1991 meeting, the Australian Education Council and Ministers of Vocational Education, Employment and Training agreed:

- to establish a steering committee to do further exploratory work on the Key Competencies concept to assist Council and MOVEET in their consideration of the Finn Committee recommendations on this matter;

- that the steering committee will survey work underway in the school and TAFE/training sectors in the areas of language and communication and mathematics to advise on the feasibility of bringing it together to develop useful national profiles in these key areas of competence; and

- that the steering committee will also advise on the feasibility of a similar exercise in relation to each of the other key areas of competence.

At their October 1991 meeting, AEC and MOVEET noted an interim report outlining the establishment of the Committee. In particular the interim report noted that the Committee had interpreted its terms of reference to include consideration of Recommendations 4.1 - 4.11 and 4.13 of the Finn Report and to include consideration of the needs of all young people, including young people from disadvantaged groups and young people with disabilities.
Appendix 2 ACCESS AND EQUITY AUDIT

In interpreting its terms of reference the Committee identified the need to give careful attention to the needs of all young people, including young people from disadvantaged groups and young people with disabilities. Responses to the Discussion Paper highlighted some possibilities presented by the Key Competencies for remedying disadvantage. These responses also exhibited caution, indicating fears about the ways misuse, misinterpretation or ill-informed development of the Key Competencies could entrench or even exacerbate disadvantage for particular groups of young people. The Committee decided to seek more systematic information and ideas from representative groups on the impact of its proposals on disadvantaged young people.

The issues raised in this report derive from the Access and Equity Audit which formed a major part of the Committee's second consultation phase. The Audit sought answers to the following broad questions:

- What are the potential advantages and disadvantages of a competency-based approach in relation to access to postcompulsory education and training for different groups of young people?

- What barriers exist, and how can they be overcome in the:
  - identification of the Key Competencies?
  - description of the Performance Levels?
  - implementation of the Key Competencies?

The Committee identified seven groups of young people as the focus of its research. The findings and recommendations of the Audit are based on extensive responses received from organisations representing these seven groups:

- girls and young women;
- Aboriginal and Torres Strait Islander young people;
- young people learning English as a second language and of diverse cultural background;
- young people with disabilities;
- young people from isolated and rural disadvantaged backgrounds;
- young people from socio-economically disadvantaged backgrounds;
- young people at risk.

METHODS

Committee members used a variety of methods to consult and to solicit responses: surveys, intensive workshops, meetings with representative groups, seminars and conferences. Reports from several Special Focus Projects enabled the Committee to gain an extensive understanding of the implications of the Key Competencies for young people of non-English speaking and culturally diverse backgrounds, Aboriginal and Torres Strait Islander young people, young women and young people with disabilities. A further Special Focus Project gathered detailed responses and practical recommendations from representatives of all the Committee's designated target groups of disadvantaged young people. In addition, the Committee conducted three specialist workshops attended by nominees of national organisations representing young people with disabilities, young people of non-English speaking and culturally diverse backgrounds and Aboriginal and Torres Strait Islander young people.

These processes generated a range of responses for the Committee's consideration, including recommendations from workshops, seminars and conferences, detailed and thoughtful submissions from community, professional and government organisations and agencies and expert analyses and recommendations from the Special Focus Projects and national workshops.
RESULTS OF THE ACCESS AND EQUITY AUDIT

The Committee used the information and ideas produced through the Audit in three broad ways:

• to adapt the descriptions of the Key Competencies and Performance Levels and examples of their application to better reflect the specific and general needs of the full range of young people;

• to inform the conceptual basis of the Key Competency proposal, including its notions of work and competence;

• as the basis of a number of recommendations designed to provide for access and equity in implementation of the Key Competencies.

Issues arising from the Access and Equity Audit are summarised throughout this report.

Despite the diversity of interests and needs expressed by groups who participated in the Access and Equity Audit a common pattern of concerns and consequent recommendations emerged. There were also particular recommendations relating to the circumstances and special perspectives of each group. Most submissions and responses acknowledged that a proposal intended to apply equally to all young people must by necessity have some common or generic elements. At the same time it must accommodate different emphases and make provisions based on the fact that young people's access to education and training is differentially affected by cultural, economic, linguistic and regional factors. Such access is also affected by gender and disability.

Equity groups viewed positively:

• the added value of a nationally-consistent record of performance in the Key Competencies;

• the emphasis on reporting what students can do rather than what they cannot do;

• the lack of time prerequisites in the proposal;

• the provision of a record of performance on exit;

• the flexibility and portability of the proposal especially in terms of time and geography;

• the potential for credit transfer across sectors involved in education and training;

• the possibility of recognition of prior learning.

In responding to the Access and Equity Audit the Committee decided to retain the common and generic nature of the Key Competencies but to attempt a pre-empt their use as barriers or excluding devices. Provisions which relate to this key objective may be found in Sections 1.5 and 2.1 - 2.4.

COMMON RECOMMENDATIONS FROM THE AUDIT AND THE COMMITTEE'S RESPONSE

The set of Key Competencies

In general participants in the Access and Equity Audit acknowledged the usefulness of the set of Key Competencies. Many responses raised matters of detail of particular Key Competencies. For instance respondents on behalf of isolated and rurally disadvantaged young people questioned how Working With Others and in Teams could be realised by some isolated young people for whom their families are their sole community. The main debate with regard to the set of Key Competencies was about what was not there: in particular cultural understanding. Command of Languages other than English (LOTE) was also felt to be a Key Competency by those representing young people of non-English speaking and culturally diverse backgrounds. In addition responses from gender equity groups and those concerned with disability commented on the absence of deftness and physical or manipulative adjustments and ingenuity from the competencies. Finally it was felt that being sensitive to the needs of others was not adequately articulated.
The definition of employment-related
All groups who participated in the Access and Equity Audit recommended that the Committee's definition of employment-related competence extend to the competencies required for unpaid domestic, community and voluntary work. Responses from Aboriginal and Torres Strait Islander organisations emphasised for instance that community building work is an essential part of the training of Aboriginal and Torres Strait Islander young people. Groups representing young women pointed to the unpaid work involved in parenting, household management and the labour necessary to present oneself for work each day. In response to this indication from the Access and Equity Audit, the Committee has decided on a broad definition of work which includes the unpaid and voluntary work essential to the satisfying conduct of adult life. This is reflected throughout the report and particularly in the descriptions of the Key Competencies and examples of their application. (Section 1.4; see also Sections 1.2 and 1.3)

Consultation and representation
All groups emphasised that further development, field-testing and implementation processes should include an equity perspective and ongoing representative consultation from the outset.

The demand for representation had special force from Aboriginal and Torres Strait Islander groups because of the recent publication of the findings of the Royal Commission into Aboriginal Deaths in Custody. Several of the Royal Commission's recommendations relate to the need for programs at the design and implementation stage to seek the support and participation of the local Aboriginal community in addition to any other appropriate Aboriginal organisations or groups (Royal Commission, Recommendation 291). Again, in Recommendation 297(a), the Commission emphasised the vital role that Aboriginal Education workers — or persons performing a similar role but with another title — can play in ensuring effective Aboriginal participation in the education system.

Further development and implementation of the Key Competencies will need to take account of such recommendations. Similarly, through representation and consultation, such work will have to draw on the expertise of groups representing young people from non-English speaking backgrounds, women and girls, the isolated and rurally disadvantaged, young people with disabilities and those at risk.

The Committee has recognised the need for the representation of the targeted groups in provisions it has made for further development and field testing.

Target group
All groups called for a redefinition of the target group in ways that reflected their different analyses and experiences. For Aboriginal and Torres Strait Islander young people, those who are isolated and rurally disadvantaged, those at risk and with disabilities, a target group which designates Years 11 and 12 or even 15 to 19 year olds may exclude a considerable proportion of disadvantaged young people. As evidence gathered through the National Youth Survey indicates, these young people are often outside work or education contexts altogether. A rigid definition of the target group also militates against women and those of non-English speaking background who may return to postcompulsory education, training or work or enter for the first time. Clearly all disadvantaged groups have difficulty with the age-related organisation of the present schooling system. Indeed, as some responses recognised, the Key Competencies proposal provides the eventual possibility of more flexible provision of a record of performance outside conventional institutional confines.

In response to these indications from the Audit, the Committee has recommended field-testing implementation of the Key Competencies through courses run by community groups, and basic and prevocational courses run by TAFE, SkillShare, welfare and corrective institutions (see Section 2.3). Similarly, the Key Competency proposal recognises that adults may also wish to access the Key Competencies and obtain a record of their performance (see Section 1.5).

Cultural understanding
Almost all submissions and responses received through the Access and Equity Audit criticised the absence of cultural understanding from the proposed Key Competencies, their descriptions and performance criteria and from examples of their application.
It was apparent that the rubric ‘cultural understanding’ carried a variety of loosely linked meanings. A few submissions acknowledged the Finn Report’s description of cultural understanding as their basis. This involved knowledge and skills related to Australia’s history, geography, and politics. It included major global issues as well as the world of work.

The submissions and responses from groups representing young people of non-English speaking and culturally diverse backgrounds, young women, Aboriginal and Torres Strait Islanders and isolated and rurally disadvantaged young people espoused several notions of cultural understanding not directly covered by the Finn Report’s description. The most prevalent additional interpretation of cultural understanding involved its expression as competence in cross- or inter-cultural communication. For instance responses on behalf of young Aboriginal and Torres Strait Islander people saw this to be a crucial capacity for non-Aboriginal young people to enable them to interact constructively with Aboriginal and Torres Strait Islander culture. Conversely they saw it as a necessary capacity to assist Aboriginal and Torres Strait Islander young people to move between the work contexts of white as well as Aboriginal Australia. Similarly, but from a different perspective, groups representing linguistically and culturally diverse young people argued that the multicultural and multilingual character of Australia’s workforce made cross- or inter-cultural competence a necessity for all Australian young people.

It is pertinent to note that this notion of cross-cultural competence may depend on the young person having some access to the variety of cultural understanding described in the Finn Report — one cannot interact constructively with a person or context formed within another culture unless one has some knowledge of that culture. This apparently new definition of cultural understanding as cross-cultural competence still depends to some extent on the definitions of cultural understanding espoused in the Finn Report. It does not preclude the knowledge of another culture being developed as part of the process of interaction and negotiation.

A further interpretation of cultural understanding was contained in a number of the responses emanating from a gender equity perspective. Here cultural understanding was seen to involve a capacity to analyse the power relationships in organisational cultures in order to better distribute power to those without it. This definition of cultural understanding is also dependent on the young person’s possession of knowledge of the world of work as described in the Finn Report. This knowledge may however be acquired on site and does not need to precede the contestation of power. It is in fact a version of cross-cultural competence in the sense that it involves an understanding of a world and ways of acting that are different from the young person’s experience.

Finally, implicit in a number of responses was a notion of culture as meaning ‘identity’ or culture of origin. This was not however articulated clearly through the responses. It had its greatest resonance with the responses from Aboriginal and Torres Strait Islander young people’s representatives. These emphasised the urgency of work involved in the maintenance and defence of cultural identity.

The Committee noted these points and emphasised in its recommendations the need for all young people to have continuing access to development of cultural understanding in postcompulsory school and training programs. The Committee has also recommended that steps be taken to ensure that the national statements and profiles for the eight key learning areas identified in the Common and Agreed National Goals for Schooling in Australia encompass the knowledge, skill and understanding integral to achievement of the Key Competencies.

Most Key Competencies now have written into them elements to assist young people to recognise and interact creatively with contexts, people and modes of behaviour different from their own. In addition the applications now explicitly refer to and include such situations.

The Committee agreed that foundation knowledge should not serve as a gateway to the Key Competencies. Members of a range of groups, including those representing young people with disabilities, pointed out that many people develop knowledge simultaneously with the development of competence (see Section 1.2).
Ethics and world views
Some responses to the Audit commented on what they perceived to be an unduly instrumentalist world view: one that they felt neglected ethics and views of the world unmediated by economic rationalism. In focusing on work the Key Competencies are not intended to replace or preclude other educational objectives. Nevertheless the Committee rejects the notion that work and ethics are somehow exclusive.

If ethics can be viewed as involving the principles and modes through which human beings conduct their interrelations then acquisition of the Key Competencies should enhance the ethical attainments of young people. The Key Competency descriptions and their applications implicitly incorporate ethical dimensions.

In many instances ethics merges with cultural and intercultural understanding when the latter is understood as the capacity, in the words of one submission, ‘to step into another’s shoes’ or to see and feel things from the perspective of another person. This version of ethics is included in such Key Competencies as Working with Others and in Teams and the social dimensions of Solving Problems.

Language, literacy and English
The research done through the Access and Equity Audit produced substantial evidence that assessment of the Key Competencies could disadvantage young people learning English for the first time, as well as those with difficulties in oral or written language.

Nevertheless access to English language training is essential for every young person of non-English speaking background. Provision for such access should be part of the implementation of the Key Competencies. There are currently developed or under development a number of competency based frameworks for language and literacy acquisition. Two that were referred to in the consultation were the adult literacy and numeracy (ALAN) scales and the New South Wales Adult Migrant English Service competencies in spoken and written English. In addition, the ‘Write it Right’ Project in New South Wales is attempting to establish connections between school and workplace literacies. It is desirable that there be some coordination of these initiatives.

It is apparent from the Audit that young people with hearing, speaking or sight disabilities may also be disadvantaged unless modifications are adopted which allow young people with disabilities to meet the assessment requirements but in ways different from students without disabilities. In response to these issues the Committee has specified that the Key Competencies should in general be assessed through English. The process of benchmarking the Performance Levels will assist in making explicit the levels of proficiency in spoken and written English assumed in each Key Competency.

This could then lead to curriculum materials designed to assist access to the language basis of the Key Competencies as well as the adjustment of the assessment methodologies to the needs and abilities of young people with disabilities (in accord with the principles for assessment set out in Section 1.5).

Representations from groups concerned with young people of linguistically and culturally diverse backgrounds also called for the inclusion of languages other than English in the Key Competencies. The Committee’s response to this is indicated in Section 1.2.

Performance Levels and examples
Many responses provided critical analysis of what they claimed to be the hierarchy of qualities implicitly espoused through the examples and the factors differentiating Performance Levels. These were seen variously as covertly preferring independence and autonomy to interdependence and collaborativeness, conventional leadership to helpfulness and assertiveness to cooperation.
Depending on the perspective of the response such rankings were described as male, ethnocentric, and Western.

The Committee responded to these criticisms in a variety of ways. It has attempted in the first place to provide an explicit basis for the Performance Levels (see Section 1.3). The recommendation regarding further validation and benchmarking of the Performance Levels also provides for their establishment through on-site research within education, training and industry settings. It is noted
that the benchmarking process will need to be undertaken on the basis of performance demonstrated by a range of young people including young people from groups designated in this Access and Equity Audit.

