YOUNG PEOPLE'S PARTICIPATION IN POST-COMPULSORY EDUCATION & TRAINING

REPORT OF THE AUSTRALIAN EDUCATION COUNCIL REVIEW COMMITTEE
Young People’s Participation in Post-compulsory Education and Training

Report of the Australian Education Council Review Committee

July 1991

Volume 2
Appendix 1
Reports by or for the Committee

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Introduction

The last decade has seen major changes in the pattern of education and training participation by young Australians. Retention rates to Year 12 at school have risen from 34.5% in 1980 to more than 60% this year, with corresponding increases in direct school leaver entry to higher education. Apprenticeship intakes have risen from 34,100 in 1982–83 to a record 56,600 currently, and the Australian Traineeship System has been established as a new source of entry-level training opportunities. Participation in TAFE vocational courses is also at record levels. This major growth in participation has raised important issues about the appropriate form and focus of education and training provision at the post-compulsory level, and the organisational and delivery arrangements which will best meet the needs of the 15–19 age group. Major reviews have been undertaken in every State and Territory, leading to important changes in curriculum, certification arrangements and relationships between the sectors. For example:

- all States/Territories are now acting to promote mutual recognition of subjects offered by schools and TAFE, and to develop more flexible approaches to tertiary entrance and dual or joint accreditation;

- some innovative institutional arrangements are being trialled in a number of States and regions, involving a far closer relationship than normally applies between senior secondary schools, TAFE institutions and private enterprise;

- there is also a clear trend towards ‘convergence’ of the full-time curricula offered to young people by senior secondary schools and TAFE, reflected in the increasingly vocational emphasis of many new programs at upper secondary level and the incorporation in most full-time TAFE courses of a significant element of general education.

The next section of this paper identifies seven key issues important to the further development of post-compulsory education and training in Australia.
Despite the impressive achievements of recent years, Australia falls well short of achieving universal participation in education and training by the 15–19 age group:

- considering participation in full-time education only, participation rates fall sharply from year to year within the age group, from nearly 92% at age 15 to only 23% at age 19;
- considering full-time and part-time educational participation combined (including, for example, apprentices and trainees undertaking part-time studies in TAFE), participation falls from 95% at age 15 to 44% by age 19;
- considering a broader profile of teenage activities, more than 10% of all 18 and 19-year olds are either unemployed or not engaged in any form of education or labour force activity, and a significant (though unquantified) proportion are engaged in full-time employment with little or no training content or skill development prospects.

These data highlight several points important to a consideration of the further development of post-compulsory education and training in Australia:

- the rapid changes in circumstances and needs within this age group, reflecting the high rate of labour market entry of young people from the age of 16 onwards;
- the relatively low level of education and training participation by 18 and 19-year olds, by comparison both with younger teenagers in Australia and with young people of the same age in other comparable countries;
- the significance of part-time employment for Australian teenagers generally, and for full-time students in particular;
- the gender differences in educational participation, with full-time participation being higher for females than males but part-time (especially employment-based) participation being markedly higher for males than females.

The decade of the 1990s provides an important opportunity to achieve further improvements in the delivery of post-compulsory education and training. The absolute size of the 15–19 population will fall steadily and significantly from 1990 until 1995, and even by the end of the century will be some 20,000 lower than at present. Even allowing for the likelihood of continuing constraints on government expenditure on education and training, this relaxation of demographic pressures offers significant potential for further improvements in participation and quality at the post-compulsory level.
Against this background, it is proposed to establish a national committee of inquiry to investigate a number of key issues relevant to the further development of post-compulsory education and training in Australia. The purpose of the inquiry will be to identify the action required to make high-quality education and training accessible to all young people in the 15–19 year age group, recognising that this goal can be achieved in a variety of legitimate and successful ways. Seven broad issues have been identified for examination by the inquiry:

(a) A National Participation Target

The Australian Education Council agreed at its 60th (April 1989) meeting that participation in education for twelve years should be viewed as a desirable objective for all students, recognising that at post-compulsory levels this may involve attendance at school and/or TAFE or equivalent institutions. In broad terms, this decision establishes a long-term objective to guide State and national policies in education and training. What remains to be done is to translate this objective into more operational terms, and to identify:

- an appropriate basis of measurement of education/training participation at the post-compulsory level, recognising the diversity of course options and attendance patterns available to the 15–19 age group;
- a time-scale for achievement of the goal of universal participation, including intermediate goals to guide policy in the short to medium term.

Accordingly, the Committee is asked to advise upon:

(a) the appropriate form and level of a new national target for participation in post-compulsory education and training, an appropriate basis of measurement of that target, and a recommended timetable and strategies for its achievement.

(b) Participation for What?

Further increases in youth participation in education and training need to be matched by corresponding improvements in content, quality and outcomes. In advanced economies such as Australia's, young people entering the labour force need both a good general education and a sound vocational preparation. Increasingly these two requirements are converging in curriculum planning for this age group—to the extent that
traditional distinctions between ‘vocational’ and ‘general’, ‘technical’ and ‘academic’, ‘education’ and ‘training’ need themselves to be reviewed and redefined.

It is important that all students have opportunities to undertake a broadly conceived vocational preparation. This need is greatest at the immediate post-compulsory level, as young people with different aptitudes and interests make the important transition from full-time studies to working life. The key issue is one of balance, and of how the combination of studies and experience gained by young people at this key formative age can contribute to the competencies they will need as individuals, citizens and workers in Australian society.

The achievement of quality outcomes for all young people will carry major implications for curriculum development and for the initial preparation and professional development of teachers. Accordingly, the Committee is asked to examine and report upon:

(b) **appropriate national curriculum principles designed to enable all young people, including those with special needs, to develop key competencies, with the associated implications for curriculum development, initial teacher preparation and continuing professional development.**

(c) **Pathways and Coherence**

Current labour market and industrial developments carry major implications for education and training systems, including at the immediate post-compulsory level. A heightened emphasis on skills and training is a feature of the award restructuring process, with strong links also to the competencies acquired through a broadly-based general education. Likewise, the proposed shift from the current system of junior wage rates to a system of training wages is likely to result in increased demand for apprenticeship and traineeship places and for an expanded provision of vocational modules in schools.

Developments in competency-based training will also be important. Appropriate relationships will need to be determined, and linkages developed, between the skill standards to be established by the new National Training Board and the variety of courses provided by education and training institutions throughout Australia.

The developments just mentioned are all proceeding on a national basis, and as they come to fruition over the next few years, will have important implications for all States and Territories and the Commonwealth. Accordingly, while there is room for a diversity of approaches to the organisation and delivery of post-compulsory education and training, it is
essential that such diversity occur within a coherent national framework which facilitates mobility and articulation across States, sectors, and between education, training and employment. Accordingly, the Committee is asked to advise upon:

(c) the means by which links can be drawn between different education and training pathways and sectors to expand the options available to all young people, including those with special needs, and to achieve national coherence in entry and exit points between education, training and employment.

(d) Delivery Arrangements

All three education sectors (schools, TAFE and higher education) have important roles to play in meeting the education, and training needs and aspirations of 15–19 year olds. As secondary schools have broadened their offerings in line with rapidly increasing school retention, important questions have arisen about the content and subjects which it is appropriate for schools to provide, and how these can be delivered to students with varying levels of ability and interests. Despite the significant changes of recent years, the vocational/technical and general/academic streams are still often highly differentiated, either within the schools or between schools and TAFE. It is important that unnecessary differences be reduced or eliminated, and/or articulation be facilitated, in the interests of students themselves and their later career prospects. For example, a secondary program which is appropriate for entry to higher education engineering may not be much different from one which provides credit into the new metals apprenticeship and advanced certificate courses.

A range of approaches are evident across the States and Territories on the balance being struck between school and TAFE provision in the immediate post-compulsory years. Different delivery arrangements can be consistent with a common set of guiding curriculum principles and a broadly conceived vocational preparation for this age group, but it is timely to review how these arrangements are evolving and interrelating from a national perspective. Another consideration is the competing claim on TAFE resources arising from award restructuring and related developments.

Higher education has hitherto exerted a strong influence on the curriculum and operations of senior secondary schools in Australia. In future this nexus is likely to weaken somewhat, as increasing numbers of students proceed to the end of secondary education with work and training as their immediate objective. New relationships will therefore need to be established.
which recognise this fact, while facilitating also the transfer of students from schools to TAFE and from TAFE to higher education.

All three sectors need to strengthen their mutual links in the interests of students. Joint curriculum development, staff exchange and other forms of collaborative effort warrant a high priority in future delivery arrangements. The role of business and industry is also important, given the high numbers of young people engaged in either full-time or part-time employment.

Against this background, the Committee is asked to examine:

(d) the appropriate roles and responsibilities of schools, TAFE and higher education in the provision of post-compulsory education and training for young people, consistent with the principles and objectives identified in (b) and (c) above, and the roles of private and industry providers.

(e) An Equitable System

Research has demonstrated the strong association between participation in post-compulsory education and training and the subsequent life chances of individual Australians. On every available measure—income, wealth, labour force participation and occupational status—there is a wide margin in favour of those who gain access to education and training opportunities over those who do not. This margin can be expected to widen still further as social and industrial developments place a higher premium on skills and competence.

Despite the strong growth in education and training participation in recent years, thousands of young people neither complete their secondary education nor participate in further education and training. Many of these young people come from family backgrounds of educational and social disadvantage, and are themselves at risk of suffering long-term economic and labour market disadvantage. There are also significant numbers of students who have disabilities. Equity demands that effective strategies be devised to improve the access of these groups to learning and skills development opportunities.

Accordingly, the Committee is asked to identify:

(e) current barriers to the effective participation of disadvantaged young people, including those with disabilities, in post-compulsory education and training, and strategies for increasing their participation and improving their educational and labour market outcomes.

(f) Careers Education and Counselling

Young people need to have access to reliable information and counselling as a basis for their decisions on subject choice,
further education and training, and eventual choice of career. The information and counselling provided should emphasise the critical importance of further education and training to their subsequent employment opportunities and prospects, making clear at the same time that there is no single 'best' path to success.

The advantages of a higher education qualification are already well recognised in the community, but more needs to be done to publicise the merits of TAFE as a legitimate and rewarding post-school destination for students. More also needs to be done to inform students of potential career paths that can be linked with further education and training in both TAFE and higher education.

In light of these considerations, and having regard to recent studies and reports in this field, the Committee is asked to assess:

(f) the implications of current and prospective changes in post-compulsory education and training for the provision of careers education, information and counselling to students, including the requirements for information on educational pathways and associated career paths.

(g) Resources and Funding

The resources required to meet national objectives in post-compulsory education and training will depend on a range of factors, including demographic trends, participation targets and the cost structures of alternative institutional and delivery arrangements. An analysis is needed of the overall resource requirements associated with different options, and of the funding implications for the Commonwealth and the States. Accordingly, the Committee is asked to assess:

(g) the likely resource and funding implications of existing trends in, and further strategies for, post-compulsory education and training.

Terms of Reference

Flowing from the issues identified above, the terms of reference for the national committee of inquiry will be as follows:

"Having regard to the findings of previous relevant studies and reviews and having regard to current reviews and working parties and initiatives being implemented in each of the States and Territories, to report to the Australian Education Council and to Ministers of Vocational Education, Employment and Training on the future development of post-compulsory education and training in Australia, with..."
particular reference to those young people who have left school and are not participating in a formal education or training program. The Review would consider:

(a) the appropriate form and level of a new national target for participation in post-compulsory education and training, an appropriate basis of measurement of that target, and a recommended timetable and strategies for its achievement;

(b) appropriate national curriculum principles designed to enable all young people, including those with special needs, to develop key competencies, with the associated implications for curriculum development, initial teacher preparation and continuing professional development;

(c) the means by which links can be drawn between different education and training pathways and sectors to expand the options available to all young people, including those with special needs, and to achieve national coherence in entry and exit points between education, training and employment;

(d) the appropriate roles and responsibilities of schools, TAFE and higher education in the provision of post-compulsory education and training for young people, consistent with the principles and objectives identified in (b) and (c) above, and the roles of private and industry providers;

(e) current barriers to the effective participation of disadvantaged young people, including those with disabilities, in post-compulsory education and training, and strategies for increasing their participation and improving their educational and labour market outcomes;

(f) the implications of current and prospective changes in post-compulsory education and training for the provision of careers education, information and counselling to students, including the requirements for information on educational pathways and associated career paths; and

(g) the likely resource and funding implications of existing trends in, and further strategies for, post-compulsory education and training.”
Appendix 1 (B)

Appendix 1 (B)


Seminar organised by the United States Department of Education and the Organisation of Economic Cooperation and Development (OECD)

19-22 March 1991
Phoenix, Arizona
United States of America
Preface

Mr T. B. Finn
Chairman
National Review of Post Compulsory Education and Training

Dear Mr Finn

We were most appreciative of the opportunity provided by the Review Committee for us to represent Australia and the Review Committee at the OECD/USED Seminar on ‘Linkages in Vocational-Technical Education and Training’ (VOTEC), hosted in Phoenix, Arizona, under the joint auspices of the OECD and the United States Department of Education.

We found the Seminar most useful in gauging the current state of thinking amongst developed nations, and have worked hard to distil the key features for the National Review in our Report.

We would emphasise the views contained in this Report outline our synthesis of the international debate as perceived from the Seminar discussions. They are not intended to be prescriptive of Australian policy positions, but represent an appraisal from our perspective.

We tender this Report as input to the work of the Review Committee.

Yours sincerely

N W F FISHER, AM
Member
AEC Review Committee on Post-Compulsory Education and Training

Ms L A BERESFORD
Secretariat Member

4 April 1991
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Chapter 1

Background

The Global Context

Although the Seminar focus was limited and perhaps even restricted, it was very evident that the issues were primarily determined by a unique and dynamic global context. Throughout the developed world there has been concern expressed about related issues of workplace reform and the workforce, the impact upon national and international economies of the globalisation of trade and economic matters, and the consequential issues of major workforce upgrading. The pressures of rapid technological development, and the ramifications of an inadequate human resource base of skill is becoming an issue of increasing concern to all nations, irrespective of their current economic status in the world. These broad trends have been overtaken by more specific developments such as the development of regional economic blocs evidenced in the development of the European Community of 1992, the emergence of the USA/Canada trade bloc, and the ‘shake out’ of the broader global environment. These are matters of considerable concern to countries involved. Equally, these concerns have been shared by countries such as Australia which are not members of any such bloc (except the CER—the Common Economic Region).

The OECD seminar focussing on developing more coherent Linkages in Vocational Education and Training (VOTEC) provided an excellent forum in which to debate the issues, and to share expertise and advice on how to develop national ‘best practice models.

Rationale for the OECD Seminar

The Seminar is one of a series being conducted through 1991 and 1992 as a result of a decision in the late 1980’s by the Education Committee of the ECD Manpower And Social Affairs Directorate. The agenda and participation reflected an aim that

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1. The collapse of the political and socio-economic Eastern Bloc since 1990 is a factor which is likely to have massive ramifications upon the economic and socio-cultural fabric of Europe. Indeed, the economic impacts and expanding emigration across the boundaries of the now defunct ‘Iron Curtain’ are already having major impacts upon European collegiate nations of the OECD, not least the VOTEC systems.

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member nations would benefit from an information exchange on current policy issues in vocational education (known as VOTEC at the Seminar) especially in response to the increasing pressures on VOTEC flowing from national and international economic development.

At the time when the seminar was proposed, there was no indication of the sweeping changes which were to occur throughout the Northern Hemisphere. These changes were an important backdrop to the discussions and added a special urgency to the interest of many countries in reform of their VOTEC sectors.

**Seminar Objective**

The overall purpose was intended to be the provision of an opportunity for OECD country representatives to exchange ideas and information on the issues of linkages between secondary and post-secondary education and with employers. In the event, the subject of linkages was somewhat overwhelmed by broader issues. Nonetheless, enough information was gained to indicate current thinking on linkages.

**Participation**

Some 16 countries were represented typically by senior officials from the VOTEC agencies, with OECD union and employer representatives (and BIAC, TUAC and CEDEFOP). The Seminar was also attended by observers from various levels of US Government agencies and other national and State organisations. Although there was a reasonably complete presence of OECD member nations, the absence of New Zealand was notable from an Australian perspective, while the low level representation from Japan and Canada suggested that these countries may not be attaching the same priority to national skill formation policies as other countries.

There was also a perception at the end of the Seminar that the under-representation of the interests of employee organisations, general educationalists, teachers and consumers may have diminished the balance in some discussions.

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2. BIAC: OECD Business Industry Advisory Council  
TUAC: OECD Trade Union Advisory Council  
CEDEFOP: EEC Centre for vocational training
Chapter 2

General Overview

Introduction

The Seminar demonstrated substantial cross country recognition that several critical issues are impinging on vocational and technical education (VOTEC) institutions and practices. Internationalisation of industries' outputs and production processes is simultaneously increasing expectations as to the skill requirements of workforces, whilst globally, nations are tending toward convergence in strategies for the appraisal of skill requirements.

There was a broad acceptance that skill formation will be critical to solutions and delivery of socio-economic problems. Implicit in this was a broad awareness of the deficiencies of existing pedagogical techniques in equipping youth (and adults) with the requisite skills for productive and meaningful employment.

Somewhat unexpectedly, there was a general consensus that existing VOTEC systems are neither adequate nor valued enough in a rapidly changing environment, nor are VOTEC systems changing rapidly enough to accommodate these pressures. That is, changes in technology and industry structure are outstripping current educational and training capacity. This now requires a 'rethink' of the key parameters involved in consideration of educational and training policy developments, and planning processes.

There was also a growing recognition that the current wastage of a nation's youth in and from education and/or training has wider ramifications other than those previously perceived, in particular, upon government policies including welfare, health and social security.

Current schooling practices have inadequately prepared, and for some even 'traumatised', students for the essential continuing education that they will require for their working lives. On the other hand, the increasing complexity of work now requires a longer and more comprehensive period of entry level education and training for youth than hitherto has been the case.

Despite this assessment, countries cannot rely on simply 'fixing' the policies, institutions and practices as they relate to youth, as this is too slow a process given that seventy per cent of the workforce in 2001 are already at work. Indeed, it is arguable that there are 'no quick fixes'. This strategy must be matched
by aggressive action with respect to the current adult workforce, which has concomitant implications for the nation's adult education and retraining provision.

There was clear evidence in the seminar of a great interest in the package of initiatives in Australian TAFE and Training over the past few years. These were widely seen as a pragmatic and comprehensive model, where implementation is already well advanced.

Nonetheless, there is general acceptance that solutions will of necessity, be 'country specific' initially. There was also clear recognition that cultural variabilities indicate that there will be no 'one superior conceptual model'. The acknowledgement by the Federal Republic of Germany (FGR) that the much vaunted 'dual system' had problems, was a major sign of the changing times. In these circumstances, there was strong support for the analysis of 'best practice' across nations as an invaluable means to gauge options.

There appeared to be general acceptance conceptually of the need for more developments which would achieve better integration of on-job/informal VOTEC and off-job/formal VOTEC. However, there was also private awareness that such extensive changes to the means of accessing the differential rewards of career opportunities, could have profound social implications. There was thus, recognition of the prospect of major political reactions.

Finally, there was a flicker of recognition that:

- VOTEC itself will increasingly have to conform to international pressures; and
- the need for workplace reform will itself require changes in education and training. As a corollary, workplace reform will be required to achieve the full potential of gains in productivity from a better educated and skilled workforce.

Additionally, a more highly vocational skilled workforce must be placed in the context of employment opportunities, and within the context of socially responsible and sustainable economic development. Enterprise and general economic development must be placed within the context of broader ecological sustainability. Australia has been to the forefront in policy decisions to control ozone depletion, for example, and the issue of sustainable economic development will be a major focus of governments of the future.

3. Germany, Sweden, Denmark, the Netherlands and the USA, evidenced by requests for literature on the Australian model.
Chapter 3

Key Themes

Pathways Through Education and Training

There was widespread agreement that ‘pathways’ is a powerful and persuasive concept to drive policies and practices for post-compulsory education and training. The ‘pathways’ concept usefully highlights the importance both of signposts (or information) for students and also of incentives that together will ensure that the free choices of students are consistent with national requirements. Again, it takes little extra effort to translate the bridges and stepping stones of the pathways analogy into the articulation and credit transfer arrangements necessary for smooth transitions from one education and training path to another.

The concept of ‘pathways’ effectively encapsulates the reality that students have various starting points (in schools, and training), and will wish to pursue an array of employment destinations. (These may be changing with technological and economic imperatives.) A fundamental virtue in the pathways concept is its positive overtones of clear points of progression, and successive educational and training milestones. These milestones can then be regarded as defined in competency (or outcome) terms rather than as they are currently defined by duration (or time served).

The essential message of the pathways concept is for clear planning. How can we devise paths, bridges, signposts and incentives that provide a diverse student/youth body with a variety of tracks between compulsory schooling and continuing employment? The presumption should be that employment destinations, educational qualifications or training modes should not be inaccessible merely because of an early, often mistaken, choice.

Finally and not least, ‘pathways’ can be translated to the VOTEC system’s consumers in a manner which can be readily understood by all. For students, the message is that they will face successive choices in their progression through post-compulsory education and training years, and that the system is being designed to prevent them from being steered into

'dead-ends', while for unions and employers, paths through education and training can clearly link up with career paths through employment.

The aim is to develop a framework of pathways with multiple entry and exit points, built on clear guidelines, which encourages individuals to develop a capability for making informed choices, coping with change and the concept of lifelong learning. In so far as the concept involves a plane rather than a hierarchy, the underlying premise is that all levels of education are flagged as important: senior secondary, university Baccalaureate, VOTEC Associate-Diploma and Diploma programmes, industry based experience and modules which are skill specific.

The Pathways concept would acknowledge the increasing international recognition of the need for both youth and adults to be provided with access to appropriate learning and cognitive skills development over a learning lifetime.

The Seminar was aware that the practical translation of the pathways into specific education and training arrangements 'on the ground' had not proceeded very far and was the next major step. These were enough leads in the Seminar papers and plenaries, coupled with modest Australian experiences to enable us to discern some principles which should guide the translation of pathways into practice. (Note Attachment 1)

The Seminar discussions highlighted a complementary concept to pathways which was policy and administrative 'linkages'. Firstly, linkages were seen as multi-dimensional viz policies and practices for VOTEC needed to be appropriately linked with policies and practices in other contexts eg. youth, social welfare, and industry development. Secondly, there must be good linkages between public VOTEC and the other key stakeholders/players, specifically employers and unions.

Finally, there needs to be deliberate focus on achieving linkages within the educational sector(s) between public vocational education and training and other forms of education such as schools and higher education.

Although not elaborated to any extent, it was also generally accepted that institutionalised delivery agencies and industry 'in-house' providers of VOTEC would also benefit from the development of a 'transparent' framework of policy guidelines.

These concepts are conceptually different yet essentially complementary. The effectiveness with which these pathways for students are constructed and maintained, and the management of the 'linkages' for information exchange between the various stakeholders will be the key to the success of such a strategy.
The concept of 'sustainable employment and training ability' raised in the General Overview suggests that education and training should NOT be perceived as sets of 'blocks'. The dynamism of the broader environment in which VOTEC operates requires more fluid policy development strategies and implementation mechanisms.

One conceptual framework which will capture this 'fluidity' in the dynamic sector of VOTEC would be to envisage lifetime learning through education and training as a continuum. (See Figure 1)

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**Figure 1 'The Learning Continuum'**

**LEGEND**

--- SERVICE PROVIDERS — the 'Thread'

TAFE/Higher Education (multi-modal)

Private Providers

Enterprise Based Providers (on-job education and training)

Schools

The model described as the Continuum should be considered simplistically as a fluid form of pathways which provide
flexibility for individuals in moving in and out of learning modes. An individual may access learning at a given point in the situational context (on-job) but at all stages is progressing along the continuum. The individual may then move along the curve to develop the appropriate cognitive/theoretical appreciations of the experientially based learning experience. At all times, an individual learner is moving ahead, not regressing. Such a model encourages the lifetime learning concept, and enhances the likelihood of adoption of on-going learning. If the individual moves along various paths, there should also be available a mechanism to minimise the likelihood of duplication of previous learning experiences.

The continuum can be visualised as discrete delivery agencies providing learning experiences in discrete modes. It becomes the ‘thread’ which links all of the learning experiences together.

This ‘blended model’ when related to the continuum, has three separate but complementary elements:

- curriculum changes within each separate education and training sector;
- joint programs between sectors (especially schools and VOTEC); and
- development of “learning to learn” capabilities.

The traditional ‘lock-step’ model has been based on clearly delineated demarcation points between categories of education: broad ‘general education’ distinguished from more vocationally related and oriented educational choices. In simple terms, this model was reflected in schools which focussed almost entirely on general education; and alternatively, vocational education institutions which were similarly dominated by vocational education to the exclusion of general education. The same distinction has also precipitated a ‘mind set’ that the academic path was the only really viable route to economic rewards in the individual’s working life.

International experience is showing clearly, that this type of distinction is not only unsustainable, but in many respects, is one of the major obstacles to economic regeneration of the workforce, and the process of work re-organisation to meet the demands of rapidly changing technology and production processes.

It became clear at the Seminar that most developed countries are actively investigating how to inject elements of VOTEC into school based ‘general’ education, and conversely, elements of ‘general’ education into VOTEC. The example of the Finns who are moving to require second language (Swedish) competencies in a broad array of vocational courses on the one hand, and Arizona State moving to inject vocational material into Year 7 secondary curricula, were indicative of such developments.
The 'blended model', or inter-mingling of learning and cognition styles has occurred as a direct result of the increased cognitive demands imposed by high technology at the workplace in areas which in the past, have required relatively unskilled labour. The representative from German industry\(^5\) emphasised that the context of the workplace has changed as a direct result of the imperatives of technological development. Where in the past, on the assembly line, for example, people could be trained within a week, and required little cognitive ability at any sophisticated level, the modern workplace demands a far higher level of intellectual acuity of 'base-level' workers. The modern workplace demands workers with familiarity and confidence with information technology, and more advance levels of language, communication and numeracy skills.

Most importantly, the capacity to be a worker with broadly applicable skills such as inter-personal communication, and process skills of conflict resolution, problem solving, working autonomously, and conversely, also being proficient in working in a team are the skill characteristics which will provide the flexibility so important to enterprise, and provide the security of adaptability to the worker.

Internationally, it has been estimated that the 'half-life' of skills and knowledge is shrinking. An estimate of 5 years before skills need to be up-dated, and strategies re-aligned, was the subject of keen interest.\(^6\) It was noted that the Japanese have proven to be most efficient in coping with these changing demands, and it is integral to their lifetime employee concept.

There was also at this international Seminar, a recognition of the growth in the service sector as the major labour market of the future.\(^7\) (This is a characteristic which is clearly visible in Australia, particularly in those States and Territories with a heavy investment in the tourism, hospitality and travel sector.) This sector has substantial requirements for employers with interpersonal skills who are capable of problem solving in diverse circumstances, skills which should flow naturally from their general education.

It was proposed in the Seminar 'Summation' debate that the 'class structure' of the developed world has undergone a dramatic transformation in its nature and characteristics. In the international forum, it was suggested that the 'middle class' is becoming increasingly a 'class' of employees. This is evident in

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5. Muller, H.K. Direktor, AEG Aktiengesellschaft, Thordor-Stern-Kai 1, Frankfurt.

6. Papadopolous, G. in the 'Summation' session, Day 4 of the Seminar. Also, Professor Shoji Murata commented on this in the 'Break-Out' Workshop on Seminal Paper No. 1.

the more heavily populated countries, although in Australia, the large number of self-employed small and medium sized business owners distinguishes this country in some respects, from its European counterparts.

There was discussion in Seminar sessions of school-VOTEC joint programs, as was initially anticipated, but Seminar participants had the opportunity to visit and inspect several examples in the Phoenix area. Many of these were comparable to ‘best practice’ of Australia (as reported in the AEC 1990 document ‘What Works’) but there were two or three examples of significance to the Review.

A. Mountain Valley Community College had a joint program with local high schools, that identified students ‘at risk’ of early ‘drop out’ from secondary education, and enabled these to enrol at the College to pursue vocational subjects as part of their secondary studies. This opportunity was reinforced by sustained and relatively intensive counselling or remedial assistance in each institution which a targetted individual was attending. Although it is early days, the retention and success rates reported were impressive.

B. Chandler Campus of the Maricopa Community College (Note Attachment 1) has developed an innovative, self-paced learning/modular framework for ‘drop-out’ secondary level students, which encourages them to return to their studies in a relatively informal setting. Based on a Community college Campus, the facility provides the students with access to a different, more relaxed learning environment, supported by specifically selected teaching staff (as facilitators of learning), where they can study for their High School Diploma as well as accessing vocationally relevant and recognised Community College subjects. The program has been targetted at teenaged mothers, and has had considerable success in ‘recovering’ students who would otherwise have been lost to the system, and ultimately, society.

These examples have led us to distinguish for analysis and policy development purposes, three broad categories of action:

- ensure ‘at risk’ groups of students are retained. This must be targetted at mainstream students;
- provide remedial/preventative intervention to prevent the risk of ‘drop-out’; and
- develop a recovery strategy for students who have already ‘dropped-out’.

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Partnerships

The Seminar provided the opportunity to examine the types of partnerships which have been adopted by other countries, including the USA in pursuing national policies and objectives for vocational education and training. In the discussion of partnerships, there were several examples of relationships which extended beyond regional borders or 'territories'.