Virtually every submission and response in the Access and Equity Audit objected to features of the examples; they were claimed to be male, unrelated to schooling, narrowly employment focused, insufficiently inclusive and arbitrary. The descriptions of the Key Competencies now provide examples of applications at each Performance Level reflecting a wider range of contexts than previously. Examples of development of the Key Competencies in school and training settings will be generated as part of the research involved in identifying benchmark examples of the Performance Levels and the training and development package to assist teachers and trainers to implement the Key Competencies (see Sections 2.1 and 2.2).

Performance Level 1
A barrier perceived by many participants in the Access and Equity Audit related to the pitching of Performance Level 1 and the possibility that young people who do not achieve Performance Level 1 will be more severely disadvantaged than they are at present.

A common standards framework, such as is proposed through the Key Competencies must start at a defined point. It would be a graver disservice to young people from disadvantaged groups to invent separate standards that are easily accessible but marginalise their participation even further. Young people with disabilities have been long isolated by such special treatment which has often denied them access to common educational and training outcomes. Thus the Committee has decided that the priority must be the provision of resources to enable all young people to have the opportunity to acquire the first level in each of the Key Competencies.

As is noted at several points in the report, the level at which Performance Level 1 is struck will need to be refined through the processes of further validation and benchmarking of the Performance Levels, and be subject to periodic review.

The need to endorse a balanced curriculum framework
Implicit in many Access and Equity Audit responses was concern that the focus of the Key Competencies on vocational education should not imply their separate pursuit as one strand of a so-called two-track curriculum, separate from the traditional academic stream. The Committee was mindful of this possible misuse of the Key Competencies. The Key Competencies are intended to accomplish convergence between general and vocational education. Recommendations in Section 2.4 address this issue.

Assessment
All contributions to the Access and Equity Audit made observations about assessment. The standards-referenced approach proposed for the Key Competencies was generally acknowledged to offer more opportunities for equitable assessment than norm-referenced approaches. Equity groups viewed positively the emphasis on reporting what students can do through standards-referenced assessment based on explicit criteria publicly available to young people before they are assessed. Nevertheless respondents indicated a range of potential difficulties with the proposals for assessment. Contributors from a disabilities perspective emphasised the need for assessment methods to adopt the principle of ‘reasonable adjustment’ that has been enshrined in employment and training initiatives arising from the Disabilities Services Act of 1986. This would mean that people with disabilities could access identical standards of assessment to those applying to young people without disabilities. The methods of assessment and the modes of application of the criteria would however be adjusted to the configuration of the young person’s needs and abilities.

Submissions and participants in consultations also recommended that assessors needed to be trained to avoid bias arising from differential perceptions of the performances of men and women, young people with disabilities and young people of diverse language and cultural backgrounds. Submissions pointed out the harsh and educationally excluding experiences of Aboriginal and Torres Strait Islander people who have long been subjected to racist assessment procedures in schools and institutions. Participants in the national workshops, the special focus project and state consultations recommended that priority be placed on training Aboriginal and Torres Strait Islander people in assessment of the Key Competencies. This would complement an equivalent priority being placed on the training of all
assessors in assessment methodologies that enable consistent standards to be applied but allow the criteria on which such standards are based to be used within inclusive assessment contexts. Section 2.2 makes provision for the training of teachers in aspects of assessment relating to disability, culture, gender and isolation.

Many of the issues raised through the Access and Equity Audit in relation to assessment were of the ‘what if...’ variety relating to details of implementation. There were also questions about assessment raised from the perspective of particular groups that were not generalisable. This is especially so with responses relating to young people with disabilities. The recommendations for field-testing implementation identify the need for participation by equity groups to ensure these practical issues are taken into account. The principles for nationally- consistent assessment of the Key Competencies address many of the issues raised by the Audit and provide a framework through which their implications for practice may be examined through field testing.

National reporting
The majority of responses from an Access and Equity orientation supported, with some reservation, national reporting conducted through sampling. The reservations related to the uses to which the information would be put. There was a general insistence on the necessity to ensure that disaggregated information on the achievements of particular groups of young people be used to effect ongoing refinement of the Key Competencies, their assessment and the resources allocated to assist disadvantaged young people in their acquisition. Some representations from groups representing young people of non-English speaking and culturally diverse backgrounds were anxious to gain statistical information of actual success rates. These groups felt that information indicating high participation in postcompulsory education could be misread as relating to ‘success’. This point was also made by groups representing young women. The recommended principles for national reporting address the role of national reporting for equity target groups.

Implementation
Many responses expressed a fear that the process of implementation would see the Key Competencies assume inequitable guises unimagined by the Committee. It was felt that the very flexibility of the proposal could be its downfall from an equity point of view. These responses also emphasised the dangers of implementation based on inadequate resource provision so that the equity dimensions of the proposal (for example training in cross-cultural assessment) were omitted. The Committee has sought to take account of these concerns in its proposals for further development of the Key Competencies.

Young people at risk
A number of responses covered this difficult area. Committee members gathered information and suggestions from a forum and workshop conducted by the NSW Ministry of Education’s Office of Youth Affairs and from consultation with a range of experts and practitioners in the field. The participants stressed the compound nature of disadvantage with these young people. The proportion of Aboriginal and Torres Strait Islander young people in corrective institutions is just one example of this. Another feature of these young people’s circumstance is their absence from educational or workplace settings. Young people at risk along with young people with disabilities make up a high proportion of the non-participants. Nevertheless participants identified the community education sector as important in providing young people at risk with access to the Key Competencies. This sector covered providers of basic and pre-vocational education such as TAFE and short courses conducted in youth refuges and funded through such bodies as SkillShare.

The Committee’s attention was also drawn to a recent statement by the Youth Ministers Council which expressed concerns at the possibly negative impact of training reform on disadvantaged young people. The statement endorses community education as a possibly preferred delivery model for disadvantaged young people and provides implicit support for the proposals contained in this report and the recommendations of the Committee. The Youth Ministers state that it is essential to develop:

- Key Competencies and levels of achievement which take into account the needs of disadvantaged young people;
- mechanisms to provide credit for learning undertaken in non-traditional education and training settings;
• a range of assessment techniques and mechanisms which take into account the special need of some groupings of young people including those for whom conventional structured written English tests may be a barrier to participation;
• assessment which recognises prior learning;
• an assessment timetable which provides for young people who have left school early;
• a mechanism which allows young people to easily access their records in relation to competencies achieved, but which is conscious of the need for privacy.

(Education and Training: Access and Equity, Youth Minister's Council, Adelaide, May 1992)
Appendix 3  PRELIMINARY INDUSTRY VALIDATION

INTRODUCTION

In conjunction with the second period of consultation, the Committee undertook Preliminary Industry Validation studies in several industries across four states, to ascertain the appropriateness to industry of the proposed Key Competencies and the draft Performance Levels.

The project was undertaken in May and June 1992 and the report written in July. Although the number of industries and workplaces sampled was relatively small, findings were consistent enough to conclude that industry welcomed the idea of Key Competencies as being relevant and important and strongly supported them.

The report that follows was written particularly to raise issues which industry felt should be examined in further development of the Key Competencies and in their implementation. Its findings influenced the further work of the Committee in a number of ways.

- They confirmed that the Committee should continue to orient its work towards future as well as present needs of industry.
- They confirmed the need to closely examine connections with ASF levels.
- The Performance Levels were reshaped.
- The scope of the Key Competencies was more clearly defined in the light of industry requirements.
- The language used to describe the Key Competencies was refined.
- The notion of dealing with clients was more specifically included in the descriptions of the Key Competencies.
- The need for industry participation in further development of the Key Competencies was affirmed.
- The need to inform industry not only about the Key Competencies but also about the National Training Reform Agenda as a whole was established.

AIMS OF THE PROJECT

The aims of this project were to identify:

- whether the proposed Key Competencies were relevant to industry;
- whether the set of Key Competencies covered the range of Key Competencies required for effective participation in work, and particularly for participation at entry level;
- whether the draft Performance Levels were appropriate, particularly for people at entry level;
- applications of the Key Competencies in the workplace;
- future needs of industry, in relation to the Key Competencies.
INDUSTRIES SURVEYED

The project was undertaken in three States and one Territory, in the following industries:

<table>
<thead>
<tr>
<th>New South Wales</th>
<th>Victoria</th>
<th>Western Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Tourism and Hospitality</td>
<td>• Office/Clerical</td>
<td>• Clerical</td>
</tr>
<tr>
<td>• Building and Construction</td>
<td>• Wholesale/Retail</td>
<td>• Beauty</td>
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<td></td>
<td>• Engineering/Metals</td>
<td>• Hospitality</td>
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<td>• Childcare</td>
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<td>• Mining</td>
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<tr>
<td>Australian Capital Territory</td>
<td>Australian Capital Territory</td>
<td>Western Australia</td>
</tr>
<tr>
<td>• Public Service</td>
<td>Australian Capital Territory</td>
<td>Western Australia</td>
</tr>
</tbody>
</table>

DEFINITION OF ENTRY-LEVEL

Entry-level was broadly defined here as referring to the jobs lowest in the hierarchy of a particular organisation.

It is also taken to mean that range of jobs starting at operative level or equivalent and progressing to skilled or trade level.

PROJECT METHOD

Validation was undertaken in two ways:

- by holding discussion forums with representatives of industry and employee groups
- by conducting structured interviews with supervisors of entry-level employees and also with the incumbents of entry-level jobs.

Note: People interviewed did not represent their industry as a whole. They were chosen because of their experience in and knowledge of the workplace.

Discussion forums
Findings of discussion forums are reported together with those of the interviews.

The forums did not follow a single model.

<table>
<thead>
<tr>
<th>State</th>
<th>Number and nature of discussion forums</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW</td>
<td>One discussion forum, for representatives from industry and employee groups</td>
</tr>
<tr>
<td>Vic</td>
<td>Two discussion forums, for representatives from industry and employee groups: it also included members of these organisations in some of its structured interviews</td>
</tr>
</tbody>
</table>
Structured interviews
These interviews followed a single general model.

In conjunction with industry, the managing body in each state conducted a series of interviews or a single interview with:

- a group of supervisors and/or other managers from a range of enterprises in that industry
- a group of employees in entry-level jobs in that industry.

Where possible, the project targeted the youngest people in the organisations surveyed.

The supervisors and entry-level employees were selected from a variety of enterprises, of different sizes and where possible, one enterprise at the leading edge of each industry sector.

The size of these groups and their composition varied from State to State.

The interview structure was as follows:

- **Introduction:**  
  The facilitator/interviewer explained
  - the work of the Committee
  - the purpose and format of the session

- **Brainstorming session, to discover job responsibilities and required skills/abilities:**  
  Participants were asked
  - to describe duties and responsibilities of and skills needed by entry-level employees.
  - to describe methods of assessing people for entry to work (NSW only)
  - to describe skills needed to progress in the job

- **Examination of the Key Competencies:**  
  The Key Competencies were presented separately, on cards. Each group was asked to
  - explain what they understood each Key Competency to mean
  - give examples of situations where these activities were used in the workplace
  - rank the cards, from most to least important
  - give examples of additional Key Competencies and Key Competencies they thought should be removed
  - examine the Key Competencies in relation to terminology, relevance/order and possible gaps (Victoria only)

- **Examination of Performance Levels:**  
  Participants were shown the Performance Levels for the Key Competencies and asked
  - to indicate the performance level at which people at entry-level would be expected to perform, and to give examples of this
  - to rank the Performance Levels and comment on their suitability in particular industries
  - to examine the Key Competencies in relation to terminology, relevance/order and possible gaps (Victoria only)

In Western Australia, in order to explore whether there were more appropriate indicators for the three Performance Levels proposed by the Committee, participants were initially asked to indicate what differentiates the performance of a person who has just started work, from one
who performs the job effectively. Participants were also asked whether they considered there to be three different levels of performance associated with each of the Key Competencies.

- **Examination of Performance Criteria:**
  Participants were shown the performance criteria for each Key Competency. They were asked if they considered the given criteria to be appropriate for determining effective performance in each of the Key Competencies and whether any additional criteria should be included. (Western Australia only)

**FINDINGS - KEY COMPETENCIES, PERFORMANCE LEVELS AND CRITERIA**

**Relevance of the proposed Key Competencies to industry**
The proposed Key Competencies were found to be relevant to industry.

When asked to name skills needed on the job, and especially by entry-level employees, participants in both the discussion forums and the interviews consistently named either the Key Competencies or skills encompassed by them.

Some examples of those consistently mentioned:

- Communication skills
- Ability to 'get on with people'/interpersonal skills
- Problem solving
- Ability to work independently

**Having the right attitude**
A range of additional skills and competencies were mentioned. The most striking of these, which emerged strongly in every interview and discussion, is the attribute of 'having the right attitude'. This was described in many ways; for example:

- having a positive attitude
- being willing to learn
- having a capacity to follow instructions
- having common sense
- being able to take personal responsibility/self-management
- being able to do things from day one.

It was suggested that this quality, or qualities, could in fact be referring to the Key Competencies themselves, in a general way. In New South Wales, therefore, a further workshop was held, with representatives from the Building and Construction industry. This group, familiar with the Key Competencies, discussed the notion of 'attitude' and examined the Key Competencies to see if 'attitude' could be discerned in them.

They explained 'attitude' as follows: employees with the right attitude have the self-confidence to perform tasks within a reasonable time, to display initiative, and to ask questions when necessary. They have the ability to think through the task ahead, and to foresee consequences of their actions. The group considered that 'attitude' was implicit in all the Key Competencies.

The group felt that overall, these skills were indicative of self-management but could not say whether this ability constituted another Key Competency, described as Working Independently, whether it showed the ability to transfer Key Competencies successfully to specific workplaces, or whether it was a function of maturity.

It was then pointed out that some of these attributes were contained in the Key Competency Planning and Organising Activities. The group agreed that the Key Competencies did encompass these skills but felt that the title was misleading and did not suggest self-management skills. The group said that the 'attitude' skills and attributes should be more closely written into both this and the other Key Competencies.
Findings from Victoria, however, contradict the notion of these attributes being encompassed in the Key Competencies. Victorian responses indicate that a further Key Competency needs to be identified, which will address attitude along with a number of other issues. This competency may be described as self-organisation/discipline (in the context of self-management, motivation, ethics, attitude, interpersonal skills).

**Other additional Key Competencies/competencies/skills**

Other Key Competencies suggested were:

- Motor Skills/Dexterity
- Creativity
- Cultural Awareness
- Understanding the Culture of Organisations
- Ability to Manage Stress
- Personal Presentation
- Health/Physical Fitness
- Morality and Ethics
- Customer Orientation
- Self Organisation/Discipline
- Two-way Communication Skills
- Customer/Client Service

**The meaning of the titles**

Several groups expressed confusion about the meaning of some titles. Generally, the titles became more meaningful only when defined by example, in context; there were, however, some consistent problems in definition. Victoria focused particularly on terminology in the Key Competencies and Performance Levels; these findings are highlighted in this section.

- Collecting, Analysing and Organising Ideas and Information: the title was initially confusing to some, and ‘analysing’ was queried as not being required for employment at entry level.

  In Victoria, one industry group found difficulty in applying this Key Competency in their industry and suggested that Listening and Interpreting would be a more meaningful Key Competency.

- Expressing Ideas and Information: there was confusion over whether ‘expressing’ referred to just oral skills, or to both oral and written skills. Several groups pointed out that oral skills would be more important to some entry-level employees than written skills. This comment was not expressed in Victoria, where the need for both oral and written skills was emphasised.

  In Victoria
  - a number of industry groups considered the word ‘expressing’ implies verbal and not written skills. Comment was also made that the title does not identify two-way communication. It was suggested that the Key Competency be amended to read Communicate Ideas and Information Using Written and Verbal Skills
  - Another industry group suggested expansion of the Key Competencies to include expressing ‘opinions’.

- Planning and Organising Activities: the title was seen to be misleading, and not to address the ability to work independently or to suggest management skills.

- Using Technology: several groups were not sure what this meant and it was interpreted differently by different industries. The concept of transferability in this Key Competency was especially difficult for some groups to come to terms with. The Building and Construction industry in NSW suggested that this Key Competency should include the ability to select appropriate technological processes.
In the Victorian study:
- the definition of 'technology' varied significantly. 'Some identified it as hammers, mannequins, display stands; others as computers, calculators, fax machines and others as computerised lathes etc.'
- one industry group said the Key Competency needs to be expanded to include 'using technological ideas' and another want it amended to specifically refer to 'technological equipment'.

- **Working with Others and in Teams:** In Victoria, industries identified a 'gap'. They felt that there was a need to expand this Key Competency to address self-organisation/management.

- **Solving Problems:** In Victoria, one industry felt that this had a negative connotation and suggested Finding Solutions would be a better title and better describe the role of its employees who are required to find solutions to problems identified by the customer.

- **Using Mathematical Ideas and Techniques:** In Victoria, the findings were as follows:
  - two concepts were identified in this Key Competency, (a) logical processes and (b) numeracy/maths
  - two industries considered that the word 'mathematical' implies/means advanced mathematical skills whereas numeracy would be a better descriptor
  - contrary to this, one industry emphasised the need for 'mathematical' to be seen in its broadest context; e.g., identification of appropriate application of mathematical concepts to address a wide range of activities.

**Ranking the Key Competencies**

Ranking of the Key Competencies varied according to industry, and even within industries. This is consistent with the idea that some competencies will be needed more than others, and at different levels, in different occupations and workplaces.

The Victorian study did not raise the issue of the ranking of the Key Competencies. Each Key Competency was seen as an integral part of a set.

In findings of the other States, however, two Key Competencies emerged as the 'most important':

- **Working with Others and in Teams** was ranked as the most important Key Competency by nearly all the industries surveyed. This varied from working alongside workmates in a mutually-dependent fashion, to working in teams, to being sensitive to the needs of clients.

  In Western Australia, the focus on meeting clients' needs was seen as so important that they have recommended that this Key Competency be renamed Working with Clients and in Work Teams.

- **Solving Problems** was seen as very important, especially by the entry-level employees themselves. This was also identified as a Key Competency essential for progress and promotion in the organisation.

Key Competencies consistently ranked lowest were:

- **Using Mathematical Ideas and Techniques:** As written, this was not seen as important by the Service sector or the Public Service, or the Clerical sector. It was seen as important by the Mining and Engineering industries. Almost all people surveyed, however, said that they 'used numbers' in their work and the Clerical sector considered numeracy skills to be important.

- **Using Technology** was ranked as important by Mining and Metals/Engineering, but not by other industries, although the widely differing types of technologies used in entry-level and other jobs were discussed. Some groups (e.g. those in the Public Service) thought that this Key Competency should refer only to computing skills. Generally, those interviewed found this Key Competency confusing.
The meaning of the Performance Levels

NSW, ACT and WA reported that the descriptors in the *Proposal for Consultation* were insufficient to explain the Performance Levels, and that additional explanation and examples were needed to make them clear to interviewees.

The Performance Levels and entry-level occupations

There was disagreement in this area.

The Mining and Metals/Engineering industries sometimes identified two Performance Levels instead of three. The two Performance Levels they identified encompassed the proposed three Performance Levels. In one Key Competency, the need for a Performance Level 4 was identified. The Clerical sector, in Victoria, thought that their entry-level employees would need Performance Level 3 in only some of the Key Competencies. Other industries felt that it was appropriate for their entry-level employees to have the Key Competencies at Performance Level 1 and Performance Level 2, that Performance Level 3 described competencies which were performed by skilled workers or supervisors, and that Performance Level 3 would be developed either on the job or in formal training programs.

There was further discussion about the relationship between the Performance Levels and the ASF levels. The general feeling was the Performance Level 3 was roughly equivalent to ASF 3/4, and that this link should be made more explicit.

Western Australia suggested that matters would be clarified if there were only two levels of performance.

Other comments about the Performance Levels

- Using Technology: groups in several States reported that the Performance Levels described in this Key Competency were 'meaningless' or 'didn't make sense'.

- Terminology: In Victoria, whose study paid particular attention to terminology it was reported that natural progressions from level to level were often difficult to follow, because of problems and inconsistency with terminology.

- The study pointed out that it was crucial to recognise significant and numerous problems with the interpretation of many of the terms used in the Performance Level descriptors.

- The change in terminology from Performance Level 1 to Performance Level 2 to Performance Level 3 in any one Key Competency was found to be confusing. It resulted in a natural progression between the Performance Levels being difficult, and at times impossible, to discern; at times the order of the Performance Levels was reversed.

Findings in other states supported this, with groups complaining about the vagueness of terms used to distinguish between levels, such as 'complex', 'expressing', 'exploratory problems', 'simple' and 'familiar'.

- Inconsistency in gradations between Performance Levels: in some Key Competencies, the gap between Performance Level 1 and Performance Level 2 was seen to be narrower than that between Performance Level 2 and Performance Level 3.

- Consistency of Performance Levels between/across Key Competencies: the need to achieve a commonality between Performance Level 1, Performance Level 2 and Performance Level 3 was identified.

Alternative descriptors for distinguishing Performance Levels

In Western Australia, interviewees were asked questions in order to explore the possibility of providing alternative descriptors for the Performance Levels. Although they found it difficult to specify such descriptors, they were able to identify differences between a person who has just started a job and one who is efficient. This was assumed to be Performance Level 3 by the participants. The following indicators were perceived to characterise effective performance at entry-level.
<table>
<thead>
<tr>
<th>Key Competencies</th>
<th>What distinguishes(characterises) different Performance Levels?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collecting and Analysing Ideas and Information</td>
<td>More efficient, knows 'short cuts', less time taken, assumes more responsibility.</td>
</tr>
<tr>
<td>Planning and Organising Activities</td>
<td>More efficient, takes less time, does not require direct supervision, assumes more responsibility, can handle a greater workload.</td>
</tr>
<tr>
<td>Working with Others and in Teams</td>
<td>Contributes to and participates in decision-making activities, fits in with the work environment, able to work with people at different levels, sensitive to the need of others.</td>
</tr>
<tr>
<td>Solving Problems</td>
<td>Difficulties resolved quicker and with less stress, problems solved without supervision, more responsibility taken, able to anticipate potential problems.</td>
</tr>
<tr>
<td>Using Technology</td>
<td>More productive with the available technology, a greater range of technology used.</td>
</tr>
</tbody>
</table>

On the basis of the above responses, it appears there were three major descriptors used by supervisors and job incumbents to differentiate Performance Levels, namely:
- time taken
- degree of supervision required
- extent of responsibility assumed.

Appropriateness of Performance Criteria
In Western Australia, participants were asked to evaluate performance criteria identified in the Proposal for Consultation for each Key Competencies. All participants agreed with the performance criteria as written, and suggested additional criteria for each Key Competency.

<table>
<thead>
<tr>
<th>Key Competencies</th>
<th>Suggested additional performance criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collecting and Analysing Ideas and Information</td>
<td>No complaints/positive customer feedback. Methods were adapted to obtain information.</td>
</tr>
<tr>
<td>Expressing Ideas and Information</td>
<td>Positive customer feedback/returned patronage. Audience used the information.</td>
</tr>
<tr>
<td>Planning and Organising Activities</td>
<td>No client/customer complaints. Smooth running of the establishment. Needs of co-workers taken into account. Organisation of activities was adapted to specific situation.</td>
</tr>
<tr>
<td>Working with Others and in Teams</td>
<td>Returned customers/positive feedback. Flexibility and patience demonstrated. Needs of others were considered.</td>
</tr>
<tr>
<td>Solving Problems</td>
<td>Proper task/completion - satisfactory result. Client is satisfied.</td>
</tr>
<tr>
<td>Using Mathematical Ideas and Techniques</td>
<td>No wastage. End product is correct.</td>
</tr>
<tr>
<td>Using Technology</td>
<td>Technology is used correctly.</td>
</tr>
</tbody>
</table>

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Application of the Key Competencies in the workplace

In most interviews, supervisors and employers were asked to supply examples of tasks from their workplaces, to illustrate the Key Competencies. These were used by the Committee to refine the examples of applications of the Key Competencies.

FUTURE NEEDS OF INDUSTRY

This issue was explored as a separate project in NSW.

The project consisted of a literature search, selected interviews with representatives of industry bodies, and a workshop, held with industry representatives and training managers from the Rural, Building and Construction and Manufacturing industries, as well as a representative of a private consultant. Western Australia contributed a paper.

People interviewed were asked what they thought would happen in their industries in the next decade, in the areas of structure, growth, market forces, employment trends (especially for entry-level workers), career paths, and training. They were then asked what skills workers, particularly entry-level workers, would need in that time. Their answers were strongly consistent.

Employment: areas of growth and change

Employment is expected to grow most quickly in Recreation and Personal Services, Building and Construction, Transport and Manufacturing.

Part-time, contract and temporary work will increase. The Rural sector, particularly, will use networking and contracting to survive. Some industries (Mining, Engineering) will hire more older workers.

On the whole, the workforce will become more 'clever', with above average growth expected for occupations with above average skill levels (particularly for those with the highest skill levels). Apart from a few occupations, such as sales assistants, lowly skilled occupations are expected to grow at below average rates.

Organisational Structure

The next decade will see continuing changes to organisational structure, which will be leaner, smaller and flatter: 'delayered, downsized, operating through a network of market-sensitive business units [with fewer, more multiskilled workers]' (Snow, et al; 1992; 5).

Participative management practices, deletion of traditional hierarchical structures and the reduction of the number of jobs means that workers at all levels will be given more responsibility. Workers at low levels will have to make decisions themselves, in order to respond quickly and flexibly to customer needs. Workers at all levels will be more accountable and will need sophisticated self-management skills.

Long-term job reduction, and project and team-based strategies will call for workers not only to have strong interpersonal skills, but also to undertake a multitude of new tasks. They will need more skills, the ability to transfer those they already have, as well as the ability to think laterally and creatively. Sony, for example, which designs new products in product groups, is looking 'for people who are nayaka - which translates roughly as optimistic, open-minded, and wide-ranging in their interests. Sony believes that the best technicians are those who are willing to move around among product groups and try technologies that they have not formally studied' (Schlender; 1992; 76).

Organisational structure will be subject to continual change as workplaces respond to customers' needs. Workers will have to be adaptable enough to cope with this change.

Workers will also have to cope with new technology, especially in the area of information systems, and changes to work practices to cater for increased responsibility to the environment.
As markets become more international, workers will increasingly need to be able to understand and cater for people from other cultures.

**Entry procedures and training provision**
Representatives of industries questioned said that they would want workers with more skills at entry, particularly relevant vocational skills.

Some manufacturing industry representatives said that they would develop — indeed had already developed — screening procedures to ensure that potential workers were literate and numerate, and had satisfactory English language skills. They would therefore not need to provide much training in those areas.

**Future needs and the Key Competencies**
All research indicates that the proposed Key Competencies describe competencies which will be essential to industry in the next ten years. It suggests that the most important competencies will be those which enable workers to work well collaboratively, to be adaptable and self-managing, to have good communication skills and to think analytically and laterally.

It seems that workers in the future will need to have these competencies at quite sophisticated levels, but it is not clear if these correspond to Performance Level 3 as described in the *Proposal for Consultation*. People interviewed said that they were not always sure exactly what Performance Level 3 meant, and the examples given did not clarify this.

**OTHER FINDINGS AND GENERAL OBSERVATIONS**

**Foundation knowledge and skills**
When interviewees were asked to specify what skills were needed by entry-level employees, they sometimes specified basic skills such as literacy and numeracy, although it seems that larger companies are screening for these skills at entry (see previous page). Interviewees also expressed concern — particularly in the Public Service and Retail/Clerical sector — regarding the assumption of foundation knowledge and skills implicit in the Key Competencies, wondering if such competencies were a linear progression from basic skills, or if people could be competent in one or more of the Key Competencies while at the same time lacking basic skills essential to employment.

In fact, comments have been repeatedly and consistently made in relation to the presumed literacy and numeracy skills of the target group of the Committee. The possession of literacy and numeracy skills is crucial to the success of the aims of the Committee and there is a perception that these skills are not achieved by a significant number of people who are involved in entry-level training or employment.

**Entry to employment**
In NSW, participants were asked what entry procedures were used in their enterprises, and what they looked for in new employees. This varied between industries, but overall, those interviewed said that they wanted people 'who could do something from day one'. They felt that the Key Competencies would equip young people well in this way. Supervisors did not think that industry would mind the lack of 'ranking' of school leavers holding competencies, although they expected their industries to develop entry assessment procedures to cope with this.
Appendix 4  INVESTIGATION INTO THE INCORPORATION OF THE KEY COMPETENCIES IN INDUSTRY COMPETENCY STANDARDS

BACKGROUND

Early in its work, the Committee acknowledged the importance of the relationship between Key Competencies and industry competency standards. To provide a stronger basis for decision making the Committee established a project, during the second period of consultation, designed to elicit issues and ideas which may impinge on this relationship.

The project was designed also to identify issues and ideas which may assist in the refinement of the Key Competencies as they were described in the Proposal for Consultation and to affirm the position that levels of the Australian Standards Framework (ASF), as portrayed by different industry sectors, would relate to varying Performance Levels across the Key Competencies.

It was agreed that two potential models should be explored. In the first model the Key Competencies would be incorporated as separate or supplementary units in industry competency standards. In the second model the Key Competencies would be integrated within the existing units.

The Committee proposed that the models be applied to the industry competency standards of job functions at ASF levels 1 and 3 in:

- the tourism industry, for which endorsed standards were available;
- the clerical-administrative occupation, for which draft standards were available; and
- the metals and engineering industry, for which draft standards were in the process of development.

Industry competency standards establish the competencies required for effective performance in employment within an occupation or industry. They comprise the specification of the knowledge and skill and the application of that knowledge and skill to the standard of performance required in employment. The establishment of a successful relationship between the Key Competencies and industry competency standards is crucial to the implementation of the Key Competencies, particularly in terms of input to training curricula and guidance to the school sector about the nature of employment in the various industries and occupations.