A variety of experiences with different organisational arrangements with different roles for each of government and industry and educational sectors were presented for discussion. However, there was widespread agreement that while the mix will differ between countries, effective strategies must involve partnerships which are balanced and equitable. Such partnerships will require the role of each partner to be distinctly identified and respect. The effectiveness of partnerships depends not only on clear roles and co-operation in pursuit of common objectives, but also mutual respect for the integrity of each partner.

Partnerships between institutions have been seriously jeopardised by the predatory actions of partners to try to capture functions and resources.

The early presumption in the Seminar that employers could lead skill formation was strongly challenged. The conclusion reached was that industry could only be an effective partner if governments clearly specify the legal framework and provide complementary services through public institutions for students, areas and functions where employers have an innate deficiency.

The role of Trade Unions was not adequately addressed in the Seminar, possible reflecting the regional proclivities of Arizona which does not endorse organised labour. Nonetheless, both Australia and other European countries drew attention to the constructive and valid role played by unions in skills formation policies. Mr Niels Hummeluhr commented that there must be balance between flexibility and centralisation of provision of VOTEC, and that such provision must be one where there is a consensus between a majority of employers and labour groups in designing the training models for all people who desire training.

Although there was general acceptance amongst delegates of the development of training markets, there was surprisingly little recognition that private 'for profit' training providers could play a significant role. Even when raised, US delegates focussed mainly on deficiencies in the performance of Proprietary

8. Mr Niels Hummeluhr, Deputy Permanent Secretary, Danish Ministry of Education, Chair of OECD Education Committee, in response to Seminar Paper No. 3 on the Roles of Unions and Employers. Paper presented by Mrs Mari Sako.
Providers, their graduates, and the regulatory framework under which they operate. This reaction was consistent with anecdotal evidence that articulation and credit transfer between US Community colleges and Proprietary Companies was negligible.
Information obtained from other countries and seminar discussions suggested there were several areas where early investigation should be undertaken. Generally such issues have been noted through the text of this Report. However, several particular issues merit specific attention:

A. Collaboration in Blending of Vocational and General Education in Secondary School and TAFE.

While much can be done within individual States and Territories and/or within each educational sector, in developing a more blended approach to curricula, there would seem to be significant gain from some national level collaboration. There could be benefits from an early joint venture between the Schools Curriculum Corporation and the Australian Committee on TAFE Curriculum to establish guidelines for achieving a blended curriculum across both sectors.

B. TAFE/School Links

Although Phoenix had some useful models worthy of Australian consideration, it was equally apparent that the diversity of Australian experience in TAFE/school links would be a helpful guide to many other countries. However, no country has yet developed a policy based, analytical framework which might guide the development of such linkages, or provide the basis for monitoring or evaluating their effectiveness. This deficiency will become more significant as the priority attached to school/TAFE transition (or school/vocational education and training transition) becomes more important nationally. It would thus be useful if the Directors-General of School and TAFE could commission a joint working-party to develop an appropriate model of school/TAFE links.

Such a model would identify key features—objectives; target groups; roles and responsibilities—and characteristics of good practice—explicit agreed statements of joint intent, clear governance and management arrangements, and reporting and accountability arrangements.
C. Adult Education Learning Strategies

The Seminar noted that most research and development on learning strategies and practices had focussed on young people in schools. There was wide agreement that were real difficulties in extrapolating these results to adults with much more diverse characteristics in equally diverse learning environments. It would seem appropriate for TAFE systems and VEETAC to identify this area as a major theme for research and development within the national strategy now to be developed by a VEETAC working party.

D. International Cohesion and Skill Standards

The Seminar noted that the EC, UK, Australia and New Zealand were already advanced in the development of national vocational skill or qualification standards. Such standards were intended to achieve greater consistency, and thus efficiency, in vocational education and training, and greater flexibility and mobility in labour markets. While developments of these standards will have to relate closely to the particular features of each country(ies), there was likely to be little immediate scope for achieving bilateral, multi-lateral, much less international consistency. On the other hand, it was accepted that there was scope for moving towards consistent intellectual frameworks, concepts, and terminologies, that would be central to future international dialogue on skill standards. There was thus support for an OECD initiative in establishing such a framework. As international recognition of Australian skills will become more important as our labour market becomes more internationalised, we saw Australia well placed to take an active role in encouraging such an initiative in the methodology of skill standards.

D. Articulation/Assessment

Given the importance of the issues of articulation, assessment and credit transfer to both the youth group and VOTEC more broadly, there is potentially much benefit to be gained from Australian participation in the Organisation for Economic Development and Co-operation (OECD) forthcoming seminar on these topics.
Principles to Guide Provision of Education and Training for Post-Compulsory Youth

1. Preamble

The issue of developing more appropriate and relevant principles to underpin policy initiatives related to the provision of vocational education and training (VOTEC) was the underlying theme of the OECD conference on 'Linkages in Vocational-Technical Education and Training' held in Phoenix, Arizona from 19-23 March 1991.

The most important outcome from the Seminar was the realisation by all participant nations that the status and quality of VOTEC provision was becoming increasingly important for all policy makers and all governmental systems. The key stimuli which have predicated this interest in VOTEC have been:

- the emerging downward demographic trends in the youth labour market; and
- the inadequacy of existing VOTEC provisions in skilling the current and future workforce of member nations.

The substantive 'Report on the Australian Delegation to the Organisation for Economic Development and Co-operation Seminar' provides the context against which the comments in this Appendix should be placed.

2. Nationally Agreed Strategic Objectives

A. A Preventative System

In considering the methods which could be adopted by governments in addressing the issue of youth education and training policies, the major focus should be on developing more appropriate preventative mechanisms to prevent an expansion in the number of youth in the "at risk" category: the 15-19 year old unemployed, ill educated cohort. Currently, this group comprises 25.5 per cent of the age group.¹

One of the chief problems relating to this age cohort, identified by educational administrators and policy planners internationally, lies in youth's relative disinterest in the existing curricula, and

their disillusionment with the pedagogical techniques of traditional schooling. Failure to provide a perceivably relevant and interesting curricula for young people is major reason for their choosing to 'opt out' of existing systems.

B. Recovery System

Currently, Australia lacks a sufficiently cohesive, structured or readily accessible recovery system for “at risk” youth. TAFE Colleges are a major provider of this type of education and training, and the Commonwealth government and State and Territory Governments provide a variety of access and bridging programs for disadvantaged youth. These include JOBTRAIN, JET, Skillshare and the like.

However, many young people still find these programs to be less than satisfactory. One reason lies in their perceptions of stigma associated with these programs, and their cynicism as to the real value such programmes provide in enabling them to access meaningful and rewarding occupations in the labour market.

Many of the programs are also perceived to be ‘like school’ and thus traumatise young people even further. The Alternative High School model in embryonic form at the Chandler/Gilbert Community College Center (Maricopa Community College, Phoenix, Arizona), run in close cooperation and in conjunction with the Chandler Unified School District offers a unique alternative for such students, and is a strategy which could readily be adopted throughout Australia’s network of secondary schools and TAFE Colleges.

C. Remedial System

Provision of adequate remediation for traumatised and slow learners in a more appropriate and non-threatening, non-institutionalised setting would provide a useful means for assisting young people back into the labour market, and off the social security lists. TAFE Colleges, Adult Education and Community Groups do provide remediation for illiteracy and innumeracy. However, increasingly, industry is suffering from the cost impost of workers with inadequate levels of literacy and numeracy to cope with an increasingly more complex technologically driven workplace. The situation in Australia is replicated in other countries, notably the USA and UK. It is not such a problem in European countries such as Germany, France and the Scandinavian countries which place a very high premium on sound general education in the Primary and Lower Secondary sectors. However, these countries face the implications of demographics more forcefully than does Australia yet.
Interestingly, also, these countries incorporate a sound core of education into their vocational programmes, an area in which Australia is deficient.

3. Characteristics of Education and Training

A. Clear, Accessible and Diverse Pathways

To encourage disadvantaged, and/or “at risk” youth to return to education and/or training, governments must develop clearly recognised and understood pathways back into the mainstream for these young people. The current system relies very heavily on the Social Security/Commonwealth Employment Service network to identify such youth, and to steer them into remediation programmes. For many, however, this method is seen as the ‘stick’ part of the “carrot and stick”—either they enrol in a programme or lose their benefits, or alternatively, take an uninteresting, often dead-end job to avoid losing benefits.

An increasing number of youth do not appear on the CES lists anyway, as a result of the removal of Social Security benefit from the 15–17 years age group, in favour of an education/training package. These types of young people become the hard core unemployed—the “street kids” of the major cities who currently are tending to from a very strong and impermeable sub-culture of their own. The unfortunate side effects of this sub-culture are experienced in the increasing number of youth suffering from AIDS, being exposed to this and other STDs, and the steady development of the drug culture in major cities in particular.

Until these young people can be reached in a more comprehensive and acceptable manner, it is unlikely that they will be able to be assimilated into the mainstream in any numbers.

The world of ‘shadow work’ described by Ivan Ilich in the 1970’s\(^2\) has been supplanted by the term, ‘work shadowing’. The latter is preferable, as it provides young people with a meaningful economic and cultural context against which the theoretical knowledge imparted in the schooling system is made

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2. Ilich, I on ‘Shadow Work’ discussed the lack of recognition given to ‘work’ which underpinned the wider world of ‘legitimate’ labour. He was referring to the work provided by women at home, raising children and managing the home, as consumers of market products, of ‘carers’ in the home, who looked after socially disabled groups eg. infants, young children and the elderly. These have never been costed for this contribution to the wider economy.
meaningful. Frequently, the ‘at risk’ category of youth who become the hard core unemployed become co-opted into the ‘shadow work’ context articulated by Ilich, frequently within the wider policy purview of social security, social welfare and social control mechanisms such as the justice and corrective services areas in adult life.

B. Curriculum Principles Encompassing Both General and Vocational Education

The “traumatised learner” concept was one which received wide recognition. Not only youth can be categorised in this manner. Many adults in the workforce, or on the unemployed lists fit into this category. These are individuals for whom the traditional ‘chalk and talk’, reading oriented education system has failed. This is a common phenomena in TAFE Colleges, where adults enrol in programmes to up-grade skills to become more marketable in the labour market, but feel inadequate in being able to cope with the demands of the educational system. There is arguably a decay in learning skills over a period, which requires sensitive and supportive pedagogical techniques to encourage these people to re-hone past skills and learn with more confidence.

New pedagogical styles such as those describe in Senta Raizen’s paper, with the emphasis on experiential learning, addressing the close relationship between practical expertise and subsequential theoretical understanding of principles has been the focus of the much vaunted German “dual system”, the Japanese system, and that utilised in Denmark and other European nations.

This research supports the contention that education and training takes place in a variety of situational locations, and that each should be recognised and accepted for its intrinsic as well as its extrinsic qualities. The motivators and incentives need not necessarily be monetary. They can often be in the form of recognition of acquired skills measured against job satisfaction and personal and professional prestige. This is the thrust of Competency Based Training (CBT) and the Industry-

3. ‘Youth Apprenticeship, American Style: A Strategy for Expanding School and Career Opportunities’, Dec. 1990, Washington DC: “Work Shadowing” is a concept used by the United States Department of Education in referring to means by which more of the 70% not destined for 4 year College can be given the opportunity to gain relevant education and training which will prevent more from disappearing into dead-end employment, or onto the social welfare statistics.

Award Restructure process in Australia. Situational learning has many benefits, and is a practice the USA is keen to develop through its proposed youth apprenticeship system.5

C. Teaching Methods

For such developments to occur, the issue of Teaching Method (pedagogical techniques) becomes a major issue. The Seminar agreed that there has been little in the way of substantial research into the issue of adult learning styles—andragogical techniques. The demographic trends which indicate a reduction in the numbers of youth entering the labour market in the next decade, indicates that this must become a major focus for government, industry and organised labour in the future. The emphasis will have to focus on retraining the existing workforce and providing them with skills in adapting to changing work requirements and technologies.

Governments must focus on:

• who is teaching skills
• where they are being taught or acquired; and
• how the skills are being taught and acquired.

D. Mode of Teaching/Learning

In the vocational education and training sphere, this means a re-evaluation of the mode of educational delivery. The block release system has its attractions for off-job training, specifically for larger corporations which have the capacity to absorb the loss of production time more readily than smaller enterprises. Considering the fact that small and medium-sized enterprises comprise the majority of Australian employers, the issue of mode of delivery must be addressed as a matter of urgency. More flexible release methods including regular day/evening release, part-time attendance for workers would provide these employers with greater incentives to encourage skills up-grading in their workers.

It was noted in the Seminar discussions that the needs of small and medium sized businesses were not always well served by enterprise-based VOTEC, which had led to the establishment of jointly owned and managed Training Enterprises in Germany, and the training levy used by France.

E. Style of Learning

There is an increasing emphasis within vocational education institutions that the greatest demand is emanating from the adult learner, who has different motivations to learn from youth. The adult learner tends to be more autonomous, is self motivated and demands free choice in choosing learning styles. This is characteristic of the ‘technologised’ workplace of the future.

These are the skills required in youth to prepare them for the demands of the workplace of the future. All young people need to have a sound grounding in the three categories of skill formation:

- general/generic skills
- process skills (including problem solving, conflict resolution etc.); and
- technical skills related to the specific tasks required in different work environments.

Students must be encouraged to pursue options which access them to informed choices about the character and nature of the content and the situation in which they acquire content proficiency. The adult worker tends to have the advantage in this area as a result of the varying and differentiated situations in which they acquire knowledge. For youth, it is essential that they also be given more exposure to a wider range of cognition acquiring methodologies than those traditionally associated with the “skills specific”, item oriented process of the “traditional” schooling system.

F. Articulation

To enable all workers to benefit from enhanced learning options and modes of delivery, it is essential that not only are clear pathways illustrated for entry-level and continuing workers, but that clear mechanisms for articulation between systems are spelt out. This requires much more transparent and readily understood mechanisms for recognition of proper learning, recognition of current learning and pathways for future learning.

A natural concomitant of this is the need to ensure that there are transparent accreditation processes which are at “arms length” from providers of education and training, whether it be by public provider (schools, TAFE and university), private providers or industry-based education and training. The regulatory issue is a vexed one, and it is arguable that RATE, the Register of Tertiary Awards is not necessarily the most appropriate body to undertake this issue.
G. Assessment

The current trends towards CBT on-job is increasingly being incorporated into both TAFE and schools assessment processes. The VCE and the Queensland Tertiary Entrance Portfolio approach are two indicators of this form of assessment for school leavers. Other states and territories have adopted similar models. The criteria-based, CBT model provides better signals for industry in recruitment and development of staff. Terminal—'lock-step' type models of assessment of learning have proven to be inadequate to meet current demands. This is another argument in support of the 'Learning Continuum', and fluidity in recognition and accreditation of learning.