The national competency standards for an industry sector or occupation are those which have national applicability and facilitate transferability between employment situations. They are developed by a Competency Standards Body (CSB). This is a recognised body which has expertise in competency standards development, is accepted within the industry as being representative of an occupation or industry, and has clear support of the several industrial parties. The industry competency standards proposed by a CSB are submitted for endorsement by the National Training Board (NTB) (NTB; 1991a: 25).

The competency standards for each industry are arranged into an industrial classification system designed specifically to reflect the requirements of that industry. There is considerable variation in the number of levels in the industrial classification systems, and to enable comparison across industries the NTB has established the Australian Standards Framework (ASF). The ASF also provides the basis for credit transfer and recognition by providing a benchmark for the alignment of credentials and other forms of recognition (NTB; 1991c: 6 - 7).

Industry competency standards comply with the format prescribed by the NTB:

A standard at any level is expressed in units of competency, each of which then comprises two parts: elements of competency and their associated performance criteria. (NTB; 1991a; 18)
A Unit of Competency is a product, described by a title and a short description of its purpose. Elements of Competency are the basic building blocks of a unit and, as such, continue the description of the purpose of the unit itself. They are described in output terms. Performance Criteria are statements by which an assessor can judge the performance specified in the elements of competency to a level acceptable in employment. A Range of Variables statement spells out the range of contexts and conditions to which the performance criteria apply (NTB; 1991a; 18 - 24).

ANALYSIS OF INDUSTRY COMPETENCY STANDARDS

An early exploration of industry competency standards
The early work focused on the tourism industry for which competency standards had been endorsed by the NTB. It sought to determine the extent to which the Key Competencies had been incorporated within existing industry competency standards, and in what form they had been incorporated. This early and limited analysis suggested that:

- the full range of Key Competencies may be represented within the standards;
- the several Key Competencies may be represented at varying levels of performance within a single ASF level. For example, for the tourism industry at the equivalent of ASF level 1 (Food and Beverage Grade 2), Collecting Analysing and Organising Ideas and Information may be represented at Performance Level 1, but Expressing Ideas and Information may be represented at Performance Level 3;
- in some instances there may not be a complete mapping of the Key Competencies onto the units, elements, and performance criteria of the industry competency standards. That is, at least at the lower ASF levels, the Key Competencies may be narrowed by the process of incorporation into the industry competency standards. For example, in the Key Competency, Expressing Ideas and Information, Performance Level 1 is 'Express ideas and information in familiar situations'. An example given to support this competency is 'Being able to explain a set procedure so that others can carry out the procedure successfully' (Mayer Committee; 1992b; 23). A narrower representation which occurs in the industry competency standards is 'Being able to use culinary terms when selecting and preparing food' (Syntax altered to aid comparison).

In order to capture the full meaning of the industry competency standards, it was necessary to include the units, the elements, the performance criteria and the range of variables statements. That is, it was not sufficient to undertake the analysis at the level of element and performance criteria alone. Further, the advice of a technical expert was required in the interpretation of the standards, especially where it relied on an understanding of one job function in relation to other job functions.

The early work suggested also that the higher performance levels of the Key Competencies may be strongly represented at ASF level 4, and that the analysis should extend to this level.

ISSUES AND IDEAS

The establishment of industry competency standards is a complex process. It is also a relatively new undertaking, especially at the level of sophistication being sought and achieved. There is no pretence that these early efforts are immutable or without blemish. Similar commentary may be made about the establishment of the Key Competencies. Thus, the development of a relationship between Key Competencies and the industry competency standards must be sensitive to the turbulence which surrounds this early period.

In the early stages of their existence industry competency standards may be critical to the process of classification, in an industrial sense. It is during this period that concern about the impact of external factors is heightened. Once classification issues subside, it is likely that the context in which industry competency standards exist will become more stable.
It is acknowledged that industry competency standards play a role in establishing what is desirable in future work settings, but as they are framed currently they tend to reflect more of 'what is' than 'what ought to be'. Although this tendency varies from industry to industry, it is unlikely that the standards in general will become future-oriented in any substantial way until the intensity of this early developmental period has subsided. The relationship between the Key Competencies and the industry competency standards must take into account the extent to which the standards can lead into the future at this stage.

Industry competency standards are endorsed under the assumption that they are applicable to existing workers at the several levels. Thus, the creation of a relationship with the Key Competencies has the potential to impact upon existing workers and on employers. Care must be exercised to establish the relationship in such a way that it enhances rather than inhibits opportunities for existing workers and employers. An observation made in general discussion around this point related to incorporating the Key Competencies only at the equivalent of ASF level 3 or 4, thus reducing the potential impact on existing workers and employers. It is the case however, that the full range of Key Competencies already is represented in industry competency standards at the equivalent of ASF levels 1 and 2, at least for the three industry sectors analysed by this project.

Industry competency standards are governed by two major organising agents. At the most specific level, standards are organised by industrial classifications; at the broader level they are organised by the ASF. Difficulties surround the identification of the Key Competencies with the industrial classifications because, although common competencies are determined, there may exist a multiplicity of awards, all drawing on the competencies but mapping differently onto the ASF levels. Thus, it will be necessary to identify the Key Competencies with the ASF levels in the first instance, and with industrial classifications only where it is meaningful.

It is not appropriate to assume that the industry competency standards are presented in hierarchical form for all industries. For example, the metals and engineering industry competency standards are being developed in such a way that the standards equating to ASF levels 1, 2 and 3 may become accessible to all workers. This would involve the clustering of the standards in varying ways to suit the level and the specific industry context. This position has not been established but is being explored during the development of the standards.

Not all industry competency standards under development are arranged or organised in the same way. For example, one of the clerical-administrative CSB, National Office Skills Formation Advisory Body (NOSFAB), has developed draft 'core specialised skills' within one framework and 'generic skills' within an adjunct framework. The full set of industry competency standards for a given job function comprises the set of core specialised skills together with a subset of the generic skills. The skills specified within the generic skills framework relate to communication, number, problem solving and the like, and are presented as competencies within the clerical-administrative context. They are generic to the extent that they are applicable to the clerical-administrative functions across a range of industries. In such cases, the relationship with the Key Competencies is likely to be closely linked with the set of generic competencies identified by the industry.

The metals and engineering industry competency standards use a core-plus-specialisations approach, where the core fields are presented as generic competencies. However, unlike the clerical-administrative core competencies, they are not presented within an industry-specific context. The tourism standards are presented in fully integrated form and are being revised to strengthen this integration. However, within these standards there are examples of units of competency being shared by a number of job functions or a number of streams. In this sense they are generic competencies.

It is important to distinguish industry competency standards from the curriculum responses of education and training providers. Industry competency standards provide substantial and important input to the development of training curriculum. But there are other factors which help to shape the training curriculum. These include the nature of the learning process, the needs of the individuals involved, social and community issues, and regional and national imperatives. To these now must be added the Key Competencies.
There appears to be no impediment to incorporating the Key Competencies within school and training curricula with a view to developing in participants the full range of Key Competencies and to the highest possible levels. In part, this is a response to the need to provide access to the Key Competencies at levels beyond those presented in the industry competency standards. But also it serves to promote the general competence of the workforce and the development of a stronger general education base within vocational education and training. This may lead to new entrants to the workforce demonstrating performance levels above those specified within the industry competency standards. In time, the industry competency standards may be reviewed if account is to be taken of the changing nature of the workforce at entry level.

To the extent that the industry competency standards are able to shape training responses, considerable concern was expressed that they should encourage a contextually-based and integrated approach to any training which involves the Key Competencies. It was argued that should the Key Competencies be treated as ‘subjects’ in the training curriculum, separate from the more technical areas, they would suffer a fate similar to that of the Life Oriented Studies subjects of times past.

The establishment of a national register of industry competency standards provides an opportunity to enhance the recognition given to the Key Competencies. Including the Key Competencies within such a register would place them in the information base from which industry, training providers and other major actors draw, and would provide continuing access to information on the Key Competencies and their relationship to the packages of industry competency standards.

The experience of those developing the industry competency standards is that there remains an ongoing need to monitor and review the standards. This forms part of the early process of ensuring that the standards are valid representations of the competencies required for effective performance in employment. But also it forms a part of the process of adapting to the changes which occur over time. A similar need will exist for the relationship between the Key Competencies and industry competency standards.

**PROCESS AND PRINCIPLES FOR INCORPORATING THE KEY COMPETENCIES WITHIN INDUSTRY COMPETENCY STANDARDS**

The integrated model
One of the ways in which the Key Competencies may be represented within the industry competency standards is by incorporation within the elements and performance criteria of the units of competency. For example:

<table>
<thead>
<tr>
<th>Industry:</th>
<th>Tourism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial classification:</td>
<td>Food and Beverage Grade 3</td>
</tr>
<tr>
<td>Equivalent ASF level:</td>
<td>1</td>
</tr>
<tr>
<td>Unit:</td>
<td>Prepare a restaurant for service</td>
</tr>
<tr>
<td>Element:</td>
<td>Plan, clean and set-out dining room and stations</td>
</tr>
<tr>
<td>Key Competency:</td>
<td>Planning and Organising Activities (PL2)</td>
</tr>
</tbody>
</table>

**Performance criteria:**

- Dining room and stations are planned correctly and set-out appropriately with minimal disruption;
- Dining room and stations are dusted, polished, vacuumed and cleaned with minimal noise and disruption;
- Tables are level, appropriately spaced and numbered correctly;
- Decorative arrangements and promotional displays are laid out appropriate to the venue.

Here, the unit, element and performance criteria are drawn from the industry competency standards and provide meaning and context for a specific representation of the Key Competency, Planning and
Organising Activities at Performance Level 2. In this sense, the Key Competency has been translated into the specific terms of the industry setting.

This integrated model may have several advantages.

- It closely reflects the ways the Key Competencies are used within the workplace, reducing any tendency to enlarge the Key Competency beyond workplace requirements.
- It supports the Committee’s emphasis on the integration of knowledge and skills as a basis for competent performance, and facilitates delivery in the workplace.
- It leads training providers towards an integrated rather than a segmented approach to training responses involving the Key Competencies - the application of the knowledge and skills.
- It provides straightforward processes for incorporating the Key Competencies within industry competency standards.

The integrated model may entail some risks.

- It may lead the Key Competencies to atrophy through lack of a clear identity.
- It requires sophisticated processes for recognition and transfer, especially when a worker moves from one stream to another within an industry sector or from one industry to another.
- It may lead to a narrowing of the Key Competencies, especially at the lower ASF levels.

The process of incorporating Key Competencies into existing industry competency standards under the integrated model is a demanding yet relatively straightforward process. In essence, it involves tagging the units, elements and performance criteria of the industry competency standards. That is, the elements and sets of performance criteria within each unit of competency must be assessed in terms of the Key Competencies and the levels of performance they invoke. For recording the output, some form of matrix could be constructed in which the Key Competencies are listed on one axis and the units and elements of the standards on the other. There remains little need to expand upon this output because the meaning, the context and the performance criteria are provided ‘in situ’ by the industry competency standards.

Where industry competency standards are under development, the integrated model of incorporation provides an opportunity to use the Key Competencies as input, in the same sense that skills audits and related processes play formative roles. There remains the same need to tag the units, elements and performance criteria of the standards and to record the Key Competencies and the levels of performance to which they relate. Satisfying the requirements of the industry competency standards means that the Key Competencies have been met at the noted levels.
Adjunct model
Another way in which the Key Competencies may be represented within industry competency standards is as a set of separate or supplementary units. For example:

<table>
<thead>
<tr>
<th>Industry:</th>
<th>Tourism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial classification:</td>
<td>Food and Beverage Grade 3</td>
</tr>
<tr>
<td>Equivalent ASF level:</td>
<td>1</td>
</tr>
<tr>
<td>Unit:</td>
<td>Key Competencies</td>
</tr>
<tr>
<td>Element:</td>
<td>Planning and Organising Activities (PL2): With guidance, plan and organise a complex activity.</td>
</tr>
</tbody>
</table>

Performance criteria:

- The activity was planned and organised;
- The planning and organisation was completed according to specifications and within the given timeline;
- The outcome and other relevant information were communicated as required.

Range of variables:

The activities relate to the efficient functioning of the dining room and include before-service operations and operations conducted whilst service is being provided. They rely on detailed knowledge of cuisine, menu and beverages, and the duties and responsibilities of other team members. Examples of typical activities include:

- Plan, clean and set-out dining room and stations;
- Cloth up tables;
- Lay tables;
- Prepare waiter stations;
- Take reservations.

Here, the performance criteria have been provided by the Key Competencies, but a range of variables statement, including examples, has been generated to portray the sorts of contexts which the industry can provide. The examples have been drawn from the elements of the industry competency standards.

The range of variables statement is a further stage of development of industry competency standards and is not a required component for all standards. It is included where the boundaries of the application of the performance criteria need to be clarified (NTB; 1991a; 23). Given the generic nature of the Key Competencies, the range of variables statement is important to provide guidance to both training providers and industry.

This adjunct model appears to have several advantages.

- It helps to maintain the prominence of the Key Competencies by making them readily identifiable within the industry competency standards.
- It requires reasonably simple administrative arrangements for managing the Key Competencies within the industry competency standards.
- It enhances the process of recognition and transfer, especially when a worker moves from one stream to another within an industry sector or from one industry to another.
- It enhances the process of establishing a future orientation within industry competency standards.
The adjunct model may also entail some risks.

- The Key Competencies may become distanced from, or devalued against, the more specialised competencies, and it may lead training providers towards a segmented approach to the formulation of training curriculum.

- It may distance the Key Competencies from the context which is provided by workplace practice, and it may enlarge the Key Competency beyond that required in workplace practice.

- It may mean that a significant proportion of the Key Competencies, particularly at the level of performance criteria, is repeated within the specialised units of the industry competency standards.

- Confusion may occur between the Key Competencies and the packages of core or generic competencies being developed by some industry sectors.

The adjunct model of incorporation draws on processes similar to those of the integrated model, but provides some additional challenges. In particular, there is a need to use the Key Competencies to establish an adjunct framework, similar in concept to that of the core or generic competencies identified by some industries. For existing industry competency standards this involves analysing the standards to identify the Key Competencies and the levels at which they are related, and to establish the range of variables statement and relevant examples. Where industry competency standards are under development, these components may be developed concurrently with the standards.

Which model?
The Committee considered two models by which to establish the relationship between the Key Competencies and industry competency standards.

- An *integrated model* in which the Key Competencies are represented within the industry competency standards by incorporation within the elements and performance criteria of the units of competency;

- An *adjunct model* in which the Key Competencies are represented within industry competency standards as a set of separate or supplementary units.

Both models provide useful bases upon which to develop the relationship. Preference for one model over the other was guided by the longer term goals and aspirations which underpin the establishment of the Key Competencies. The Committee was attracted to the adjunct model on the basis of its superior ability to:

- maintain the identity and the prominence of the Key Competencies;
- anticipate and foster development of a future orientation;
- facilitate recognition and transfer.