H. Certification

As noted in paragraph F above, accreditation processes must change to meet emerging imperatives for flexibility and adaptability across sectors, whether educational institution or industry/enterprise based. All stakeholders in the VOTEC process must be incorporated into the process of curricular developments, delivery, pedagogical techniques and ultimately, the certification process.

Within certain industries (viz Metal Trades) there has been significant progress made in the field of CBT and recognition of skills. The National Training board (NTB) has developed a framework for skill development and recognition for the future. At the operative level, these developments are quite advanced. However, there will need to be a significant amount of research undertaken to provide frameworks which will incorporate similar recognition for the more esoteric, cognition skills required at higher levels of enterprise development.

4. Monitoring, Reporting and Evaluation of Outcomes

To achieve nationally recognised goals in these critical areas, it is essential that a nationally recognised, cohesive, coherent and co-ordinated approach to the strategy be applied. The strategy for future coherence is underpinned by the demands of 'outcomes oriented' strategies. In the past, the Australian educational and training system has been heavily focussed on inputs in the form of dedicated Consolidated Revenue allocations, distributed on a per capita basis to meet equity and redistribution criteria. Laudable as these methods are, the incremental budgeting strategies of government resource allocations of the past are no longer relevant in the wider environment.
The move towards competence based training, the ramifications of Award and Industry Restructure which underpin the TAFE and Training Package which is being implemented in Australia have major ramifications on governments as major employers. Economic rationalism demands an outcomes oriented focus, with demonstrated performance and measurement processes clearly articulated.

Monitoring will increasingly involve closer assessment of performance in educational institutions and other educational training agencies. This will increasingly be tied to Performance Oriented Resource Agreements. This underpins the Commonwealth—State/Territory Resource Agreements for TAFE, and agreement achieved by consensus by MOVEET (the Ministers for Vocational Education, Employment and Training) in 1990.

The Ministers for Education have given a commitment “In Principle” to achieving similar outcomes for education, particularly as it relates to curriculum development and implementation throughout the nation’s schooling sector. Evaluation should involve assessment of whether or not agreed Performance Targets have been achieved, where deficiencies may have been identified, and the development of strategies for remediation of such deficiencies, particularly as they relate to spatial equity and other equity issues.

5. Structures—At State/Territory Discretion

'Structures' as a generic term has implications for organisational structural transformation to enable the process of enriching the curricula and lifting both the 'floor' and the 'ceiling' of Australia’s workforce to meet the rapidly transforming technological imperatives of the workplace of the future. Implicit in this argument, is the realisation that existing structures have in many senses, become impediments to the development of youth marketability in the labour market. Additionally, the educational and VOTEC systems have to be geared more tightly to meeting the needs of re-skilling and up-skilling the existing adult workforce.

Key Concepts

A. Governance of Institutions—Learning Institutions

The demands of the future in the world of work focus on several key competencies which interact symbiotically:

- self-directed and self-paced learning;
autonomous decision making capacities, ‘trouble-shooting’/diagnostic skills and remediation techniques;

- the capacity to identify problems and develop appropriate contextually related solutions to those problems.

These generic skills which are increasingly required in the workplace have implicit ramifications for the manner in which learning institutions are organised and operate. The concept of ‘top-down’ driven decision-making in the administration of the affairs of VOTEC institutions in particular, undermines the very pedagogy which is relevant to the demands of industry and enterprise in the wider environment.

The desire to create workers who are more autonomous in their working life, yet who can work cooperatively as a work team or unit, must be replicated in the institutions which provide much of the generic VOTEC for society at large.

This requires institutions with higher levels of self governance and autonomy in decision making, staffed by personnel who themselves can respond more flexibly and adaptably to external environmental pressures.

Additionally, it is imperative that governance be ‘multi-sectoral’ and ‘based on ownership—partnerships’. Public education and VOTEC institutions can no longer operate in isolation from the wider environment. The ‘educational ghettos’ of the past, geared towards pursuit of intellectual knowledge for its own sake, have become irrelevant and extremely expensive.

The ‘Ivory Towers’ concept of academe is increasingly being challenged by the university sector itself in its industry interactive research and development. This must be the strategy adopted by VOTEC institutions in the future. More industry partnerships, based on mutually agreed principles regarding ROI (return on investment) must be pursued urgently. This must also occur in the schooling sector, to enable young people in their foundation educational period to be better exposed to the world of work which they wish to enter.

B. Organisational Structures

To enable these thrusts to be implemented, requires a close examination of the functions and operational success of existing institutional structures. The hierarchical models of the past again, are no longer relevant in today’s dynamic environment. A system which actively encourages 20% of its youth to ‘drop-out’ of education or training, is one which is denying the nation access to the skills and abilities of a large proportion of its most important resource: its people, and their intellectual capacities.

If this means a re-evaluation of the hierarchies within the schooling sector, for example, where professional prestige is
often connected to the Senior Years of schooling, then this should be undertaken. All levels of education are important when considering the development of the Human Resources of a nation. Errors made in foundation years can have devastating effects down-track, with drop-outs, "hard core" often structural unemployment, and cycles of poverty which result in anti-social activities being a clear indication of the longer term effects.

To encourage greater community investment in education and training, Phoenix, Arizona is proposing to levy a Property Tax of US$25.00 per household to be generated into the educational and training system as a means of providing greater revenue for Local Educational authorities. Australia, has an enviable record in overcoming regional disparities through its use of General Purpose Assistance Grants allocated from the Commonwealth Grants Commission. Part of these resources are allocated to State Treasury for re-allocation, and additional funds are distributed through the Local Governments Grants Commissions in States/Territories, where grants are made on a formula-driven basis to Local Authorities.  

Essentially, organisational restructuring should be undertaken in the context of maintaining government’s legitimate obligations towards serving equity issues, particularly in highly decentralised states/territories where spatial equity issues alone create cost imposts.

This has relevance in the context of regional economic development within states/territories, across ‘artificial’ state borders, and also in the context of Common Economic Regions in the international context.

The pressures of a globalised economy have hastened the need to develop structures with the flexibility to work in more autonomous and co-operative manners with similar organisations in other countries. The ‘twinning’ initiatives being undertaken on international scale by the ACT TAFE sector have the capacity to be broadened significantly, with advantages to all partners.

C. **Physical Structures**

Physical structures should not be impediments to innovative strategies in VOTEC and education and training in general. Currently, differences in physical capacity and structure of organisations is seen as an impediment of flexibility. Physical structures, ‘bricks and mortar’ institutions are a tool for innovative management. The full ramifications of educational technology including interactive video computronics, satellite

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6. AGPS ‘Commonwealth Financial Relations with Other Levels of Government 1989-90, Budget Paper No. 4’.
networks and ‘Open Learning’—named often as ‘Telematic Learning’—have yet to be fully explored. The best mix will occur when Telematic Learning can be combined with situational learning in the home or at work, or in a physical institution of learning, or in a blend of all or some of these modes.

6. Conclusions

This paper has presented some suggested principles for restructuring provision of education and training for youth, and for adults. It has considered the need for developing a strategically targeted series of policies which will assist in reducing the youth unemployment sector, and has proposed some fundamental areas for review, including review of pedagogical techniques, assessment and accreditation of learning, and policy planning and analysis processes.

The paper is not meant to be seen as conclusive. It merely ‘fleshes out’ some of the current debate at international level about how to gear education and training to meet the needs of the twenty-first century. What it is hoped that this paper will do, however, is to stimulate the debate about VOTEC in Australia to harness more fully the potential of the nation’s human resource asset base.

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2 April 1991
Implications for the AEC National Review
Task Force
A Possible Strategic Framework for the Future

VOTEC in Australia is delivered from entry-level to professional level in many forms, from formal education to informal on-job training. The Employability/Training continuum provokes the need to revamp existing pedagogical (and andragogical) techniques and learning strategies. The Seminar noted that there was a need to examine this issue more closely, recognising that nations would develop processes suited to their own particular needs and requirements.

The term, education "ghetto" was raised as a descriptor of educational delivery which was more appropriate for the needs of the learner of thirty to forty years ago, rather than the learner of the future.

The "partnership" concept between delivery agencies, embraced within the learning continuum described earlier, provides a framework for developing pathways for learning more suited to the VOTEC needs of enterprises affected by rapidly developing technological transformation.

The roles of stakeholders in VOTEC will need to change, and to be much more clearly separated out to enable the individual learner, and others involved in the education and training area to identify the pathways. Flexibility in access for learners is the framework for the future.

- Lifelong learning; the lifetime learner in the learning organisation;
- Enhanced employability and sustainable employability for:
  - individuals;
  - enterprise and small/medium businesses;
  - socio-economic growth and development;
  - socio-cultural satisfaction leading to equitable life chances for individuals; and,
  - increased prosperity and quality of life for nations.

- Enhanced skills formation for all, to enable reader achievement of national (governmental) social objectives.

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• A more:
  - coherent;
  - cognitively coordinated; and,
  - comprehensive system of education and VOTEC;¹⁰
  - enhanced status of VOTEC in the mind-set of communities; stakeholders; individuals and society at all levels:
    - locally
    - regionally
    - sectorally
    - nationally, and
    - at international levels.

**Strategies:**

Andragogical analysis will be required to scan the existing data base and literature in Australia. This could consider the potential and ramifications for Distance Education Delivery through DECs and the capacity (or incapacity) of the adult learner to benefit from the existing over dependency on ‘hard’ data such as written script as a relatively cheap option. In this context, it is important to consider the extent and growth of educational technology to enable it to match the increasing dependency of workers upon technology in the work place.

Some strategies which could be investigated further could include developments in the following areas.

**Develop:**
- Educational pathways, embedded in a contextual framework of
- Policy and inter-organisational linkages.

**Provide:**
- enhanced diversity and choices for individuals within the context of a strongly focussed set of alternative pathways: pathways which are personally and socially valid and socially viable and valuable.

**Develop:**
- extrinsic and intrinsic incentives to motivate young people (and the adult learner) to strive towards lifelong learning as the norm.

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¹⁰ The three “Cs” were synopsized in Mrs Barbara Border’s summation of Dr David Raffe’s paper, Seminar No. 4, addressing the theme of ‘Compulsory Education and What Then? Signals—Choices—Pathways’. 
transparency in processes related to VOTEC, particularly in light of the changing nature of the learning environment from reliance on the classic pedagogical techniques of the past, to the more flexible and autonomous learning model of the future.
Appendix 1 (C)

Summary Report of Submissions to AEC Review of Post-Compulsory Education and Training
Summary Report of Submissions to:

AEC REVIEW OF POST-COMPULSORY EDUCATION AND TRAINING

Chris Charlesworth, SA Ed Dept
Lionel Phelps, NSW Ed Dept
Robyn Wretham, Qld Ed Dept
12 April 1991
Preface

Seventy submissions were received and analysed under the seven terms of reference.

A number of submissions recommended the formation of a single national body to exercise co-ordinating functions in one or more areas—including national curriculum principles, accreditation, articulation and resource allocation.

Ministries, Departments and Boards of Education however advocated that these principles, structures and processes should be developed in harmony with and reinforce significant state initiatives. These mostly include senior secondary frameworks which have been developed or are in the process of being developed following intensive public consultation, collaboration, agreement and resource provision.

Advocates for the establishment of a national body claimed the right of participating in that body’s deliberations.

A. The appropriate form and level of a new national target for participation in post-compulsory education and training, an appropriate basis of measurement of that target, and a recommended timetable and strategies for its achievement.

Nearly all submissions accepted the need for all 15–19 year olds to complete 12 years of compulsory and post-compulsory education and/or training.

In general, these comprehensive submissions from major organisations supported high levels of participation and training or some recognised equivalent. Targets ranged from full to 80% participation with the submissions from the ACTU (68) suggesting a minimum achievement of (National Training Board) competency level 2 and the Australian Teachers Union (58) suggesting level 3, given that some students would be working towards an accredited higher award. Many submissions specified the year 2000 as the date for achievement of these targets.

Some submissions addressed the issues of targets from the point of view of targeting program areas rather than institutional areas. This was particularly in submissions from organisations and individuals involved with the recognised disadvantaged who would recommend the setting of separate targets for these groups (see notes on E).

Emphasis on the need to consider the quality of participation as distinct from a numerical measurement was suggested.
B. Appropriate national curriculum principles designed to enable all young people, including those with special needs, to develop key competencies, with the associated implications for curriculum development, initial teacher preparation and continuing professional development.

There was a general acceptance of the need for the development of a set of national principles for curriculum development. The dominant theme was the development of a set of key competencies but, understandably, proponents of liberal education (25) cautioned on the danger of focussing on these competencies to the detriment of the maintenance of a broad-based general education.

Mostly submissions suggested that the key competencies should be carefully described so as to be useful and directional (for purposes of articulation and cross-accreditation) and yet to enable the development of responsive processes, curriculum, structures and policies at the local and systems level.

Typical of the key competencies and/or the curriculum principles were; literacy and numeracy, broad based generic skills (eg. communication, analytical problem solving), negotiating and inter-personal skills, information and technological skills and an appreciation of economic, environmental and safety factors (68, 41, 42, 53 and 43).

There were diversions of opinion on such issues as:

- Curriculum meeting the needs and aspirations of individual students or being focussed on tertiary requirements.

- The inclusion of vocationally oriented courses or strands in senior secondary schools and general education courses in TAFE.

Overall, the tenor in submissions was one of a balance between theoretical knowledge and practical knowledge and skills.

Typically "what is envisaged here is a standards driven curriculum, not a standardised system" (68).

Attention was drawn to the specific need for inclusion of career education courses in school curriculum and with strong implication for general teacher-training and in the appointment of specialised career education counsellors.

Implications for initial and continuing teacher training and development included: a better understanding of adult learning modes, the needs of disadvantaged students and of industrial and commercial experience.
C. The means by which links can be drawn between different education and training pathways and sectors to expand the options available to all young people, including those with special needs, and to achieve national coherence in entry and exit points between education, training and employment.

Whilst many submissions emphasised the need to retain the traditional school, TAFE and Tertiary divisions, all that addressed this term of reference advocated the development of effective links between the sectors.

The development of key competencies was generally seen as the basis for articulation, accreditation and joint curriculum development. Recognition of and credit for the achievement of key competencies is advocated by many through a range of formal and informal learning (e.g. experimental and prior learning) in a diversity of situations.

Some States are in the process (15, 41, 42 and 67) of providing formal links in areas such as curriculum accreditation of staff development. Queensland for example is one of the States which has established an Interdepartmental Management Committee with the specific task of ensuring cooperation between the Departments of Education and TAFE.

Some submissions advocate the development of modular courses which they claim would facilitate curriculum intersections, flexibility of entry and recently, joint recognition and credit accumulation and transfer.

D. The appropriate roles and responsibilities of schools, TAFE and higher education in the provision of post-compulsory education and training for young people consistent with the principles and objectives identified in (B) and (C) above, and the roles of private and industry providers.

Many submissions advocated strengthening the links between the providers but that they retained their separate identities.

There was acceptance that the major role of secondary schools was the provision of a general education. There was a marked difference of opinions on the inclusion of vocational courses in secondary curriculum. Points raised included; the undesirable cost of duplicating facilities required for vocational courses; the desirability of a school setting for vocational courses preferably jointly designed with TAFE, inadequacy of training for school teachers to provide vocational courses, vocational courses necessary in school in order to meet the diversity of student needs (15).

Although the main role of TAFE was accepted as providing relevant vocational courses as preparation for employment, the role was expanded in some submissions to include catering for post-Year 12 learning. A submission from the Catholic University
of Queensland advocated a radical restructuring of Australian education to the three certified levels; School Education (Reception to Year 10) College Education (Post-Compulsory) and Tertiary Education. Two submissions (20 and 34) respectively support for and caution against the expansion of TAFE's role to fill a perceived void resulting from the changed status and roles of former CAE's. A parallel submission (65) promotes the development of post-compulsory institutions providing a range of programs for 16 to 20 year olds and suggest the implication of this is that separate bureaucracies for schools and TAFE should be dispensed with.

E. Current barriers to the effective participation of disadvantaged young people, including those with disabilities, in post-compulsory education and training, and strategies for increasing their participation and improving their educational and labour market outcomes.

There were many submissions from individuals and groups which detailed the barriers to effective participation of disadvantaged young people. These barriers related to: (45)

- access—physical, cost and opportunity
- relevance—curriculum content, options, delivery modes
- awareness—course information, support available
- financial—high living/transport costs, limited income (pension)
- isolation—particularly rural students
- recognition—status of focussed programs.

Strategies for overcoming identified areas of disadvantage included:

- The review of eligibility criteria for AUSTUDY especially as they relate to; rural youth; part-time study/work; age of Year 11 students; level of means test and proof of lack of family support.
- Government support for employment of disadvantaged either through subsidised employment or preferential employment by government or semi-government employers.
- Network of funded agencies to provide clearer and more accessible information.
- Changes in traditional academic curriculum and associated assessment practices.
- Provision of increased resources particularly for literacy and numeracy programs.
F. The implications of current and prospective changes in post-compulsory education and training for the provision of careers education, information and counselling to students, including the requirements for information on educational pathways and associated career paths.

There was a strong endorsement of the need for a substantial increase in the level of career education, information and counselling.

Concerns regarding career education were on both the level of provision and quality of delivery. It was suggested that career education should be included as an essential part of the school curriculum for all students and be developmental over the 12 years of schooling and extending into TAFE and Higher Education.

Source information could include labour market information, career pathways, training courses, award restructuring, credit transfer and articulation.

There needs to be a national program for the training of career counsellors to work in schools, TAFE colleges and tertiary institutions. One submission (16) promotes current award and in-course options related to career education.

G. The likely resource and funding implications of existing trends in, and further strategies for, post-compulsory education and training.

Resource costs resulting from:

- Establishment of a National Coordinating Committee.
- Increased training for and provision of career advisers/counsellors.
- Guaranteed or subsidised employment of disadvantage.
- Revised eligibility criteria for AUSTUDY.
- Facilities required for increased range of relevant and vocationally based post-compulsory courses.
- Increased emphasis on technology.
- Restructuring of school and/or for post-compulsory systems at a State or sector level.

Many submissions called for an increase in resource support for course development from business and industry whilst others stated that government should accept full responsibility for resourcing education and training initiatives.

The ACTU submission advocates strongly an equivalence in funding for all alternative education and training pathways.
## Classification of Submissions

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Appendix 1 (D)

Case Studies: Vocationally Oriented Education in Secondary School Curriculum
Case Studies
Vocationally Oriented Education in Secondary School Curriculum
Contents

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II. Approaches
III. Strengths and Issues arising from each approach
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Case Studies of Vocationally Oriented Education in the Secondary School Curriculum

I. Introduction

The purpose of this study of different approaches to the inclusion of vocationally oriented education in the secondary school curriculum was to:

- enhance the Review Committee's understanding of the origin, current practices and potential value of such approaches;
- document relevant factors that lead to the development of specific approaches;
- highlight 'good practice' and issues involved in replicating such practices throughout Australia.

The approaches examined were chosen on a case study basis after discussion with senior officers of the various state secondary school and TAFE systems. Each approach was identified as an example of innovation and good practice in regard to the integration of vocational and secondary education.

A short list was determined within the constraints of the time available to conduct the visits. At least one example was included from NSW, Queensland, Victoria and South Australia.

The case studies primarily involved face to face discussions with principals and directors at the specific locations. Students and teachers were also consulted where time permitted. Available written information was collected and analysed. The time frame was extremely short with the visits being made from 29 April 1991 to 3 May and the report submitted to the Review Committee on 14 May.

The study was conducted by Ms Ros McLean, Policy and Research Officer, TAFE Commission and Mr Chris Charlesworth, Principal, Croyden High School, South Australia. These officers were chosen for their detailed knowledge of current practices in respect of vocational courses in secondary schools.

The study was not exhaustive and the conclusions are not necessarily valid for all such approaches in Australia. However the range of approaches included is a fair indication of the range of strategies currently in place across Australia which are designed to provide a more vocationally oriented preparation for students during their post compulsory years.
II. Approaches

The various approaches at the seven sites visited can be categorised as follows:

1. On a Statewide Basis Broadening of School Curriculum by Inclusion of TAFE Subjects/Courses:

Hornsby College of TAFE (Sydney, N.S.W.)

Twenty Secondary schools (Government and non-Government) participate in the Joint Secondary Schools/TAFE Program (JSSTAFE) at the College in a wide range of vocational courses that reflect students' needs, and post school goals. The JSSTAFE is provided by TAFE on a contractual basis.

Glendale College of TAFE—Glendale Technology High School (Newcastle, N.S.W)

A collaborative program where a discrete group of secondary students are offered subjects in one vocational area as part of their Higher School Certificate. Students are undertaking 13 TAFE modules developed by the TAFE Commission from the national metals descriptors and presented at the Glendale TAFE. The remainder of their HSC program is undertaken at school.

2. Broadening of School Curriculum by the Inclusion of a School Based Vocational Course Developed in Conjunction with Industry:

Doonside Technology High School (Sydney, N.S.W.)

A course for a discrete group of secondary students developed and implemented in 1990. The course offers school based modules developed with M.T.I.A. and based on the national metals descriptors.

3. Multi Campus Secondary Colleges:

Sandringham Secondary College (Senior Campus), (Sandringham, Victoria).

A multi-campus 7-12 College consisting of two 7-10 and one 11-12 (Senior) campuses under the one administration. The senior campus offers a wide range of Victorian Certificate of Education (VCE) subjects and courses, many of which are vocationally oriented.
Hamilton College (Senior Campus) (Adelaide, S.A)
An 8–12 secondary school of approximately 500 students that incorporates on the same site a Senior Campus for 520 (EFT) adult entry students.

4. **Single Campus Secondary College:**

Footscray Secondary College (Footscray, Victoria)
A 7–12 Secondary College with 614 students in Years 11 and 12 that offers a wide range of Victorian Certificate of Education secondary subjects and vocationally oriented courses.

5. **Combined TAFE/Secondary College:**

Hervey Bay College (Hervey Bay, Queensland)
A community college of approximately 1300 students. Run by the Bureau of Employment, Vocational & Further Education and Training (BEVFET) Queensland, with both secondary and TAFE courses and teachers on the one site together with an annexe of the University College of Southern Queensland.

III **Strengths and Issues Arising from each Approach**

The study identified a number of strengths and issues which may arise in replicating each approach across States and Territories. Some of the issues were specific to a particular approach whilst others were common across all approaches.

(A) **On a statewide basis the broadening of school curriculum by the inclusion of TAFE courses/subjects.** (Hornsby, Glendale)

(1) Where TAFE curriculum is taught by TAFE teachers to secondary students.

*Strengths*

- Students increase their educational and vocational options by including vocational areas of study within a general education.
- Students have the opportunity to gain dual credentials from the secondary school accrediting authority (Board of Studies in NSW) and TAFE.

- Students experience an adult learning environment.

- Students are able to choose from a wide variety of subjects relevant to their post school goals without narrowing their career options.

- Expensive resources/facilities necessary for the provision of vocational courses are not duplicated.

- Because of the large number of delivery points in State TAFE systems students in both country and metropolitan schools have equal access to such a curriculum.

- Statewide planning is facilitated because of the identification of need and demand for TAFE courses in advance.

- Arrangements to meet costs are dealt with on a statewide or system basis by the respective schooling authorities.

- Curriculum development, accreditation, funding and articulation issues are negotiated collaboratively at a systems level.

- Classes can be formed by drawing students from many high schools (both government and non-government) or by students 'topping up' community classes. This allows students to participate in courses for which there would not have been significant numbers if drawing from one school only.

**Issues**

- TAFE Colleges nationally do not necessarily have unlimited capacity to cater for secondary students. The proportion of TAFE systems' overall provision that should be devoted to secondary students also needs to be considered.

- Schooling systems need to earmark funds in advance on a statewide or system basis to meet the costs of participating in the JSSTAFE program.

- There is a potential for the vocational elements of the curriculum to be too narrow eg. Glendale High School students only study the metals modules.

- In most cases vocationally oriented subjects are accepted as valid for the completion of the various secondary certificates but not as contributing to a tertiary entrance score. In this situation the community perception of the status of vocationally oriented subjects is lower than for so called 'academic' subjects.

- The lower status of vocational courses is often reflected in a lack of flexibility when timetabling which results in courses being offered outside school hours, or on sport afternoons.
The NSW Universities have categorised Board-developed Joint Courses as “Basket B” subjects. This means that only one course is eligible for inclusion in the Tertiary Entrance Rank and this effectively downgrades the status of vocational courses in general.

2) Where TAFE curriculum is licensed to Secondary Schools.

**Strengths**

- Costs per student to participating schools/systems may be less than if courses are taught at TAFE by TAFE teachers.
- Timetabling and travelling difficulties are avoided
- Students increase their educational and vocational options by including vocational subjects.
- Students have the opportunity to gain dual credentials.

**Issues**

- The source of funding to meet costs associated with curriculum licensing needs to be identified in advance and may be problematic if decisions about participation are purely a local matter.
- In order to be ‘licensed’ to teach TAFE courses that provide accreditation, secondary teachers need to meet TAFE teaching requirements. These usually specify industrial experience which may limit the potential pool of secondary teachers.
- For a specific site to be licensed to deliver a TAFE course it is necessary to have appropriate resources, including equipment and facilities as specified in the curriculum documents. This may limit the number of potential sites.

**Implications:**

- If TAFE courses are to be used to broaden school curriculum options on the scale they are currently on in NSW (11,300 students, 694 courses) a number of key issues eg. TAFE capacity, funding source, curriculum licensing need to be addressed at senior levels across the respective systems through mechanisms such as a joint policy framework. It should be noted that even given such a framework in NSW only up to about 10% of each Year 11 and Year 12 cohort has a broadened school curriculum through enrolment in TAFE courses. The major limitations to increased participation are the cost to the schooling sector and the capacity of TAFE colleges to cater for further demand.
• The perceived status of vocational subjects clearly needs to be enhanced. This would be assisted by the successful negotiation of credit transfer with higher education institutions and the acceptance by universities of vocational courses contributing to a tertiary entrance score would address this issue.

(B) Broadening of School Curriculum by the inclusion of a School Based Vocational Course developed in conjunction with Industry. (Doonside)

Strengths
• The course will be relevant to industry needs.
• Travelling and timetabling difficulties associated with (A) are avoided.

Issues
• In most cases vocationally oriented subjects are accepted as valid for the various secondary completion certificates but not as contributing towards a tertiary entrance score. Clearly the status of vocational courses needs to be enhanced with parents, students and the community seeing them as valid and worthwhile rather than 'second class'.
• Vocationally oriented courses, particularly those that lead to TAFE accreditation, often require more specialised and expensive facilities and equipment. This may limit the number of secondary schools able to implement these courses.
• These courses have the potential to disadvantage students by narrowing their career options and if appropriate accreditation, articulation arrangements are not negotiated in the curriculum development stage, students may be further disadvantaged.

Implications
• If school based vocational courses developed in conjunction with industry are to be used to broaden curriculum options care must be taken to ensure that expensive and unnecessary duplication of resources does not result.
• Guidelines and structures for curriculum development, accreditation, funding and articulation must be developed collaboratively at the state, industry and systems level.
• The status of vocational subjects clearly needs to be enhanced. This would be assisted by the successful negotiations of credit transfer with higher education institutions and the acceptance by universities of vocational course contributing to tertiary entrance.

(C) Multi and Single Campus Secondary Colleges
(Footscray, Sandringham and Hamilton)

Strengths
• A wide range of curriculum is able to be offered, including vocational courses, because of large student numbers and available resources. Student subject choices are able to be accommodated in almost 100% of cases.
• The development of the ‘emerging adult’ learning environment provides greater freedom for students and takes into account the relatively young age of many of the students. It involves a relatively high responsibility for students to make decisions (with appropriate parent involvement), sets clear consequences (particularly in regard to work-required and assessment), provides easier and more open access to teachers and resources and generally recognises that responsible, autonomous adult behaviour is learnt.
• Strong, visionary educational and administrative leadership was clearly evident in these successful models, particularly from Principals and Directors but also from other administrators and coordinators. This was combined with high levels of collaboration and goodwill, particularly in replacing or discarding traditional restrictive attitudes and practices.

Issues
• For each senior college visited there remains a legacy of ill will on the part of the junior high school/campus as it did not receive the same attention, support and upgrade as the senior campus.
• Resources, whilst adequate at the secondary level, may not meet the requirements necessary for TAFE accreditation if sought.

Implications
• The issue of the development and resourcing of the middle or junior high school/campus must be addressed if the senior college model is to be replicated.
• Due consideration must be given in the selection of principals and directors to ensure strong visionary leadership and commitment to both the senior college concept and to vocational education in secondary schools.

• Senior colleges must be able to attract large numbers of students and be well resourced and funded in order to continue to provide a wide range of curriculum and to have the flexibility to accommodate most student choices. In most cases this involves use of an extended day.

• Guidelines and structures for curriculum development, accreditation, funding and articulation must be developed collaboratively at the state, industry and systems level.

(D) The Combined TAFE Secondary College (Hervey Bay)

Strengths

• A wide range of curriculum is able to be offered, including vocational courses, because of large student numbers and available resources. Student subject choices are able to be accommodated in almost 100% of cases.

• The development of the 'emerging adult' learning environment provides greater freedom for students and takes into account the relatively young age of many of the students. It involves a relatively high responsibility for students to make decisions (with appropriate parent involvement), sets clear consequences (particularly in regard to work-required and assessment), provides easier and more open access to teachers and resources and generally recognises that responsible, autonomous adult behaviour is learnt.