Pragmatic considerations about what can be achieved under current conditions provides a balancing argument. It is the case that the several CSB differ in their preference for the models, and industry competency standards already have been established using each model. Given the range of other inputs to the industry competency standards and the range of purposes they serve, it is unlikely that the need for a relationship with the Key Competencies would be sufficient to change that position.

An option is to shift focus from the model under which the relationship is established to the principles which guide the establishment of the relationship. For example, the emphases portrayed by the Key Competencies would be supported by a relationship which:

- clearly enables the Key Competencies to be identified within the package of industry competency standards for each industry sector;
• clearly specifies the Key Competencies and their associated levels of performance against each of the ASF levels within a package of industry competency standards;

• fosters the integration and application of knowledge as the basis for competent performance;

• reviews periodically the specified levels of the Key Competencies within the industry competency standards for each industry;

• establishes a basis for all workers to continue to develop across the full range of Key Competencies to the levels specified;

• anticipates the characteristics of the workplace of the future.

In this option, the NTB may be a major actor, as it provides the policy and guidelines for industry competency standards and manages the process of endorsement of the standards. It will require that the process of establishing a relationship between the Key Competencies and the industry competency standards be explored, tested and documented in greater detail. The work will involve:

• detailing the principles which underpin the relationship between Key Competencies and industry competency standards;

• establishing a guide to practice, including illustrative and other support materials;

• establishing procedures for ensuring that the Key Competencies are included in national registers of industry standards, and that information about the relationship is readily accessible.
Appendix 5 RESPONSES TO CONSULTATION

WRITTEN SUBMISSIONS IN RESPONSE TO THE DISCUSSION PAPER

National organisations

Aboriginal and Torres Strait Islander Commission
Australian Library and Information Association
Australian Association of Christian Schools
Australian Association of Mathematics Teachers Inc.
Australian Council for Computers in Education
Australian Council of Adult Literacy
Australian Council of Deans of Education
Australian Council of Professions
Australian Council of Social Service
Australian Council of State School Organisations Inc.
Australian Council of Teachers of English to Speakers of Other Languages Associations
Australian Council of Trade Unions
Australian Institute of Building
Australian Institute of Steel Construction
Australian Parents' Council
Australian Reading Association
Australian Science Teachers Association
Australian Society of Real Estate Agents and Valuers Ltd.
Australian Teachers Union
Australian Vice-Chancellors' Committee
Business Council of Australia
Christian Community Schools Ltd.
Committee of Chief Executive Officers, Australian Curriculum, Assessment and Certification Authorities
Confederation of Australian Industry
Federation of Ethnic Communities' Councils of Australia Inc.
Graduate Careers Council of Australia Ltd.
Home Economics Association of Australia Inc.

Independent Teachers' Federation of Australia
Mathematics Education Lecturers' Association
Metal Trades Industry Association of Australia
National Affiliation of Arts Educators
National Building and Construction Industry Training Council
National Catholic Education Commission
National Coalition of Mental Health and Psychiatric Disability Groups
National Council of Independent Schools Associations Inc.
National Industry Education Forum
National Industry Training Advisory Boards - Chairs and Executive Directors
National Maritime Industry Training Council Inc.
National Network for Healthy School Communities
National Reference Group, TAFE Library Services
National SkillShare Association Ltd.
Network of Healthy School Communities
Road Transport Training Australia
Schools Council, National Board of Employment, Education and Training
TAFE National Centre for Research and Development
TAFE National Disability Advisers
Technology Education Federation of Australia
Union of Australian College Academics in association with the Federated Council of Academics
Women's Standing Committee, Vocational Education, Employment and Training Advisory Committee
New South Wales

Art Education Society (NSW)
Asquith Girls' High School
Association of Heads of Independent Schools of Australia (NSW Branch)
Australian Library and Information Association - School Libraries Section (NSW Group)
Board of Studies, Division of Secondary Education, NSW Chapter of the Australian Catholic University
Casino High School P&C Association
Catholic Education Commission
Catholic Education Office, Diocese of Armidale
Catholic Education Office, Diocese of Parramatta
Central Coast Grammar School
Cowra High School
Department of School Education
Dunheved High School
Dusseldorp Skills Forum
Ethnic Communities' Council of NSW
Faculty of Education, University of Technology Sydney
Faculty of Education, University of Western Sydney - Nepean
Federation of Parents and Citizens Associations Glenaeon Rudolf Steiner School Ltd.
Hawker De Havilland Ltd.
Joint Council of NSW Professional Teachers' Associations
Kyogle High School
Mathematical Association of NSW
Menai High School
Mount Druitt High School
New England Mathematical Association
NSW Board of Studies
NSW Chamber of Manufactures
NSW Independent Teachers' Association
NSW Industry Training Council Ltd.
NSW Secondary Principals' Council
Private Hospitals Association of NSW
Our Lady of Rosary College
Santa Sabina College
School of Education, Macquarie University
St Catherine's School
St Joseph's Vocational College
University of New England - Northern Rivers
University of Sydney
University of Western Sydney - Nepean
Upper North Coast Subregion of P&C's
Woy Woy High School

Victoria

Association of Independent Schools of Victoria Inc.
Australian Association for Religious Education (Victorian Secretariat)
Council of Adult Education
Deakin University
Department of School Education
Hawthorn Institute of Education - Affiliated with the University of Melbourne
Humanities and Creative Arts, School of Early Childhood and Primary Education, Faculty of Education, Monash University
Inner Northern Group Training Ltd
LaTrobe University
Mathematical Association of Victoria
Network of Women in Further Education
Royal Melbourne Institute of Technology
School of Primary Teacher Education, Deakin University
St Paul's Anglican Grammar School
State Training Board
Swinburne College of TAFE
TAFE Teachers in Further Education Common Interest Group
Tertiary Arts Group
The Graduate School of Management - University of Melbourne
Victoria University of Technology
Victorian Adult Basic Education Council
Victorian Association for Drama in Education Inc.
Victorian Association of TAFE College Librarians
Victorian Council of School Organisations Inc.
Victorian Employers Chamber of Commerce and Industry
Victorian Federation of State School Parents Clubs Inc.
Western Region ALBE Workers Association
Yallourn College of TAFE
Queensland

Association of Independent Schools of Queensland Inc.
Australian Society for Music Education - Queensland Chapter
Commerce Teachers' Association of Queensland (Inc.)
Construction Industry Training Council (Queensland) Inc.
Department of Civil Engineering, University of Queensland
Department of Education
Department of Employment, Vocational Education, Training and Industrial Relations
English Teachers Association of Queensland Inc.
Isolated Children's Parents Association, Qld Inc.
Printing Industry Training Council (Queensland) Inc.
Queensland Affiliation of Arts Educators
Queensland Catholic Education Commission
Queensland Council for Adult Literacy
Queensland Guidance and Counselling Association
Queensland Secondary Principals' Association
Queensland Small Business Corporation
Queensland Trades and Labor Council
Road Transport Training Council (Queensland) Inc.
School Library Association of Queensland Inc.
TAFE-TEQ Library Network Branch
The Stubbies Clothing Company Pty. Ltd.
Visual and Performing Arts Unit, Department of Education

South Australia

Aboriginal Education, Education Department Arts Training Australia SA
Chamber of Commerce and Industry Inc.
Department of Employment and Technical and Further Education
Education Department
Flinders University
Hamilton Senior Campus, Mitchell Park
Junior Secondary Review, Education Department
Senior Secondary Assessment Board of South Australia
South Australian Association of School Parents Clubs Inc.
South Australian Commission for Catholic Schools Inc.
South Australian Independent Schools Board Inc.
South Australian Youth Training Centre
United Trades and Labor Council of South Australia
University of Adelaide
University of South Australia

Western Australia

WA Association for Independent Schools
Catholic Education Office
Catholic Secondary Deputy Principals' Association
Catholic Secondary Principals' Association
Curtin University of Technology
Parents and Friends' Federation of Western Australia
University of Western Australia
Youth Affairs Council

Tasmania

Arts Faculty, University of Tasmania at Launceston
Association of Independent Schools of Tasmania
Department of Education and the Arts
Department of Employment, Industrial Relations and Training
Secondary Colleges Staff Association
Schools Board of Tasmania
Scotch Oakburn College
Tasmanian Catholic Education Commission
Tasmanian Education Council
### Northern Territory

- Council of Government Schools Organisations in the Northern Territory
- Home Economics Association of the Northern Territory Inc.
- Northern Territory Board of Studies
- Northern Territory Employment and Training Authority
- Northern Territory University
- Northern Territory University Institute of TAFE

### Australian Capital Territory

- Board of Senior Secondary Studies
- ACT Council of Parents and Citizens Associations Inc.
- ACT Institute of Technical and Further Education
- Belconnen High School
- Catholic Education Office, Archdiocese of Canberra and Goulburn
- Phillip College

### Commonwealth

- Australian Defence Force Academy
- Department of Employment, Education and Training
- Department of Industrial Relations
- Economic and Policy Analysis Division, Department of Employment, Education and Training
- Joint Australian Public Service Training Council
- Public Service Commission

### Individual

- C Ballenden, Victoria
- R J Halsey, Senior Secondary Assessment Board of South Australia
- I Lowe and C Lovitt, Chance and Data Project, Curriculum Corporation
- M B McCarthy, Springfield SA
- G Secomb, Windsor SA
- B Walters, Waverley NSW
- M White, Faculty of Education, Curtin University of Technology
National organisations

Arts Training Australia
Asian Teachers Association
Australian Academy of Science
Australian Association for Dance Education
Australian Association for Religious Education
Australian Association for the Teaching of English
Australian Association of Mathematics Teachers
Australian Chamber of Manufactures
Australian Chamber of Manufactures - Steering Committee on Technology Education
Australian Council for Adult Literacy
Australian Council for Computers in Education
Australian Council for Private Education and Training
Australian Council of Deans of Education
Australian Council of Educational Research
Australian Council of State School Organisations Inc.
Australian Council of Teachers of English to Speakers of Other Languages Associations
Australian Council of Trade Unions
Australian Curriculum Studies Association
Australian Curriculum, Assessment and Certification Authorities
Australian Federation of Modern Language Teachers Associations
Australian Geography Teachers Association
Australian Jesuit Schools' Board
Australian Library and Information Association
Australian Literacy Federation
Australian Mathematical Sciences Council
Australian Parents Council Inc.
Australian Science Teachers Association
Australian Society for Music Education
Australian Teacher Education Association Inc.
Australian Teacher's Union
Business Council of Australia
Confederation of Australian Industry
Constitutional Centenary Foundation Inc.
Enterprise Australia
Federation of Ethnic Communities Councils of Australia Inc.
Home Economics Association of Australia Inc.
Independent Teachers Federation of Australia
Isolated Children's Parents Association, Federal Council
Local Government Training Council Inc.
Metals and Engineering Workers Union
National Aeroskills Project Inc.
National Affiliation of Art Educators
National Assessment Framework for Languages at Senior Secondary Level
National Association of PostCompulsory Educators
National Automotive Industry Training Board
National Building and Construction Industry Training Council Ltd.
National Coal Sector - Mining Industry Training Advisory Project Ltd.
National Council of Independent Schools' Associations
National Education Forum
National Electrical and Electronic Industry Training Committee Ltd.
National Industry Education Forum
National Metals and Engineering Training Board
National Office of Skills Formation Advisory Body
National Retail Industry Training Council
Network for Healthy School Communities
Public Transport Training Project
Road Transport Training Australia
Royal College of Nursing, Australia
Rural Educational Research Association Inc.
Shop, Distributive and Allied Employees' Association
Society for the Provision of Education in Rural Australia Inc.
The Australian Academy of Design
The Australian College of Education
The Institution of Engineers, Australia
Tourism Training Australia
Union of Australian College of Academics in association with Federated Council of Academics
Vocational Education, Employment and Training Advisory Committee, Competency Based Training Working Party
Women's Standing Committee, Vocational Education, Employment and Training Advisory Committee
New South Wales

Arts & Media Industry Training Division, NSW TAFE Commission
Asquith Girls High School
Association of Heads of Independent Schools of Australia (NSW Branch)
Association of Teachers of English to Speakers of Other Languages
Australian Library and Information Association, School Libraries Section (NSW Group)
Board of Studies
Bomaderry High School
Catholic Education Commission
Catholic Education Office, Armidale
Catholic Education Office, Diocese of Lismore
Catholic Education Office, Diocese of Parramatta
Department of School Education, Progress Report on responses from the Public Education System
Department of School Education, Access and Equity Issues
Department of School Education, Gender Equity Report
Disability Council of NSW
Engadine High School
Ethnic Affairs Commission
Ethnic Communities Council of NSW
Faculty of Agriculture and Rural Development, University of Western Sydney - Hawkesbury
Faculty of Education, University of Newcastle
Faculty of Medicine, University of Newcastle
Faculty of Professional Studies, University of NSW
Federation of Parents and Citizens Associations in NSW
Fine Arts Section, School of Art and Design, Meadowbank College of TAFE
John Paul II Senior High School
Joint Council Board - Art Education Society
Joint Council of NSW Professional Teachers Associations
Library, University of Western Sydney - Hawkesbury
Macquarie University
Marrickville Cluster of Schools, Department of School Education
Mathematical Association of NSW
McCarthy Catholic Senior High School
Mental Health Coordinating Council Inc.
Metropolitan East Region Home Economics Association, Excellence and Equity Writing Committee
Ministerial Advisory Committee on Gifted and Talented Education
Ministerial Advisory Committee on Multicultural Education and Ethnic Affairs
Ministerial Advisory Committee on Rural Education
Mount Druitt High School
Nepean High School
NSW Adult Migrant English Service
NSW College of Nursing
NSW General Studies Teachers Association Inc.
NSW Parents Council Inc.
NSW Peer Tutoring Committee
NSW Plastics and Rubber Industry Training Council Ltd.
NSW Plastics Skills Centre
NSW Secondary Principals' Council
NSW Special Education Workshop from NSW Access and Equity Audit
NSW TAFE Commission
NSW TAFE Commission, Special Focus Project, People with Disability
NSW TAFE Intellectual Disability Consultants
NSW TAFE Principals' Association
Office of Education and Youth Affairs
Oxley Education Resource Centre, Department of School Education
Saint Ignatius College, Riverview
Santa Sabina College Ltd.
School of Education, Charles Sturt University - Riverina
School of Teacher Education, Charles Sturt University - Mitchell
Social and Cultural Syllabus Committee of the Board of Studies
State Literacy Coordinating Committee
Tamworth High School
University of Sydney
WallSEND High School
Western Institute of TAFE, Orange College
Victoria