• Strong, visionary educational and administrative leadership was clearly evident in these successful models, particularly from Principals and Directors but also from other administrators and coordinators. This was combined with high levels of collaboration and goodwill, particularly in replacing or discarding traditional restrictive attitudes and practices.

• The three strengths listed above have been expedited by the single ownership of Hervey Bay College viz. the Bureau of Employment, Vocational and Further Education and Training. The single funding source, administration, regulation (and the greater autonomy given to new enterprises generally) has allowed initiatives such as hybrid courses and cross accreditation to proceed principally at the local level.
• Professional Collaboration between TAFE and secondary teachers in curriculum development and teaching is assisted by the single negotiated industrial award.

**Issues**

• The development of Hervey Bay College was opportune in that a TAFE College was proposed in a rapidly growing rural town where the local high school facilities were overstretched.

• The development was unique in that it involved different funding arrangements and a negotiated single industrial award for both secondary and TAFE teachers.

**Implications**

• Industrial relations issues related to the negotiation of a similar single award in other states needs to be addressed.

• The development of a middle or junior high school to complement the senior college is an absolute imperative, in particular, in rural locations.

• Due consideration must be given in the selection of principals and directors to ensure strong visionary leadership and commitment to the community college concept and to vocational education in secondary schools.

• The status of vocational courses appears to be higher at Hervey Bay College. However the acceptance by higher education institutions of these courses as eligible for inclusion in a Tertiary Entrance Score would greatly enhance the status.

• The college must be able to attract large numbers of students and be well resourced and funded in order to continue to provide a wide range of curriculum and to have the flexibility to accommodate most student choices. This involves the use of an extended day.
Case Studies

Hornsby College of TAFE

The Joint Secondary Schools/TAFE Program (JSSTAFE)

Program Objectives

The Program aims to promote increased educational opportunities for students in Years 11 and 12 by enabling them to:

- increase their educational and vocational aspirations and options by including vocational areas of study within a general education.
- have the opportunity to gain credentials from both the Board of Studies and the TAFE Commission
- enhance their talents and abilities
- have the useful experience of learning in an adult environment.

From its inception as a Pilot Program in 1985 the Program has continued to grow. In its initial year of implementation a total of 990 government school students participated in 62 Board-endorsed JSSTAFE Courses at 19 colleges of TAFE. In 1991, 11000 students are participating in 694 JSSTAFE Courses (both Board-endorsed and Board-developed) at 106 colleges of TAFE. Schools in the non-government sector joined the Program on a very small scale in 1987. In 1990 both government and non-government secondary school students were able to participate jointly in the JSSTAFE Courses for the first time.

Courses in the Joint Secondary Schools TAFE Program have been provided on a contractual basis by TAFE for the Department of School Education (and later the non-government sector) since the Program’s inception in 1985.

Types of Courses

Courses in the Program are known as Joint Courses are taught by TAFE teachers generally using TAFE facilities and are made up of established TAFE subjects drawn from major award TAFE courses. They are either Board-endorsed or Board-developed courses of the Board of Studies. Students who successfully complete these courses receive dual accreditation from both the Board of Studies and TAFE.

A wide range of TAFE subjects is available for students to undertake. The courses offered at a local level depend on student career interests and resources available at individual
schools and colleges of TAFE. The timetabling of courses is organised between the local TAFE college and participating schools.

**Board-developed Courses**

The first Board-developed Joint Courses were introduced in 1990. Approximately 1795 students commenced these Certificate courses in Accounts-Clerical, Small Business Practices, Travel Agency Practice and Electronics Technology in 1990. The results obtained by students in these courses are eligible for inclusion in the Tertiary Entrance Rank. Students who successfully complete a Board-developed Joint Course are awarded a nationally registered TAFE Certificate.

The NSW Universities have recently classified these courses as Category B courses ie. only one may be counted in the TER. This effectively downgrades the status of these courses in particular and vocational courses in general.

**Board-endorsed Courses**

Students who undertake a Board-endorsed course will have the course appear as an Other Endorsed Studies course (OES) on their Record of Achievement and if studied in Year 12 on their HSC. In addition, students receive a TAFE result notice and, depending on subjects studied, may receive a Statement of Attainment or a TAFE Certificate.

**Content-endorsed Courses**

These courses were developed in response to recommendations contained in the Excellence and Equity document regarding the need to rationalise the number of OES courses and in order to avoid duplication of effort and to provide TAFE awards for complete courses.

Three Content-endorsed Courses, covering 40% of Board-endorsed provision in the Program, are operating for the first time in 1991:

- Child Studies
- Automotive Studies
- Office Studies

The courses may be undertaken as one or two unit courses over one or two years. The courses have a flexible structure, based on a core and options, and vary in length from 60 to 261 hours. In addition to receiving a TAFE result notice upon successful completion of a one year, one or two unit Content-endorsed
course, students also receive a Statement of Attainment. If they successfully complete a two year two unit course they will receive a TAFE certificate.

**Hornsby College**

In 1991, 20 schools are participating in the JSSTAFE Program at Hornsby College. This involves 246 students from both government and non-government schools from as far away as the Central Coast & Homebush. Enrolments at the college have been growing each year with total enrolment in 1990 being 210. Board-developed enrolments dropped in 1991 as students apparently found the courses 'too hard'. Four hour blocks were also difficult for students to cope with. Schools in the area seem reluctant to alter their timetables and hence all JSSTAFE Courses are timetabled to operate at the college between 3.30 pm and 7.00 pm.

It appears that although the numbers of students participating in OES courses is increasing, Secondary School Principals still have some concerns about the validity of vocational subjects. The fact that they do not contribute to the TER is also of concern.

Student counselling and the conduct of orientation and induction days is an important part of the college's participation in the Program. Staff felt that the success of these measures was reflected in the low attrition rates in 1991 particularly given the fact that students attended TAFE on top of their school attendance. Although JSSTAFE Program guidelines state that where courses are conducted outside of school hours students should be given compensatory time off, it appears that this may not actually be happening. In addition, conflict with school sports days, excursions and exams is a problem especially in classes which are made up of students from many high schools.

It was reported that students enjoyed the more adult environment of TAFE and quickly adjusted to the informality of TAFE. Students find the long TAFE blocks (2-4 hours) difficult to adjust to and TAFE teachers indicate that they have had to adopt more flexible teaching strategies. This in turn has implications for the staff selected to teach on the Program.

One area of concern was the reporting of students absences and non-completion of assessment tasks. Although not usually TAFE practice, procedures have been set in place to report these matters to the school principal for action and communication to parents.

The state-wide evaluation of JSSTAFE courses conducted in 1990 found that 90% of personnel from managing schools and 92% of colleges of TAFE personnel rated individual JSSTAFE courses as
successful or very successful. The most successful features cited by both managing school and college of TAFE staff was the relevance of courses to post-school goals and/or community needs, students enthusiasm and the practical nature of the courses. There has been a significant increase in students who continue on to tertiary study, including TAFE, in related fields.

**Key Issues for Replication**

1. **TAFE Resources**
   Questions which would need to be addressed relate to
   - the proportion of TAFE systems overall provision that should be devoted to secondary students
   - the identification of funding sources
   - the extent to which school/TAFE links should become a government priority
   - the capacity of TAFE systems to meet potential demand.

2. **Equity Issues**
   The relatively small participation by the non-government sector raises issues of access and equity. The major obstacle to further non-government participation is cost. In some cases the cost, or part thereof, is passed on to the student in the form of additional fees and in other cases, system authorities or diocese may decide to fund a course at the expense of say 0.5% of a teacher.

   As articulation arrangements between TAFE and other educational institutions continue to be negotiated, all students whether government or non-government unable to access the JSSTAFE program will be disadvantaged.

3. **Status of Vocational Subjects**
   The classification by NSW universities of Board-developed Joint Courses as Basket B subjects effectively downgrades the status of vocational courses. This needs to be addressed.

4. **TAFE/School Co-operation**
   For replication to occur both TAFE and the secondary sector need to willingly and enthusiastically co-operate to ensure that students are advantaged by their participation in the program. Thus issues relating to timetabling need to be addressed and more flexibility encouraged. Similarly orientation days, induction days and effective student counselling are essential if the program is to be replicated.
Glendale Technology High School—Glendale College of TAFE

Glendale Technology High School (950 students) and Glendale TAFE (over 2000 equivalent full time students) are on adjoining campuses in a growing suburb near Newcastle NSW. The STEM Program (School-TAFE-Educational Modules) is a collaborative program designed to meet the needs of senior (Year 11 and 12) students seeking careers in engineering fields.

This program was originally intended to provide courses for senior high school students in each section of Glendale TAFE. However, difficulties in funding and staffing, and class size requirements of 12 (TAFE) and 25 (secondary) resulted in only one discrete class of 12 being formed.

The class now comprises 9 students. The observers did not have the opportunity to speak with students, however they did attend a scheduled joint School/TAFE teachers and Principals meeting that was chaired by the Staying On Deputy.

The program is apparently proceeding well. Its conception and development was very much locally based and depended on evident goodwill between the two institutions, the presence of a catalyst in the school's careers adviser and was based on the need to broaden post school options of the 'good average youngster' and to provide a more adult learning environment for them.

Difficulties encountered in establishment of the program included:

- Class size and staffing. After negotiation the Department of School Education allowed a discrete class of 12 to be formed. The school was provided with additional staffing via the Staying On Program.

- Provision for both Board of Studies and TAFE requirements. After (apparently) considerable negotiations, the Board of Studies Regional Approval Panel decided that the 13 National Broad Based Modules would equate to only 4 units of OAS study, (instead of 6 units) and that the students would need to complete the 10 units of HSC across the normally required range of subjects. Therefore the time requirement of 288 hours per annum of TAFE study resulted in a reduction and rationalisation of school HSC subjects by reducing contract time by one lesson/week in other subjects.

If the course was funded through the JSSTAFE program it would have used all available funding for the cluster. The Glendale TAFE has therefore agreed to fund the TAFE part of the course on a pilot basis.
Current difficulties (expressed at the meeting) include:

- **Assessment and reporting**—Both parties are learning the practice and principles of continuing competency based assessment. There was considerable discussion around the dilemma of Competency Based assessment and the requirement or perceived need to provide a graded mark and norm referenced assessment of skill development both for employers and in order to meet the school and Board of Studies requirements.

- **Late provision of module curriculum outlines,** some of which arrived after course commencement.

- **The changed nature of work experience** so as to provide a more focussed and relevant practicum for students at different stages of skill development. This has resulted in the change to 'Structured Work Experience' and the proposed development of information brochures for employers similar to those provided for traineeships. This requires a training commitment from industry as compared with the relatively cost-neutral work experience.

- **The discrete class provision** meant that the program did not present major timetabling difficulties for the school. Being a discrete class there is potential for students not to belong to either TAFE or the school. Staff indicated that students sometimes missed out on important announcements at school because they were TAFE etc.

**Key Issues for Replication**

- **Necessary Goodwill and Collaboration** between all parties, particularly the school and TAFE college staff but also Board of Studies, Departments, Commissions etc.

- **Funding and Staffing.** It is considered NOT POSSIBLE to replicate this model on a larger scale without the issues of funding and staffing being resolved.

- **Curriculum.** Negotiation and agreement on methods of assessment and recording would need to be reached at a SYSTEM level before wholesale replication.

- **Student Programs.** There is a need to address the imbalance between the hours spent at TAFE and the Unit value accorded to the course. (A two year unit course is approximately 240 hours in total. The thirteen modules total 468 hours). Again this is a systems issue.

- **Proximity.** While the close proximity of these two institutions made initial, informal discussions easier, it is considered that this model could be implemented between non-adjointing schools and TAFE Colleges given reasonable travel times.
Development course as level training for the was consistent the those involved in the industry restructuring that for the industry be raised to HSC or equivalent. Students wishing to enter the trade course would need to have completed either a School Course, a Traineeship or a Pre-Apprenticeship course.

Course Structure

A The Core Lobe

The Working Environment (110 hours)

The modules will lead students to an understanding of the work environment. Students must study all modules in this Lobe

Modules Titles:

<table>
<thead>
<tr>
<th>C1</th>
<th>Communications</th>
<th>22 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2</td>
<td>Industrial Relations</td>
<td>22 hours</td>
</tr>
<tr>
<td>C3</td>
<td>Occupational Health and Safety</td>
<td>22 hours</td>
</tr>
<tr>
<td>C4</td>
<td>Quality Concepts</td>
<td>22 hours</td>
</tr>
<tr>
<td>C5</td>
<td>Computing in Industry</td>
<td>22 hours</td>
</tr>
</tbody>
</table>

B The Options Lobe

Industry Skills Development (130 hours)

Students are to select 4 modules from the following 6:

<table>
<thead>
<tr>
<th>01</th>
<th>Basic Electricity</th>
<th>32 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>Fabrication</td>
<td>32 hours</td>
</tr>
<tr>
<td>03</td>
<td>Hand and Power Tools</td>
<td>32 hours</td>
</tr>
<tr>
<td>04</td>
<td>Engines</td>
<td>32 hours</td>
</tr>
</tbody>
</table>
05  Welding and Thermal Cutting  32 hours
06  Metal Forming and Assembly  32 hours

The obvious enthusiasm and commitment of the teacher who taught all lobes of this course in 1990 was noted. He will continue to teach all school based aspects of the course through 1991.

Curriculum/Module Development

There was apparent confusion at the school level over the development and provision of curriculum for the various lobes. It appears that there was little or no consultation with TAFE in the initial development of the course. The teacher and school were however under the impression that the school and TAFE were working in parallel on the course development and accreditation.

Only after the commencement of the course did consultation occur with TAFE regarding the status, assessment, accreditation and reporting of the school based modules even though one of the original intentions was "to develop a course so that students could leave at the end of year 12 (with their HSC) and receive advanced standing in appropriate TAFE courses." An evaluation committee on which TAFE was represented, was established in late 1990 to report on aspects of the course but the school has received no report to date.

Regional Board of Studies approval was gained for the course to be recognised as an Other Endorsed Studies (OES) course contributing 2 units to the students' HSC. The course is not eligible for inclusion in the TER.

Local Blacktown TAFE/Doonside THS

In 1990 the school negotiated with Mt Druitt College of TAFE to provide TAFE modules, as part of the Joint Secondary Schools/TAFE Program, for some lobes for which the school was not equipped. This arrangement was apparently not acceptable to the MTIA which undertook to provide the school with the necessary equipment. The equipment was delivered and was to be set up in a demountable building. However, as yet it has not been connected and students (now in Year 12) have not been able to undertake practical work.

The teacher advised that current negotiations with Blacktown College of TAFE are to be centred on a "joint ownership and sharing of TAFE modules", with the TAFE college agreeing, for 1991 only, and at TAFE expense to run the metal based modules at the College with the broader generic modules and basic competencies being taught at the school, presumably from school developed curriculum.
Students are to spend one day per week at the TAFE college and complete the rest of the Technology course and their HSC subjects at the school using their ‘spare’ periods to catch up on HSC work.

**Practicum—Structured Work Experience**

It appears that the opportunities for structured work experience over 1990 have been successful in enhancing student self esteem but have been limited in time necessary requirement of the course in 1991.

The time set aside for regular work experience occurs simultaneously to that where other students engage in organised school sport, resulting in at least one student choosing to not attend work experience.

The need expressed was to structure the work experience on competencies developed by students and the point was made that employers were in effect being asked to voluntarily take part in the skill training of school students which may not be possible for small businesses.

**Facilities**

The school personnel related that assistance was provided by industry but that the Department of School Education was slow in providing and adapting a necessary additional welding workshop.

**Implementation**

In view of the difficulties experienced by the school, it would be advisable that the implementation of school courses based on national descriptors or indeed any other vocational courses not commence until

- Course documents have been developed and approved by the recognised body or bodies (eg Department of School Education, TAFE, Board of Studies)
- Funding and staffing issues have been resolved.
- School facilities have been upgraded and shown to be adequate and appropriate for successful implementation.
- Issues of structural work experience (eg additional training impact on business) have been resolved.
Sandringham Secondary College (Sandringham, Victoria)

Sandringham Secondary College (SSC) was formed in 1988 from the amalgamation of three High Schools and the Sandringham Technical School. The new College has Year 7-10 campuses at Beaumaris and Highett and a Year 11-12 campus at Sandringham.

'Sandringham Secondary College aims to provide a quality education for all students, whatever their career intentions might be, and to assist them to become contributing members of our society'.

In 1991 the senior campus of SSC has 550 students with approximately 260 in Year 11 and 290 in Year 12. Year 10 students from the two 7-10 campuses have automatic right of enrolment and the college attracts additional senior enrolments from other government and non-government schools, some travelling a considerable distance to attend.

School Ethos—Staff Morale

The 'young emerging adult' environment is readily apparent at Sandringham Senior campus, with both additional freedoms (eg of movement, dress, access to resources) and self-responsibility (eg. of punctuality, attendance and completion of work-required) evident. Staff report different, more relaxed, yet professional relationships with students with problems of disruption rare. (".. other students tend to discipline the 'class clown'").

Staff complained, however, of the lack of a cafeteria/common room for the students stating that this would greatly assist in providing a more adult environment. Other difficulties expressed included the legal liability issue of supervision of students when off-campus, suspension and exclusion etc. The college advertises for adult students to give them the opportunity to complete their HSC/VCE although most of these students apparently prefer to attend the nearby Moorabin TAFE.

Staff morale is reported to be high at the senior campus. The campus development was and is seen as a 'fresh start' for both students and staff and the development of different relationships with students and of the new VCE curriculum are seen as worthwhile challenges. ('I have never worked so hard in my life')

It appears, from senior campus staff reports however, that the 7-10 campus schools did not receive the same support (eg resources upgrade) and government attention as did the senior campus. More recently, however these campuses are developing a different culture that recognises the stages of early adolescence, builds a caring 7 to 10 environment, utilises the
additional flexibility of not having 11–12 courses on campus and
the challenge of curriculum renewal for staff. It was reported
that many (but not all) 7–10 campus staff are content to stay
even when given the opportunity to shift to the senior campus
although many feel that they may be disadvantaged by not
being involved in the development of the VCE curriculum.
Staff are appointed to the college by the normal methods of the
Victorian Ministry of Education with their location determined
by the Local Administrative Committee, and reviewed after
three years.

Curriculum/Student Choice

The college, along with all other Victorian Secondary Schools, is
currently involved in the transition from High School Certificate,
T12 and T.O.P courses to the required patterns, curriculum
design and assessment requirements of the Victorian Certificate
of Education. (Year 11–1991 and Year 12–1992). Thus current
year 12’s are completing HSC requirements, with the college
offering all HSC subjects originally and beginning 37 of those
with class size viability being the only reason given for a
subject not running. The college as a whole promotes courses in
Music, Art and Design, Drama, Sport, Technology and Marine
Biology. ‘Students’ studies involve balanced courses which are
composed of: English, Mathematics, Science, Technology and
Practical Studies, Foreign Languages, Commerce, Humanities, the
Arts and Personal Development.” The college claims to offer one
of the widest ranges of subjects in Victoria including HSC groups
1 and 2 subjects and the following T12 courses:

- Outdoor Education
- Catering
- Drama
- Art and Design
- Business, and
- Technology

Because of the relatively large number of students and
flexibility of line timetabling there are very few students who
are unable to pursue the courses of their choice.

Year 11 student subject choices are based on the ‘course’
approach outlined in the VCE student handbook but many
students choose, with counselling, ‘hybrid’ courses given the
‘difficult decisions’ they need to make about their future at a
relatively early age. Senior staff relate difficulties in timetabling
courses for discrete groups while still allowing for the flexibility
of ‘hybrid’ courses. They also relate that the Technology Courses
have a perceived lower status than the others.


Links with TAFE

Productive links have been negotiated with the Moorabin College of TAFE. Students attend TAFE classes in Year 11 (automotive engineering) and for those activities where the College does not have the necessary equipment (eg. robotics, Lotus 1-2-3). These activities are funded systemically.

Links with Higher Education

The college has developed productive communication links with Monash University and has made local arrangements with the Footscray Institute of Technology for advanced standing of its students in some areas (eg. in Art and Design). Staff report, however, that the systemic ‘Pathways’ project, designed to promote Secondary-TAFE-Tertiary links could jeopardize these arrangements by basing advanced standing on the cross-accreditation of modules rather than completed courses of work.

Key Issues for Replication

(1) Systematic Rationalisation of Secondary Schools
Sandringham Secondary College is one of four such rationalisations and reorganisations of secondary schools in Victoria with the concurrent systemic support for implementation, development, resourcing, staffing etc.

(2) Parallel Development of ‘Junior’ High Schools
Notwithstanding (1), it is evident that the development of the concept of 7-10 High Schools requires similar attention and appropriate resourcing although the multi-campus model maintains joint administration and curriculum development/pathways which greatly assist years 10 to 11 transition, particular for students and their families but also for staff.

(3) Local Arrangements with TAFE and Higher Education
Recognition needs to be given to advanced standing or credit arrangements negotiated at the local level, at least in the transition period of systemic or national development so that over-riding such (albeit unwritten) undertakings does not jeopardize the career paths of students.

Hamilton Secondary School (Senior Campus) South Australia

1. School Profile

Hamilton Secondary School is an 8-12 school of approximately 500 students recently formed by the amalgamation of two nearby Secondary Schools onto the Hamilton site. It incorporates,
also on that side, the Hamilton Senior Campus of approximately 800 (520 EFT) adult re-entry students.

The Hamilton Senior Campus was formerly an Adult Re-entry School established in 1984 with an initial enrolment of 67 adult students and offering mainly courses in Business Education and a variety of enrichment (e.g. TAFE Stream 1000) classes. Thus the average age of students was around 30 years.

In 1989 the respective South Australian Ministers of Education and TAFE issued a joint memorandum of agreement that effectively redefined the secondary education role of schools and vocational training role of TAFE and set general limits on secondary schools enrolling re-entry students except for a limited number of adult re-entry senior campuses. Hamilton Senior Campus was thus officially designated as an adult re-entry centre for secondary education subjects.

Students studying secondary education subjects at local TAFE Colleges therefore transferred their enrolment to Hamilton Senior Campus en masse, resulting in a sharp increase in enrolments in the campus. Moreover, TAFE previously offered secondary subjects as a second chance for students who had not satisfactorily completed their secondary education, and for many who had not left formal education. Therefore the majority of new enrolment was younger (e.g. around 18 to 19 years) and this has significantly lowered the average age of the Senior Campus students.

2. Curriculum

(1) Secondary Certificate Subjects

The Senior Campus, in conjunction with the Secondary School as a whole, offers a most comprehensive range of Year 12 Senior Secondary Assessment Board of South Australia (SSABSA) subjects including 20 PES (publically examined) and 32 SAS (school assessed subjects) and claimed to be the widest range offered by any secondary school in South Australia. Day courses in technology (SAS subjects) include:

- Applied Graphics
- Creative Woodwork
- Electricity
- Furniture Construction
- Photography
- Power Technology
- Technical Graphics
- Workshop practice

A range of SAS Business, Art, Design and Computing courses is also included.

Foundation (bridging to Year 12) courses are offered in Biology, Business Mathematics, Chemistry, English and History.
Courses are offered in a range of day (8.15 to 4.30) and evening (6.15–9.15) sessions for all students including the continuing Year 12 secondary students.

(2) **Vocational Certificate Courses**
Specific vocational certificated courses offered are:

- **Media Production Certificate**
  This one year, full time course aims to introduce students to a broad range of industries which comprise 'The Media' (viz: radio, video, film, design and photography). The class is limited to 24 students (who have substantially completed their secondary education) by the working party representative of the media industry and the school. This working party also assists in course construction, assessment methods, practicum placements, and is involved in the assessment of individual students. The certificate is local and unique but well recognised by the local media industry as a qualification for employment.

- **Travel and Tourism Certificate**
  A one year full-time course for post-compulsory students who wish to enter the travel and tourism industry. The course was modelled on the corresponding pre-vocational Adelaide College of TAFE course and with the demise of such TAFE courses and additional flexibility of the school (by salary conversion) to employ instructors from industry, the school is confident that the current negotiations with TAFE and the Industry Training Committee will lead to TAFE accreditation of many or all of the course modules.

- **Secretarial Studies Certificate**
  This is a one year full-time course for post-compulsory students who wish to gain secretarial skills. No previous experience is necessary. The course comprises six core modules and two optional modules (chosen from a select list of other school modules).

(3) **Other Adult Courses Offered**
The Senior Campus, also offers 26 courses of varying length covering a wide range of subjects and including Accounting, Cookery, Computing, English, Fitness, Nutrition, Languages, Music, Office Techniques, Science, Shorthand, Small Business Management, Car Maintenance, Photography, Welding, Woodwork, Typing, Word Processing and Women’s Studies. (Some classes are established specifically for women).

(4) **Current Developments in Technology/Vocational Courses**
It is a current State initiative to establish a network of secondary schools that will offer courses leading to career pathways in what essentially were the areas of pre-vocational TAFE study. The modules for these courses are being developed.
jointly by the Senior Secondary Assessment Board of SA (SSABSA), TAFE and Industry under the auspices of the I.C.T.C. Thus students will be able to simultaneously complete the requirements of the South Australian Certificate of Education (SACE) and gain module credit for TAFE and Industry training courses. A number of issues that are being addressed by staff and school Council, viz:

- school dress—the requirement of the newly amalgamated Secondary School that their continuing students wear school uniform while re-entry students do not
- behaviour management
- parental involvement in individual student decision making.

Staff commented, however, on the positive motivational effect of adults in classes on younger adolescents.

Key Issues for Successful Replication

1. Visionary, Strong Leadership
Clearly this Secondary School is faced with many complex developments, (the implementation of the new SACE, recent amalgamation of schools, rapid growth of adult/re-entry, disruptions of facilities upgrading etc.) and yet successfully offers a most comprehensive range of educational opportunities for its students.

2. State/Systems Infrastructure
Development within the school, particularly in curriculum and its associated accreditation and funding are proceeding within the emerging but relatively clear guidelines developed collaboratively between SSABSA, the Education Department, TAFE and industry.

3. Senior Adult/Re-entry Campus and Secondary School Sharing the One Site
Increased re-entry student numbers have made possible a much greater range of subjects than would have been possible to provide the continuing Year 11 and 12 secondary. However the local politics involved in simultaneously increasing adult enrolments and amalgamating two 8-12 secondary schools on the one site has abruptly highlighted a number of significant issues. (See above).

Footscray City Secondary College (Victoria)

The college is a $3 million dollar complex built in the days of Technical High Schools in Victoria. It has an extensive Horticultural Section and an excellent media department.
including sophisticated television production facilities. There is a student lounge and cafeteria, a small restaurant, a catering kitchen and a student gymnasium. The college caters for students for Years 7-12 and is committed to assisting students to start to take charge of planning for their futures and in a genuine way be responsible for their learning and their future careers.

With the demise of the technical school concept, the school set out to market itself. It now boasts one of the widest ranges of VCE courses in Australia—40 of the 44 new studies are offered in year 11 and the school is attracting students from across Melbourne. Four years ago the school had 520 students and numbers were falling. In 1991 the school has 614 students in years 11 and 12 alone. Since 1987 the total school population has nearly doubled and the college is now forced to turn away prospective students.

The school is funded on the same basis as all other State high schools. It is necessary to levy a materials charge to cover the cost of materials used in courses. Costs vary between courses and subjects eg. probably the most expensive is the media studies course which has a fee of $500.

The college has an extended day 8.10 am–4.00 pm. in order to give timetable flexibility. As at Hervey Bay this gives students 'free lessons' which in many cases is the most difficult aspect of the more adult environment for students to adjust to.

The college and Footscray College of TAFE have developed arrangements in a number of courses where successful completion of VCE subjects earn credits towards a TAFE qualification. This relationship often involves sharing staff and facilities between Footscray Secondary College and Footscray TAFE.

In addition, proximity to and long standing association with Victoria University of Technology FIT campus benefits VCE students. Students are able to use the library facilities at FIT campus both for free study time and borrowing purposes.

**Curriculum Offerings**

The new Victorian Certificate of Education is being introduced in 1991. A VCE student program will normally be made up of 24 units completed over two years. There are 44 possible areas of study in two groupings—Arts/Humanities and Mathematics/Science/Technology.

In determining their 24 unit program students must include—

- English units 1, 2, 3 & 4 (each unit = 1 semester or approximately 100 hrs)
- At least 4 units from the Arts & Humanities grouping including Australian Studies units 1 & 2.
At least 4 units of studies from the Mathematics/Science/Technology grouping.

To be eligible for the award of the VCE students must satisfactorily complete

• at least 3 units of the common study of English
• at least 2 sequences of units 3 & 4 of studies other than English.

In units 1 & 2 (ie. Year 11) of each area of study individual schools choose how to assess and report on students performances.

In units 3 & 4 (ie Year 12) there will be a system of graded assessment based on Common Assessment Tasks (CATS) for specific pieces of work. All students across the state will do a particular CAT which may be in the form of a research project, producing a folio of work or/and examination assessed by external examiners. The results of these CATS will be moderated state-wide.

According to the Principal, Footscray Senior Secondary College is offering the widest choice of VCE studies in Victoria. Students choose programs based on their area of interest/chosen career or further study. Where possible the college attempts to cater for students who do not wish to follow a particular program. The development of these student programs has

1. allowed the development of faculties within the college
2. allowed students to focus on areas of specific interest.

In some cases it may force students to make choices when they are not ready. Changes in Year 11 programs can be achieved without difficulty. It is more difficult to attempt to change programs in Year 12 because of the VCE requirements.