Adult Community and Further Education Board
Adult Migrant Education Services, Office of the
  Adult, Community and Further Education Board
Advising Centre for Women at Swinburne
Association of Councils of Post Primary
  Institutions in Victoria Inc.
Australian College of Education - Victorian
  Chapter
Association of Independent Schools of Victoria Inc.
Australian Catholic University, Academic
  Committee of the Victorian Division
Ballarat High School
Belmont Secondary College
Bendigo Senior Secondary College
Business Services Industry Training Board
Catholic Education Commission
Catholic Education Office, Special Focus Project
Clerks Training Model and Associated Projects
Council of Adult Education
Deakin University
Debney Park Secondary College
Department of Employment and Training -
  Office of the State Training Board
Department of School Education
Eltham High School
Engineering Skills Training Board
Faculty of Education, LaTrobe University
  College of Northern Victoria
Faculty of Education, Monash University -
  Frankston
Federated Teachers Union of Victoria
Footscray City Secondary College
Geelong Grammar School
Kilmore College
Kurnai College
Kyneton Secondary College
MacRobertson Girls' High School
Maribyrnong Secondary College
McClintock Collective
Melbourne High School
Merbein Secondary College
Ministry of Ethnic, Municipal and Community
  Affairs, Office of Youth Affairs
Modern Greek Teachers Association of Victoria
Modern Language Teachers Association
Monash University
Mount Waverley Secondary College
Sandringham Secondary College
School of Visual and Performing Arts Education,
  Institute of Education, University of
  Melbourne
Science Teachers Association of Victoria
Seymour Technical High School
Sunraysia College of TAFE
Tourism Training Victoria
University of Melbourne
Victorian Association for the Teaching of English
Victorian Association of Teachers of English to
  Speakers of Other Languages and
  Multicultural Education
Victorian Building and Construction Industry
  Training Board
Victorian Commercial Teachers Association
Victorian Curriculum and Assessment Board
Victorian Employers' Chamber of Commerce and
  Industry
Victorian Federation of State School Parents'
  Clubs Inc.
Victorian Secondary Teachers Association
Victorian Textile Clothing and Footwear
  Industry Training Board
Victorian Trades Hall Council
Victorian University of Technology, Melton
  Campus
Warragul Secondary College
Werribee Secondary College School Council
West Gippsland and LaTrobe Valley Community
  Education Centre Ltd.
Queensland

Arts Educators from the Faculty of Education, Griffith University
Association of Independent Schools of Queensland
Board of Secondary School Studies
Catholic Education Commission
Catholic School Services
Christian Schools Association of Qld
Darling Downs Region, Darling Downs Northern School Centre
Department of Education
Department of Education and DEVETIR
Faculty of Education, James Cook University of North Queensland
Forest Industries Training Council
General Studies Unit, Studies Directorate, Department of Education
Humanities Unit, Studies Directorate, Department of Education
Isolated Children's Parents Association, Qld Council
Kelvin Grove State High School
Local Government Training Council, Qld Inc.
Middlemount State High School
Modern Language Teachers Association of Queensland Inc.
Mount Carmel College
Mount Maria Senior College
Oxley Secondary College
Qld Affiliation of Arts Education
Qld Association of Home Economics Teachers and the Home Economics Association of Qld
Qld Furnishing Industry Training Council Inc.
Rural Education Research and Development Centre, James Cook University of North Qld
School Library Association of Queensland Inc.
Southport State High School
Special Focus Project - Geographically Isolated Students
State Training Council and the Accreditation Council
Tourism Training Queensland

South Australia

Adelaide South TASS Centre on behalf of Superintendents, Adelaide South Districts
Catholic Education Office
Chamber of Commerce and Industry Inc.
Croydon Park College
Department of Employment and Technical and Further Education
Education and Visual Communication, University of South Australia
Education Department
Elizabeth Munro Parra Project
Employee Planning and Development, Electricity Trust
Furnishing Industry Training Council Inc.
Kimba Community response
LEARN Planning Group
Marion High School
Metropolitan Fire Service
Port Augusta College of TAFE
Retail Industry Training Council, Retail Skills Training Centre
SACE Training and Development and School Support
Salisbury East High School
School Library Associations
Senior Secondary Assessment Board of South Australia
South Australian Association of School Parents' Clubs Inc.
South Australian Independent Schools Board Inc.
South Australian Institute for Educational Administration
Tea Tree Gully College of TAFE
The Flinders University of SA
Union of Australia College Academics (SA Branch) and Union of Australia College Academics Inc.
University of South Australia
Western Australia

Administration, Clerical and Finance Industry Employment Training Council
Australian Library and Information Association School Libraries Section (WA Group)
Catholic Education Office
Catholic Secondary Deputy Principals’ Association
Central Metropolitan College of TAFE
Craigie Senior High School
Curtin University
Department of Employment, Vocational Education and Training
Department of Employment, Vocational Education and Training - Women’s Policy Unit
Department of Occupational Health, Safety and Welfare
Developmental Disability Council of WA Inc.
Faculty of Education, Edith Cowan University
Food Industry Employment Training Council
Headland College
Irrabeena, Authority for Intellectually Handicapped Persons
James Nash State High School
Karratha College
Melville Senior High School
Ministry of Education
Ministry of Education Mayer Committee Reference Group
Mount Lawley Senior High School
Murdoch University
Office of Higher Education
Secondary Deputy Principals’ Association
Secondary Education Authority
State Employment and Skills Development Authority
The Chamber of Mines and Energy
The University of Western Australia
Trades and Labour Council Response
Tuart College
Western Australia Association for Independent Schools
Western Australia Forest Industries Training Council
Western Australian School Library Association
Western Australian Secondary Principals Association
Western Australian Textile, Clothing, Footwear and Allied Industries, Industry Employment and Training Council Inc.

Tasmania

Department of Education and the Arts, Consultation on Equity Issues
Department of Employment Industrial Relations and Training, Training Division
Department of Parks Wildlife and Heritage
North West Regional College of TAFE
Schools Board of Tasmania
Secondary Colleges Staff Association
Tasmanian Education Council
Tasmanian Rural Industry Training Board Inc.
The Association of Independent Schools of Tasmania

Northern Territory

Casuarina Secondary College
Independent Schools Parents Council
Northern Territory Arts Industry Training Council
Northern Territory Department of Education, Southern Region
Northern Territory Employment and Training Authority
Northern Territory Independent Schools Parents Council
Northern Territory Special Focus Project, Aboriginal People and Aboriginal Educators
The Northern Territory Board of Studies
Australian Capital Territory

ACT High School Principals Association
ACT Institute of TAFE, Reid Campus
ACT Secondary College Teachers response
ACT TAFE, South Side Campus - Consultation with Hearing Impaired Schools
Board of Senior Secondary Studies
Catholic Education Office, Archdiocese of Canberra and Goulburn
Department of Education

Faculty of Education, University of Canberra
Modern Language Teachers Association of the ACT Inc.
Phillip College
Phillip College (small staff group)
School Library Association in Canberra and District Inc.
Stirling College

Commonwealth

Department of Employment, Education and Training
Department of Employment, Education and Training, Schools and Curriculum Division, Access and Equity Audit
Department of Industrial Relations

Disability Advisory Council of Australia
Office of Multicultural Affairs, Department of the Prime Minister and Cabinet
Public Service Commission
Schools Council, National Board of Employment, Education and Training

Industry

BHP Steel
Hawker De Havilland Ltd.
Kembla Coal and Coke Pty Ltd.

Shell Australia Ltd.
Westpac Banking Corporation
Wilson Learning

Individual

B Thorley, Board of Studies, NSW
C Hamer, Gidgegannup WA
D Duffy, NSW
G R Anderson Fernando, Mornington Vic
G Secomb, Windsor SA
H Miller, Dimboola
J Welton, Cronulla NSW

L Goldberg, NSW
N Neil, Camden
N Walker, Gepps Cross SA
P Hume, Emu Plains NSW
P Thomson, National Centre for Vocational Education Research
S Youngberry et al, Goodna Qld
AN EXTRACT OF THE HOBART DECLARATION ON SCHOOLING (1989)

Ten national goals for Schooling will, for the first time, provide a framework for cooperation between Schools, States and Territories and the Commonwealth. The goals are intended to assist schools and systems to develop specific objectives and strategies, particularly in the area of curriculum and assessment.

The agreed National Goals for Schooling include the following aims:

1. To provide an excellent education for all young people, being one which develops their talents and capacities to full potential, and is relevant to the social, cultural and economic needs of the nation.

2. To enable all students to achieve high standards of learning and to develop self-confidence, optimism, high self-esteem, respect for others, and achievement of personal excellence.

3. To promote equality of educational opportunities, and to provide for groups with special learning requirements.

4. To respond to the current and emerging economic and social needs of the nation, and to provide those skills which will allow students maximum flexibility and adaptability in their future employment and other aspects of life.

5. To provide a foundation for further education and training, in terms of knowledge and skills, respect for learning and positive attitudes for lifelong education.

6. To develop in students:
   - the skills of English literacy, including skills in listening, speaking, reading and writing;
   - skills of numeracy, and other mathematical skills;
   - skills of analysis and problem solving;
   - skills of information processing and computing;
   - an understanding of the role of science and technology in society, together with scientific and technological skills;
   - a knowledge and appreciation of Australia’s historical and geographic context;
   - a knowledge of languages other than English
   - an appreciation and understanding of, and confidence to participate in, the creative arts;
   - an understanding of, and concern for, balanced development and the global environment; and
   - a capacity to exercise judgment in matters of morality, ethics and social justice.

7. To develop knowledge, skills, attitudes and values which will enable students to participate as active and informed citizens in our democratic Australian society within an international context.

8. To provide students with an understanding and respect for our cultural heritage including the particular cultural background of Aboriginal and ethnic groups.

9. To provide for the physical development and personal health and fitness of students, and for the creative use of leisure time.

10. To provide appropriate career education and knowledge of the world of work, including an understanding of the nature and pace of work in our society.
Appendix 7  
ANALYSIS OF TRAINING AND DEVELOPMENT NEEDS

This report is based on a preliminary study of the current work of small sample groups of teachers from schools and TAFE colleges in Queensland, NSW and Victoria undertaken by a working party of the Committee. The discussion of appropriate models and principles of professional development is supplemented by the experience of members of the Australian Council of Deans of Education.

Teachers who volunteered for this analysis participated in two days of structured discussion with an associated period of reflection in which they recorded evidence of their own practice. The first day was framed to provide appropriate briefing and to design the framework for analysis. The second was used to consider teacher documentation and to construct a report.

THE IMPACT ON TEACHERS’ WORK

The framework for teacher analysis was established by the teachers involved.

Focus Questions
- Can I assess that my students have achieved the Key Competencies?
- To what extent does the current course structure/content provide for the development of the Key Competencies?
- How does current teaching practice enhance or inhibit student achievement of the Key Competencies?
- What changes are required to facilitate implementation?
- Where will resources be required to facilitate implementation? Are these additional requirements or a reorganisation of current provision?

Current Provision
It is possible to identify a number of the Key Competencies in almost all curriculum whether it be in schools or TAFE. Teachers who examined their programs could establish that most if not all of the Key Competencies existed as a sub-set of expected outcomes.

Teachers believed it to be the role of the curriculum and credentialling agencies to provide an explicit analysis of curriculum documents to ensure that all teachers are able to recognise the potential for developing the Key Competencies.

A concern that pervaded all teacher discussion was the question of access to an appropriate mix of curriculum in order to ensure that all teachers could recognise the potential for developing the Key Competencies.

Assessment
Assessment requirements and therefore practices vary considerably across States and sectors, yet there is universal acceptance that without (a) systems re-thinking some of the formal requirements of current credentials and (b) teacher training and development, implementation of the Key Competencies could not be successful.

Teachers viewed some of the Key Competencies as requiring a more collaborative approach and believed that this and the performance orientation generally could present the major challenges.
TAFE teachers working with competency-based assessment shared a concern that assessment dominated the learning setting perhaps at the expense of facilitating a deeper understanding of required knowledge and skill.

All teachers agreed that nationally-consistent benchmarks for the Performance Levels were required and that States/Territories and systems needed to cooperate to develop appropriate assessment tools, preferably underpinned by some common philosophical links.

Teaching practice
The discussions demonstrated that it is possible to draw appropriate, even model, practice from the wealth and richness of teacher experience. However the teachers themselves were convinced that changing approaches to teaching and learning were necessary and needed to be supported.

There is a strong view that successful implementation of the Key Competencies requires some re-learning for teachers in order that they themselves facilitate development of workplaces which demonstrate best practice.

Resources
An analysis of current resources identified a range of provision that could be drawn upon and re-organised yet there still remains a significant deficit. Student counselling, technical support, adequate and up to date technology, librarians and information access, appropriate trained teachers, increased levels of retraining, physical space for practical or experiential learning and access for students and teachers to industry experience were the common and consistent themes in a considered analysis of current workplace provision.

The general conclusion could be summarised by the view that the Key Competencies could be identified across a range of curriculum provision but current pedagogy and assessment practice did not provide for consistent development. Thus teachers considered that the degree of success of integrating the Key Competencies in senior school curriculum will be based on the degree of success of inserviceing teachers.

The consensus among teachers was that this required a model of teacher/trainer development which was based on similar principles of development and assessment and that it must be nationally consistent with demonstrations of the Key Competencies in a range of settings.

Principles
It was agreed that professional development is most successful when:

- situated at the school/college;
- some withdrawal time from classes is coordinated with some practice in a classroom context;
- an intensive initial course is offered;
- a resources package for ongoing school/college use is developed;
- a highly structured learning environment is used to ensure consistency of outcomes;
- a clear theoretical framework is established rather than an entirely process based program.

Models of delivery
All consultation groups endorsed the need to examine a combination of delivery approaches, given the different sectors involved. An additional challenge is presented by the cross-curricular character of the Key Competencies.

Any model of professional development will need to address three phases.

- Introductory: to provide theoretical underpinning to the concept of competency based education and increase the knowledge base of teachers.

- Teaching methods: training in the teaching of Key Competencies.

- Assessment: methods of assessing achievement of the Key Competencies (which must be closely linked with teaching methods).
There is substantial experience across the sectors with three models of delivery.

**Model 1: Train the Trainer**
Characterised by:
- a core of people trained to implement a package;
- teachers working with a trainer, then returning to the classroom to practise new skills;
- support material accessible at the school so that the school becomes the centre of training;
- curriculum-based approach so that curriculum change is embedded, rather than imposed;
- a clear theoretical framework;
- management support gained by training one trainer and one supervisor for each school;
- teacher relief or pupil free days.

This approach involves a cascading model of training, in which each trainee returns to their work environment as the trainer. This expands the level of expertise very effectively, however the hidden cost of teacher release time needs to be noted.

The implementation of two major projects have been supported by this model with some variation. These are the Victorian Certificate of Education and the National TAFE package for the Recognition of Prior Learning. Both initiatives have required a significant cost in initial training and on-going time provision from employers.

**Model 2: Learning Partnership**
A learner partnership model is characterised by:
- experiential learning;
- learner-centred approach to develop skilled learners;
- work based training, centred on the work setting and driven by the teachers’ current practice;
- action learning process which is owned by the organisation;
- related to teachers’ current delivery or subject;
- team learning, rather than a highly individualised experience;
- on-site support of management;
- learning professionals on-site;
- benefits of practitioner delivering as a trainer;
- accessible support material;
- appropriate time for planning and reflection.

This model is currently being used by Professor John Wilson of the Victoria University of Technology for recognition of professional skills.

**Model 3: Network Team**
A network model is characterised by:
- the breakdown into regions by identification of experts in the field of study (curriculum);
- clear integration with curriculum;
- a hierarchical structure;
- issues of quality assurance;
- the need to identify and train experts;
- delivery through an expert panel;
- teacher relief or pupil free days.

It is probable that a model of delivery chosen by an employer would consist of a matrix that takes features of all three models and creates an appropriate one for training many, if not all, teachers across all sectors.

The working party concluded that what is required is the development of a package which will enable systems and sectors to manage training and development for teachers/trainers through a range of delivery models and still achieve national consistency.

The initiative should be linked to best practice. Emphasis should also be placed on the definition of competence, which includes the application of knowledge, skills and understanding.
Target group
The initial group for training and development will include secondary teachers, TAFE teachers responsible for development and assessment of Key Competencies and teacher educators.

Accreditation
It is imperative that training and development in implementation of the Key Competencies be integrated into award courses and that accreditation arrangements be put in place for teachers who complete this retraining.

Partnerships with TAFE and higher education institutions should be pursued to establish joint accreditation.

The provision of training and development associated with the Key Competencies through interactive modes of open learning should be explored.

Field tests
The Committee believes that there could be significant benefits from testing an implementation model on a small scale. This would provide an opportunity to evaluate the outcomes for students and to gain valuable knowledge about implementation and assessment of Key Competencies. These field tests could provide the support required to finalise a training and development package and assist with the establishment of agreed benchmarks for the Performance Levels.

An action research project is also considered valuable to document the best practice of teachers. Pinpointing exemplary practitioners in different sectors and assisting with the development of case studies would provide a valuable support for teachers as they approach the task of implementation of the delivery and assessment of competency-based standards.

On the basis of these views, those consulted considered the options associated with the development of a national package which would rely on the use of interactive software to manage a training and development program which allowed sufficient flexibility for employers to choose from a range of delivery models.

The following proposal was commissioned to inform these considerations.

USE OF A COMPUTER SOFTWARE PACKAGE FOR TRAINING AND DEVELOPMENT OF TEACHERS AND TRAINERS IN THE KEY COMPETENCIES

Characteristics of an effective national training and development strategy for implementation of the Key Competencies

To be effective, any strategy for ensuring teachers, trainers and instructors can implement the Key Competencies must:
- be cost effective in delivery costs and development costs;
- be realistic;
- be capable of delivery across sectors/systems/States/Territories/contexts without excessive dilution of content;
- be able to accommodate sector, system and local variations in acceptable assessment practices;
- be applicable to existing training and development structures within State/Territory sectors;
- be capable of being delivered in both isolated and densely populated locations;
- be able to accommodate the need for teachers to understand Key Competencies, apply them to existing curricula and modify programs accordingly;
- be based on responsible learning principles;
- utilise technologies with high saturation;
- utilise multimedia flexibly;
- control learning/processes;
- be capable of reliable evaluation.
NATIONAL DELIVERY MODELS

In the absence of an agreed national infrastructure for the delivery of training and development, and given a short timeline for implementation, there are three possibilities for delivery.

Trainer training
It would be possible to instigate a trainer training program from a nationally designed program. It could be implemented on a cross-sector or within-sector structure.

The quality of training delivered by trainer training programs is controllable only in the first generation of trainers. It is most likely to succeed where those being trained have a good grounding and experience in teaching adults and are being trained in the requirements of a specific program. If those being trained as trainers are not confident and able as trainers of adults, they will require expensive support to carry out their role. Systems which rely on those trainers to train another generation of trainers in a ‘pyramid’ effect are unlikely to succeed, especially when large numbers are involved.

The numbers of teachers and trainers who need to be able to incorporate and assess the Key Competencies make this method a poor and expensive choice.

Sector-managed programs
It would be possible to develop national guidelines for implementing the Key Competencies in written format and let sectors and systems transfer these into programs and packages at sector or system level. This utilises sector and system culture and infrastructures, spreads the cost, and maximises ownership of delivery.

It does not, however, maximise ownership of the Key Competency concept. It is likely to lead to inconsistency, resource duplication, sabotage by pockets of resistance, and will make it very difficult for teachers or trainers in situations where there is some resistance or inadequate support.

Nationally-agreed standards are critical to the implementation of Key Competencies, and some effort will be needed to facilitate this.

A nationally managed program utilising technologies that allow delivery at multiple sites and over significant distances
The only such technology which will both provide management of learning and be immediately deliverable in most parts of the country, is the use of computer Courseware developed from one of the currently available authoring programs.

While there is a range of available distance technologies with educational applications, all rely on infrastructures which do not yet have national acceptance.

The last option has a greater potential than other options to deliver a consistent application and assessment of Key Competencies. It meets the strategy criteria identified above to a significantly greater degree than the other approaches.

COMPUTER BASED COURSEWARE

Definitions
Authoring Software
Authoring software is a computer aided design software package that enables a program developer to create training and development courseware, incorporating a wide range of media, including video, sound, scanned graphics and text, that can be delivered by computer to users in any site with a suitable computer.

Courseware
Courseware is the computer software package developed using authoring software for use by learners. It is a training and development program which guides the learner to specific outcomes through instruction, observation, decision making and interactions of various kinds. Courseware can use open or
closed learning techniques, and can be used to manage a learning program that incorporates activity, text, video and other media.

**Qualities of Courseware**

**Interaction**
Courseware is designed to be highly interactive. A program delivered in this way will require the student to respond, initiate, activate, discuss, trial, manipulate, analyse, judge, compare. The nature and skill level required to respond is built into the program by the developer, who will chose the learning theory that underpins the program in the same way as any face to face program developer or presenter chooses.

While there are obviously interactions which could occur in a face to face delivery which cannot occur in a software delivery, the range of interactions which can occur is great. The program can also guide face-to-face interaction at the delivery site, by incorporating the frameworks for this and assuming some group management skills at the delivery end.

While information can be incorporated in an authored package, it is wasteful to use the medium in this way. The range of ways in which the user can manipulate materials, use processes, make decisions, respond and develop make this medium an effective learning tool. Large amounts of information are better and more cheaply presented through the print medium, or through extensions to Courseware, such as electronic databases. These provide for open-ended, self-directed exploration.

**Flexibility of delivery**
A program may be built on the assumption it will be received by an individual learner working alone, or by a group of learners who will work together, or a combination of these. It is not a good mode for delivery to large groups assembled together, unless these groups can be configured in smaller groups each with access to a computer capable of delivering the program.

For delivery, two pieces of equipment are needed, a computer and a storage device containing the program. The computing equipment is available at most training and schooling sites. Storage devices would need to be upgraded in most schools.

Software is currently available which will allow a program to be delivered in either MSDOS or Macintosh format, using CDROM, computer tape or hard disk. The amount of storage required for a program of any size makes floppy disks inefficient. With a very large user group, delivery in a range of formats from a single program development is quite feasible.

Although programs are developed in colour, they can run on monochrome machines. A delivery machine requires a 13" screen. Fast access requires upwards of 100Mb storage, 10MbRAM and 16 bit or better processor. Delivery is possible however with 40Mb storage and 4MbRAM.

To achieve full flexibility of delivery, the machine/s for this use should be available for use at the time the teacher/instructor is free. In a site where there are a number of teachers/trainers, a machine used only for this purpose will ensure maximum flexibility of delivery.

Where appropriate, Courseware may be used successfully by individuals. Educational practice would suggest an approach designed to draw on collaboration and existing networks of support is likely to be most useful. This approach assumes some group management skills at or close to the delivery site.

The delivery site has extensive control of delivery. Place, time and groupings are in the control of the user. There is no need for satellite links, datalines or telephone lines to receive the package.

Training and development structures which rely on networks or regional clustering can deliver via centres with one or more computers. Some systems will achieve a compromise with powerful colour computers in regional centres and existing black and white computers at individual sites.

**Flexibility of development**
A number of models for development are discussed in the section Options for Development. There would be some expertise in all aspects of development in all sectors. Equipment needed for
development is neither so expensive nor so specialised that it restricts development. Unlike Hypercard-type developments, Courseware does not require a high level of programming skills for its development. It is therefore a flexible tool for educators.

The resources required for development are:

**Equipment:**
- colour computers with 13'' screen, 100+ Mb hard disc, 10+MbRAM
- Authoring software
- other design assisting software, such as drawing, painting programs
- possibly image capturing, sound and animation hardware
- possibly enhancing databases

**Human resources:**
- content expertise
- an expert in training and development program design and adult learning
- graphic design expertise
- computer programming expertise (the level required varies with Authoring software)
- The better the interaction between these people the better the program is likely to be, and the more possibilities for learning are likely to emerge.

**Delivery licence:**
- a software manufacturer charges a fee according to the number of copies of the Courseware for development. In the case of 'Authorware' there is no additional cost for use within the education system/s.

**Development infrastructure:**
- to gain agreement at national level to parameters, frameworks and to gather examples.

**Distribution system:**
- Courseware is no more difficult to distribute than print material once system requirements are known.

**Quality**
It is possible to use the very best developers, experts and materials to produce a professional and high quality product. This loses nothing in reproduction so there is every chance that the program delivered to the school, college or worksite represents the best components, knowledge, presentation and expertise available. A developer who uses responsible learning principles will produce Courseware as good at the final delivery point as at the development point.

**Consistency**
Unlike trainer training models the use of authoring software does not rely on a flow down effect. The original program is presented to each user in the same way. While there may be extensive choice involved for the user, each user receives the benefit of the program as conceived. Inevitably, different sectors, States/Territories and sites will have different issues to resolve in implementation of the Key Competencies, but the framework and provision of benchmark examples of the Performance Levels to support this process can be very consistent.

**Tailoring to sector needs**
Within the consistent national framework presented by a software program, local variation and examples can be incorporated with minimal change to the core. This could be done at the original development point or on a State/Territory or sector basis, meeting different needs and at the same time providing a richer and wider repertoire for both developer and receiver. The already developed training and development support structures of each sector and system can also be utilised (see 'The use of Courseware in a range of settings').

**Cost effectiveness**
The work to develop a national training program will have to be done regardless of the method of delivery. The only cost difference is in the programming component of an authored package. Ratios of
development time to computer delivery time are between 200:1 and 300:1. This is comparable to any major training and development program delivered at multiple sites over a twelve month period. It shifts resources from the delivery phase to the design and development phases. While this is expensive for a small client group, it becomes very economical when the client group is large, and sectors can use existing infrastructures to support its delivery, without the need to redevelop and redeliver. It significantly reduces costs to State/Territory sectors with large rural or isolated clientele. Courseware concentrates up-front the time to produce a high quality product. Its quality and ready reproducibility and transportability mean its useful life is longer than other methods and the maintenance costs low. A minimum three year life from Key Competency Courseware would be very realistic.

Accreditation possibilities
While any training program has the potential for accreditation from a variety of sources, the consistency and control of the quality of this medium makes national accreditation possible. There is a variety of ways by which assessment of the users' understanding or ability to apply the Key Competencies could be built in, depending on the kind of accreditation sought.

Accreditation would facilitate the exchange of teachers and trainers between sectors for consistency, skill building and program enhancement.

There are several options for accreditation of work resulting from Courseware.

Training Guarantee Administration Act
The package should be designed to meet the requirements of the Act, and therefore, when appropriately applied, be accredited under the Act. All employers within systems and sectors can apply appropriate record-keeping procedures to Courseware use. The outcomes are measurable.

Graduate Diploma Accreditation
It would be possible to negotiate accreditation for work completed from the Courseware through higher education institutions with distance learning facilities. Some institutions with education courses already utilise Authoring technologies. The adoption of Courseware for a national program would provide a vehicle for facilitating a range of inservice courses from the tertiary sector, since every school and college and potentially every worksite, becomes a learning centre.

Courseware can incorporate written documentation for the purposes of accreditation, or the completed Courseware can be 'read' for its record of learning responses and pathways by an accrediting tutor.

Accreditation linked to registration
Since any teacher/trainer responsible for assessment of Key Competencies will be required to be proficient, it would be possible to link participation in a structured professional development program with formal accreditation in terms of either teaching registration or accreditation that is determined by industry standards.

The use of Courseware in a range of settings
Courseware
- is best used in small group or individual settings;
- relies to some extent on site-based leadership of groups;
- lends itself to regional support structures and various clustering arrangements;
- would fit well with key teacher and coordinator structures;
- would work well with networking support structures;
- is useable by individuals even in isolated settings; and
- can be readily, and cost effectively altered to meet the needs of specific communities (for example, remote Aboriginal communities).

Courseware could be used in systems with well-developed trainer training structures. As it is just as easy to go straight to the user, however, use in this context would only be cost effective if the users were very unskilled in managing their own learning.

Delivery of information to large groups is better achieved by other means, such as written material or video.
While the method lends itself to individual use, achieving consistency of standards requires interactions and comparisons at certain points. It is possible to expand the package for trainers who work in isolation by the incorporation of more extensive examples and case studies.

**Incorporation of a range of media**
Courseware acts as the organiser and manager of the learning process. The following media offer possibilities for training. Currently none provides an adequate organising structure for nationwide training and development, but each could support or be incorporated within Courseware.

**Print packages**
Print packages can provide some consistency of content. They will not provide a management system, nor exercise control over the interactions desirable in training. Authoring programs, as both tutor and management system, can demand responses and control sequencing.

Print packages are more limited in the range of demonstration methods and metaphors at the developer's disposal. An Authored package, with its provision for multimedia, has more stimuli available to engage a learner's sense, experience and style.

Print is a useful adjunct to an Authored package. An Authored software package is a whole program, not an aid to a program.

**Video**
As with print, video fulfills particular roles in training. It does not, however, fulfill a program management role. With the current state of computer hardware, the incorporation of large segments of video into computer Courseware is expensive in money and memory. In the short term, videos to accompany a computer-assisted learning program would be more feasible.

**Distance Technologies**
A range of distance technologies could be used, but most of them rely on an infrastructure which is not yet available nationally. It may be possible to use satellite delivery via cable television, but currently available outlets are not well placed for the delivery of training on a large scale.

Delivery through a television network has some possibilities, but requires the user either to be available at a particular time or to record programs for later use. This medium would require supplementary material and an infrastructure to supply the interaction which is missing from the medium. The establishment and understanding of Key Competencies and the requirement to maintain consistent standards requires interaction. This delivery method has possibilities, however for materials to supplement training, and particularly to establish how the Key Competencies are manifest in the workplace.

**Evaluation**
The Courseware itself can be evaluated against a variety of criteria relating to clarity, learning principles, interest, establishment of concepts, applicability across sectors. Because Courseware is consistent in delivery and quality, evaluation of its success across States/Territories and sectors could be conducted reliably by sampling techniques.

**A KEY COMPETENCY COURSEWARE PACKAGE**

**Development principles which would underpin Key Competencies Courseware**

Key Competencies Courseware will:
- provide discussion and program development framework;
- concentrate on on-site application;
- be strong in case studies;
- draw on prior learning;
- be designed to be adapted readily to needs of each sector;
- be adaptable to a variety of support structures;
• make explicit the application in each sector;
• have an articulated focus on intersectoral links in application.

Content of a training program
Any training program needs to cover:
• establishment of concept of Key Competencies;
• development of the Key Competencies with examples;
• exploration of the Key Competencies in a number of contexts;
• demonstration of the three performance levels;
• a framework and models for identifying the three levels;
• processes for teacher/trainer to audit for equity and access;
• incorporation of the Key Competencies into the curriculum;
• reporting;
• record keeping;
• developing parent awareness;
• teaching students about the Key Competencies.

Methods to be used within Key Competencies Courseware
Methods will include:
• demonstrations;
• case studies;
• simulations;
• construction of decision-making processes and trees;
• discussion;
• models for program development;
• feedback loops;
• frameworks for analysis of curricula;
• electronic analysis of data;
• database construction/exploration.

Outcomes of completed Key Competencies Courseware
Teachers and trainers satisfactorily completing the package should be able to:
• recognise the Key Competencies in postcompulsory curricula;
• apply the Key Competencies within existing curricula;
• construct programs to develop the Key Competencies within existing curricula;
• assess and report on the Key Competencies within agreed principles and guidelines.

Management options using Courseware
• A single Courseware package covering the content in a generic way, so it can be adapted at the delivery site to each of the Key Competencies.
  This option would require a very good grasp of the concept of each Key Competency and assumes a strong ability to transfer learning from one Key Competency to another.

• A Courseware package on each of the twelve content areas identified under content of a training program, but applied across the seven Key Competencies.

• Seven Courseware packages, each one managing a Key Competency.
  This would achieve maximum unity and consistency in the development of a particular Key Competency. It allows teachers and trainers to work methodically through each Key Competency in relation to their teaching program.

While it is obviously more costly to produce seven programs than one, a development team would have much of the content and experience after the first package. Seven packages, therefore, might cost three or four times the cost of one, rather than seven times. This is likely to prove a worthwhile investment in improved speed of take-up by teachers and trainers, and adaptation costs to systems and sectors.

In each of these options, the Courseware could incorporate all materials within the program or could manage the learning mostly by Courseware but using accompanying packs of print and video, where
large amounts of either are required. With the current state of the technology, this would contain
development and delivery costs by keeping the memory storage required within reach.

The option involving a Courseware package for each Key Competency, using accompanying video and
printed materials to illustrate extended examples of Key Competencies would be the most cost effective.
The option involving a single package, also using accompanying print and video material would be the
next most effective, but would require significant transfer work at worksite or system level.

A NATIONAL STRUCTURE FOR DEVELOPING A SOFTWARE PACKAGE

The most significant difficulties in development are those involved in gaining a common view and
agreement to benchmarks, examples, what teachers and trainers need to incorporate and to assess in the
Key Competencies.

Potential framework for development
Courseware should be developed within the following agreements:
- Courseware will be based on cross-sector application;
- all States/Territories and sectors to supply examples of applications and assessments for
  incorporation;
- Courseware will incorporate on-site applications and case studies from several
  States/Territories;
- Courseware will incorporate an assessment unit specific to each State/Territory; and
- any State/Territory and/or sector should be able to access material specific to any other
  State/Territory or sector.

While it is important to preserve local application and curricula, it is also important that teachers and
trainers have the opportunity to benefit from the best practice elsewhere, and to enrich their experience
and practice.

Options for development
There are three phases of development which could be combined or separated. These are the design
stage, the programming stage and the distribution stage. If accreditation is required, this must run
alongside the design stage, and be accommodated in the worksite delivery.

Any option for development could be applied to the stages combined or separated.

The options are:

Establish a project team to produce the software and other materials to specifications
The cost of this establishment and development to be budgeted as part of implementation costs and
shared between State/Territory sectors and the Commonwealth.

This requires either location in one centre with a team made up of workers from each State/Territory or
members who work in their own States/Territories but meet frequently. The latter seems undesirable for
a project of limited and tight timelines requiring significant collaboration.

Call for tenders for each of the three stages, or for the whole package
The brief would need to be developed and most of the content gathered by a project team or reference
group, but each stage could be put out to tender.

If the stages were tendered separately, it is likely that the design tender would be won within the
education and training sectors. The programming and distribution tenders might be won outside.

Monitoring of the development would be critical.

Divide the Key Competencies between the States/Territories for development
Although this would accommodate cross-sector cooperation within States/Territories, it loses
consistency, introduces particular State/Territory emphases to a national program, and would
significantly reduce the acceptance of the Key Competencies. Each Courseware package would need to have an assessment component added for each State/Territory and sector, increasing the variables on an already diversified base. This option works against the spirit of national consistency.

**Allocate development to one State/Territory to do on behalf of all**
The developing State/Territory would need to work closely with a national reference group. Unless the development team is particularly adept at consultation, there would be significant danger of lack of ownership and acceptance by all States/Territories.

**Contract a higher education institution to develop and deliver using Open University or external studies model**
Provided there is a clear brief and ongoing monitoring by a project team or reference group, this option is attractive. It simplifies accreditation, utilises existing structures, and could lead to significant improvements in the delivery of a range of other post-graduate programs for teachers and trainers. It would take, however, a lead period of several years to be implemented on a national scale, and require, on the part of the higher education sector, extensive consultation with and use of expertise from school, training and industry sectors.

While this does not appear to be a workable option immediately, it is worth pursuing in the longer term.

The first two options, or a combination of the two, are the most likely to work in a way that achieves timelines, acceptance by States/Territories and sectors, and consistency. The fourth option could be workable.

**Ownership and copyright**
Whichever model is used, the ownership of the material would need to be resolved to ensure that copyright and control remain within the framework of the AEC and MOVEET.
### Appendix 8

**COMMITTEE MEMBERSHIP, REFERENCE GROUPS AND SECRETARIAT**

**Chair**

*Eric Mayer*

Chair, Business/Higer Education Round Table and former Chief Executive Officer of National Mutual

<table>
<thead>
<tr>
<th>New South Wales</th>
<th>Western Australia</th>
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<tbody>
<tr>
<td><em>Dr Susan Holland</em></td>
<td><em>Paul Roberts</em></td>
</tr>
<tr>
<td>General Manager, Quality Assurance and Customer Services, NSW TAFE Commission</td>
<td>Chair, Skills Standards and Accreditation Board, State Employment Skills Development Authority</td>
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<tr>
<th>Victoria</th>
<th>Tasmania</th>
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<tr>
<td><em>Sue Christophers</em></td>
<td><em>Graham Fish</em></td>
</tr>
<tr>
<td>Manager, Vocational Education and Training Policy Branch, State Training Board</td>
<td>Director, Curriculum Services, Department of Education and the Arts</td>
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<thead>
<tr>
<th>Dr Helen Praetz</th>
<th>Brian Turner</th>
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<tbody>
<tr>
<td>Director, School Improvement Branch, Department of School Education</td>
<td>Manager, Design and Development, Training Division, Department of Employment, Industrial Relations and Training</td>
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<th>Queensland</th>
<th>South Australia</th>
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<tr>
<td><em>Viv Caulfield</em></td>
<td><em>Garth Boomer</em></td>
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<tr>
<th>Dr Larry Smith</th>
<th>Jim Dellit</th>
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<tbody>
<tr>
<td>Director, Vocational Education and Training Queensland, TAFETEQ (from February 1992)</td>
<td>Principal Curriculum Officer, Curriculum Monitoring and Effectiveness, Department of Education (from March 1992)</td>
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<tr>
<th>Robin Sullivan</th>
<th>Dr Geoff Wood</th>
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<tbody>
<tr>
<td>Director, Studies Directorate, Department of Education</td>
<td>Director of Curriculum Services, Department of Employment and Technical and Further Education (September 1991 - June 1992)</td>
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**Alternate: Brian Rout**

*Gary Leduff*  
Assistant Director of Curriculum Services, Department of Employment and Technical and Further Education (from July 1992)
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<th>Australian Capital Territory</th>
<th>Northern Territory</th>
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<tr>
<td><em>Martha Kinsman</em></td>
<td><em>Dr Harry Payne</em></td>
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<tr>
<td>Associate Director (Education Services), ACT</td>
<td>Assistant Secretary, Curriculum and Assessment, Department of Education</td>
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<td>Institute of TAFE</td>
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<tr>
<td>Alternates: <em>Trixie van Leeuwen, Paul Gillespie</em></td>
<td><em>Dr Don Watts</em></td>
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<tr>
<td><em>Mal Lee</em></td>
<td>Chairman, Northern Territory Employment and Training</td>
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<td>A/Executive Director, Belconnen Schools, Department of Education and Training</td>
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**Commonwealth**

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<tr>
<th><em>Alan Ruby</em></th>
<th>Nominee of the Independent Teachers Federation of Australia</th>
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<tr>
<td>First Assistant Secretary, Schools and Curriculum Division, Department of Employment, Education and Training</td>
<td><em>Patrick Lee</em></td>
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<td>Deputy General Secretary, NSW Independent Teachers Association</td>
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**Nominees of the Australian Teachers’ Union**

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<tr>
<th><em>Sharan Burrow</em></th>
<th>Nominee of the National Catholic Education Commission</th>
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<tr>
<td>Senior Vice-President, NSW Teachers Federation</td>
<td><em>Susan Pascoe</em></td>
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<td>Coordinating Chairperson (Policy), Catholic Education Office, Victoria</td>
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| *Dave Robson*                | |
|-----------------------------|Federal Secretary, Australian Teachers Union |
|                            | Alternate: *Paul Byrne* |

**Nominee of the Australian Council of Trade Unions**

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<tr>
<th><em>Martin Schutz</em></th>
<th>Nominee of the National Training Board</th>
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<tr>
<td>National Industrial Officer, Metals and Engineering Workers’ Union</td>
<td><em>Alan Godfrey</em></td>
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<td>Chief Executive, National Training Board Ltd</td>
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<td>Alternate: <em>Diane Ryan</em></td>
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**Nominee of the Australian Vice-Chancellors’ Committee**

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<tr>
<th><em>Professor Di Yerbury</em></th>
<th>Nominees of the Finn Committee</th>
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<tr>
<td>Vice-Chancellor, Macquarie University</td>
<td><em>Laurie Carmichael</em></td>
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<td>Chair, Employment and Skills Formation Council, National Board of Employment, Education and Training</td>
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<td><em>Alan Houston</em></td>
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<td>Director, Personnel, Coles Myer Ltd</td>
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**Nominee of the Business Council of Australia**

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<tr>
<th><em>Allan McKachnie</em></th>
<th>AEC Secretariat</th>
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<tr>
<td>Manager, Organisational Change and Development, BP Australia Ltd</td>
<td><em>Dr John McArthur</em></td>
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<td>Secretary AEC</td>
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<td>Alternate: Dr Judy Forsyth</td>
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REFERENCE GROUPS

INDUSTRY REFERENCE GROUP

To advise the Committee on the construction of competency standards, industry requirements in relation to the proposed Key Competencies and approaches to industry validation of the Key Competencies.

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<thead>
<tr>
<th>Name</th>
<th>Position/Location</th>
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<tbody>
<tr>
<td>Jane Carnegie</td>
<td>Education/Industrial Officer, Australian Council of Trade Unions</td>
</tr>
<tr>
<td>Anne Rein</td>
<td>Chief Executive, Tourism Training Australia</td>
</tr>
<tr>
<td>Jenni Colwill</td>
<td>Assistant Commissioner, Human Resource Development Policy and Projects, Public Service Commission</td>
</tr>
<tr>
<td>Julius Roe</td>
<td>National Industrial Officer, Metals and Engineering Workers’ Union</td>
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<tr>
<td>Cassandra Parkinson</td>
<td>Executive Director, Australian Textiles, Clothing and Footwear Industry Training Board</td>
</tr>
<tr>
<td>Dr Percy Worsnop</td>
<td>Project Manager, Confederation of Australian Industry</td>
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HIGHER EDUCATION REFERENCE GROUP

To assist the Committee to examine the relationship between assessment and reporting on the Key Competencies and processes of selection for higher education.

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<tr>
<th>Name</th>
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<tr>
<td>Associate Professor John Mack</td>
<td>University of Sydney</td>
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<tr>
<td>Dr Tony Hayden</td>
<td>Australian Vice-Chancellors’ Committee</td>
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<tr>
<td>Professor Ian Rae</td>
<td>Monash University</td>
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<tr>
<td>Doug Porter</td>
<td>University of Queensland</td>
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<tr>
<td>Dr Mary Dove</td>
<td>University of Melbourne</td>
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<td>Name</td>
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<tr>
<td>Ann Borthwick</td>
<td>Secretary, Victorian Curriculum and Assessment Board</td>
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<tr>
<td>Peter Jones</td>
<td>State Training Board, Victoria</td>
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<tr>
<td>Natalie Conyer</td>
<td>NSW TAFE Commission</td>
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<tr>
<td>Joy Corben</td>
<td>NSW Board of Studies</td>
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Appendix 9  ACKNOWLEDGMENTS

Development of the set of Key Competencies

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John Pollack  School of Education, Phillip Institute of Technology
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Gaye Romuld  National Office Skills Formation Advisory Body
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Robert Veal  Write it Right Project
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Australian Council of TESOL Associations
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Federation of Ethnic Communities Councils of Australia
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Rural Educational Research Association
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Isolated Children's Parents Association
Aboriginal and Torres Strait Islander Commission
Australian Council of TESOL Associations
NSW Ministry of Education and Office of Youth Affairs
Aboriginal and Torres Strait Islander Commission
NSW Department of School Education
Federation of Ethnic Communities Councils of Australia
NSW Ministry of Education and Office of Youth Affairs
NSW Board of Studies
NSW Ministry of Education and Office of Youth Affairs
Australian Teachers Union
NSW Association of Teachers of English as a Second Language

Preliminary Industry Validation

Bran Byrne
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Lyn Parker
Pauline Robinson
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NSW TAFE Commission
Office of the State Training Board, Victoria
NSW TAFE Commission
NSW Building and Construction Industry Training Council Ltd.
Public Service Commission
Victoria University of Technology
NSW TAFE Commission
Victorian Trades Hall Council
NSW TAFE Commission
NSW TAFE Commission, NSW TAFE Commission
NSW TAFE Commission
ACT Institute of TAFE
Office of the State Training Board, Victoria
Investigation into the incorporation of the Key Competencies in industry competency standards

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Joint Australian Public Service Training Council
Metals and Engineering Workers Union
Metal Trades Industries Association
National Metals and Engineering Training Board
National Office Skills Formation Advisory Body
National Training Board
Tourism Training Australia

Professional development and training needs

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Implications of the Key Competencies for Training Curriculum

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