**Tertiary Entrance**

At this stage it appears unclear as to how university entrance will be determined under the new VCE system. Students will have to present to individual institutions. Only minimum entry requirements appear to have been published.

System arrangements are being made so that students who have completed their VCE may be given credit in a TAFE course for work already completed. One example that is being considered is the TAFE Certificate in Office and Secretarial Studies. Credits for the units Introduction to computers I and II in that certificate could be given to students who have satisfactorily completed two units of VCE Information Technology.
As part of the college's philosophy to provide a mature learning environment, a welfare discipline system which depends on guided development and interaction is practised. Similar to Hervey Bay, a home group tutor is assigned to each 20 students. In year 11 this is the Australian studies teacher and in year 12 will be the English teacher. The tutor is responsible for the pastoral care of those students.

Students do not wear uniforms and there are no bells. Students take responsibility for getting to class on time.

The facilities provided in the college eg. cafeteria, gym, common room, appear to be an important part of the culture necessary to provide a more mature learning environment.

Staff

Staff are appointed to the college by the normal methods of the Victorian Ministry of Education with their location determined by the Local Administrative Committee, and reviewed after 3 years. They were obviously enthusiastic and proud to be part of the college.

Key Issues for Replication

- **Flexibility** in timetabling and use of the 'extended day' is essential.
- **Large student numbers and extensive resources** (including facilities) are necessary to provide such a wide range of courses.
- **Resources/funding.** If schools are to offer vocational subjects with heavy resource requirements, this should be taken into account in annual funding allocations. Care must be taken to avoid unnecessary duplication of resources (a) across schools (b) with TAFE colleges.
- **Strong visionary leadership** at Footscray is evidenced in the turn around in college enrolments and, obvious staff and student enthusiasm for the college and its mission.
- **Status of vocational subjects.** Acceptance of vocational subjects as valid, rather than second class, subjects is essential. Clarification as to how universities will determine tertiary entrance will be critical.
- **Local arrangements with TAFE.** Recognition needs to be given to advanced standing or credit arrangements negotiated at the local level.
Hervey Bay

Hervey Bay is a small resort town with a population of approximately 26,800. Unemployment is currently running at 26% with the only real employment opportunities in the hospitality and small business areas. Until 1986 the town had one high school and a Catholic school which catered for students up to Year 7.

The decision in 1986 to establish the 'senior college' appears to have been made quite hurriedly without a great deal of community consultation. The high school now only caters for students up to year 10.

College Profile

The college's primary mission is to offer as wide a range of programs of study as possible to students in their post-compulsory years of education and training. A concomitant mission is to provide an environment which will assist students to develop the levels of communication skills, confidence, flexibility, adaptability, creativity and responsibility necessary to cope in a personally and socially productive way in today's rapidly changing world. The college's current enrolment of approximately 1300, is made up of secondary students studying Board or Pre-Vocational courses, Associate Diploma students, Apprentices and students participating in a number of short courses including DEET funded courses. The hours of operation are from 8.30 am–5.30 pm five days per week and 6.00–9.30 pm on Mondays to Thursdays. The extended hours ie. 8.30 am–5.30 pm provide the college with timetable flexibility which enables student's first subject choices to be accommodated in almost 100% of cases. The extended day and timetabling arrangements result in students timetables including a number of free periods. The efficient utilisation of these free periods is an aspect of the adult learning environment that some students found difficult to adjust to.

Recurrent costs associated with the operation of the college are $4.135 million per annum. Student fees ($60 per student) provide additional income to the college as do the entrepreneurial activities in which the college is involved. In 1990 entrepreneurial activities eg. operation of the college restaurant, generated an additional $200,000 income. It should be noted that the college's budget for the first two years of operation was $7 million per annum and that capital costs were approximately $6–7 million.

The University College of Southern Queensland has an extension campus at the college. The first year of degree courses in six disciplines are available. Students are therefore able to stay at
home for an extra year before having to pursue studies outside the area. College and University staff are currently discussing the establishment of a pilot program for gifted students. The University pays for some services provided by the college eg. word-processing. At least one college staff member is studying with the University.

**Curriculum Outline**

Prospective students who wish to obtain a Tertiary Entrance Score and Senior Certificate in order to obtain a place in a University need to study at least five Board accredited subjects.

As a sixth subject, these students may choose another Board accredited subject, a Board registered college subject or a TAFE accredited subject(s). Those who undertake the TAFE option may be eligible for a TAFE award in addition to their Senior Certificate.

Board Registered college subjects and college subjects on the list below cannot be counted towards a TE score—nor can pre-vocational subjects.

**Subject Offerings:**

The following lists provide the range of subjects offered at Hervey Bay Senior College. All subjects are locally assessed based on centrally set criteria. There are no external examinations.

**BSSSSS Accredited subjects:**

<table>
<thead>
<tr>
<th>English</th>
<th>French</th>
<th>Physics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ancient History</td>
<td>Modern History</td>
<td>German</td>
</tr>
<tr>
<td>Legal Studies</td>
<td>Economics</td>
<td>Geography</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>Mathematics II</td>
<td>Maths in Society</td>
</tr>
<tr>
<td>Biological Science</td>
<td>Agriculture/Animal Husbandry</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Film &amp; Television</td>
<td>Health &amp; Physical Education</td>
<td>Theatre</td>
</tr>
<tr>
<td>Dance</td>
<td>Earth Science</td>
<td>Marine Studies</td>
</tr>
<tr>
<td>Music</td>
<td>Information Processing &amp; Technology</td>
<td>Home Economics</td>
</tr>
<tr>
<td>Accounting</td>
<td>Art</td>
<td>Graphics</td>
</tr>
</tbody>
</table>

**Board Registered College Subjects:**

Design in Action | Journalism | Music in Practice |
Workplace English |            |                 |
Applied Communication Studies | | |
College Subjects:
Outdoor Education

TAFE Pre-Vocational Courses:
These post Year 10 courses are designed for students interested in entering the appropriate trade area either as apprentices or in other jobs within the trades.
The areas of study equate with the first year studies in any particular trade apprenticeship. Study is undertaken on a full time basis over two years.
Courses offered:
CN081 Vocational Studies in Engineering & Construction
CN081 Hairdressing and Beauty Care
CNL80 Hospitality Studies
CN068/69 Vocational Studies in Business
CN081 Visual Arts
On completion of each subject, students receive a Statement of Attainment. A TAFE Certificate is awarded on successful completion of the two year course.
This certificate usually entitles the student to exemption from first year college of an apprenticeship and six months off the first year of an apprenticeship.
Part Time Courses:
CNJ13 Associate Diploma of Business
CNJ77 Advanced Certificate of Real Estate Agency
CN972 External Senior
Additional to these are apprenticeship courses and a number of short courses which are offered in response to local industry needs. An Associate Diploma in Performing Arts is to commence in 1992.
It is compulsory for all students undertaking Pre-Vocational courses to include the subjects Workplace English and Life Skills in their study program. Workplace English (3.5 hours per week) is a subject developed by the college in consultation with local industry and as a Board Registered subject is not eligible for inclusion in the TE score but does contribute to the Senior Certificate. It is co-taught by TAFE and secondary teachers with specific industry input where appropriate.
The inclusion of the Life Skills program is particularly important as a large percentage of students will have to leave Hervey Bay in order to find employment. It is an integral part of the college's mission of preparing students with the skills
necessary to cope in a rapidly changing world. It is made up of 3 core elements:

- Health & leisure
- Essential social skills
- Communication skills.

About 50% of pre-vocational students are also studying Maths in Society. Where students are studying this subject together with Workplace English they are exempt from these components of the Life Skills course. About 10% of pre-vocational students are undertaking a 'free choice' subject from the BSSSS accredited subject offerings.

All board students do the Health & Leisure component of the Life Skills course. In addition, approximately 50% of Board students undertake at least one whole TAFE subject or Certificate course.

**Students**

The following table indicates college enrolments as of 1/2/91:

<table>
<thead>
<tr>
<th>Enrolment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time secondary (year 11)</td>
<td>252</td>
</tr>
<tr>
<td>Full-time secondary (year 12)</td>
<td>246</td>
</tr>
<tr>
<td>Pre-Vocational courses (year 11)</td>
<td>198</td>
</tr>
<tr>
<td>Pre-Vocational courses (year 12)</td>
<td>126</td>
</tr>
<tr>
<td>Total Secondary students</td>
<td>862</td>
</tr>
<tr>
<td>Apprentices</td>
<td>35</td>
</tr>
<tr>
<td>Associate Diploma</td>
<td>50</td>
</tr>
<tr>
<td>Part-time students</td>
<td>345</td>
</tr>
<tr>
<td>Total College Enrolment</td>
<td>1292</td>
</tr>
</tbody>
</table>

A waiting list of approximately 100 existed at 1.2.91. The college has undertaken to accommodate all students from the Hervey Bay area. All students are interviewed during enrolment period and after all Hervey Bay students have been accommodated, students from surrounding areas are offered places in the order in which they applied. There are 131 full-time adult students in Years 11 and 12.

Sixty-two (62) full-time secondary students and 167 pre-vocational students currently travel from Maryborough each day. (Maryborough has two high schools and a TAFE College).

Enquiries regarding enrolment are made from as far away as Brisbane. Some students are travelling up to 200 Kms. per day to attend the college.
Adult Environment/Care Program

Central to the philosophy of Hervey Bay College is development of students as effective independent learners and responsible members of the community. They are seen as emerging adults not children and as such are given the opportunity to develop as adults. The College has few rules and so students are given greater freedom. This in turn requires responsibility and decision making on their part. Where rules are continually broken students may be put on contract. Each student is assigned to their own care teacher who has responsibility for 10–15 students. Care teachers provide students with support and advice and ideally should identify problems as soon as they arise.

If students, parents or teachers have a significant concern about a student's progress, the care teacher will arrange for a 'case conference' to be held. The case conference is aimed at developing a strategy for improvement and obtaining a genuine commitment to that strategy. All class teachers, the care teacher, the special needs co-ordinator, parents and student attend the case conference which focuses on improvement and not condemnation.

Absenteism at the college is approximately 2%. This compares with a stage average of 10%.

Outcomes

The student product of Hervey Bay College is something of which the college is justifiably proud. In the three year period 1988-90, 70% of Board students entered tertiary courses. This is considerably higher than the State average which is in the vicinity of 60% A study undertaken by the college found that 94% of HBC students completed the first year of their university course compared with the State average of 80%.

In the last three years, 8 students have achieved the maximum TE score of 990 which is twice the State average and twice the number achieved by the two Maryborough schools combined.

The standard of the vocational students is continually being praised by employers and is reflected in entry into employment or further education of approximately 95%. It should be noted that a large percentage of students leave the Hervey Bay area in order to find employment. In this regard the inclusion of the Life Skills component in their course is critical.

Ownership

There is a strong emphasis of ownership of the college by students and this is very much reflected in the college surroundings. The students are clearly proud of their college.
The Student Representative Council appears strong and organises many fund raising activities for the benefit of the college.

**Student Perceptions**

Most students spoken to appeared to be very proud of the college and supportive of the senior college concept. However most felt that the adult learning environment including 'free periods' had been hard to get used to. Some even indicated that they preferred the more rigid system and timetabling of their previous high school experience as they were not effectively using the free time for study and felt that their day was being unnecessarily extended. There was obviously no division at all between Board and Pre-Vocational students. Clearly students viewed their relationship with teachers very positively.

**Staff**

Staff are appointed to HBC largely by advertisement, application and interviews in accordance with current requirements regarding qualifications etc. Teaching and administration/leadership staff are appointed from both secondary and TAFE backgrounds.

Teaching and administration/leadership/counsellors 80
School assistants/cleaners/store 41

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TAFE/Secondary staff divisions or friction are not apparent. On the contrary there are examples of cross teaching, in particular, secondary teachers taking substantial aspects of the (vocational) Life Skills course and TAFE teachers taking (Board) Graphic Skills as well as the collaborative team approach to the development and teaching of 'Workplace English' etc.

Teachers, community members and students relate that the staff are 'highly professional and hardworking', 'easy to talk to' and 'work very long hours'. Teachers are highly engaged with numerous observations of formal and informal discussions on student progress and curriculum matters. Teachers value their autonomy— that they are able to 'get on with the job'. Ancillary staff play an integrated role in the college with student care and involvement in the Life Skills course evident. Overall, staff morale, esprit and commitment are high and this is reflected in the 'classroom' observations of engaged, attentive and participative students.

The expectations for staff to work closely together regardless of TAFE or secondary background is made clear at interview. A modification of the TAFE teachers industrial award ensures that they all work under the same conditions of employment. Issues addressed were working hours and the payment of overtime to
secondary teachers. Twenty one contract hours are required, 'duty' time is not prescribed and teachers take tutorials and enrichment activities (eg. camps) outside of their contract time.

**Community/Industry Involvement**

Seventeen industry link committees have been established to comment on vocational curriculum and teaching practice so as to maintain the links with current industrial practice and to give local emphasis to the vocational courses without alteration of content, competencies etc.

Lack of time meant that it was not possible to canvass community /industry opinion about the college program.

Anecdotal evidence, however indicated a high regard for the principle of the joint TAFE/Secondary college. One concern expressed was that the entrepreneurial nature of some college activities (eg. restaurant) could undercut local industry. The College Principal separately described such activities as being necessary both for adding realism to student courses and to raise additional funds for college equipment etc.

Many respondents related change in the ways in which self-discipline of students has been reinforced with clear consequences for disruptive behaviour and absenteeism including contracts for students arising out of student/staff/parent case conferences. Parents are contacted by teachers who have concerns about students. Parents visit the college with their concerns.

A significant concern is the relationship between the Senior College and the local High School and their relative roles. (see issues below).

**Key Issues for Successful Replication**

a. The flexibility in timetabling, hours, facility and resource use, cross teaching and hybrid courses evident at HBC are strongly predicated on the harmonious collaboration between TAFE and secondary teachers on the one site. This has been accomplished at HBC by:

- strong, visionary leadership
- staff selection procedures that make these expectations clear
- a single industrial award
- the autonomy given to individual and staff groups to achieve high standards of student outcomes within the college goals
- separation of years 11 and 12 from the different constraints of Junior High School.
b. (a) above has been expedited by the single ownership of HBC viz: Bureau of Employment, Vocational and Further Education and Training. The single funding source, administration and regulation (and the greater autonomy given to new enterprises generally) have allowed initiatives such as hybrid courses and cross accreditation to proceed principally at the local level. It is of interest to note, however, that the curriculum (and hence principal costs) of HBC is supply driven (as secondary) rather than the mainly demand driven curriculum of TAFE colleges.

c. The culture of the young emerging adult:
It appears that in its early years the college took on more of a humanistic (even existential) approach to self-determination of students in say attendance, dress, behaviour, work completion etc. Many respondents related the difficulty of that ideological approach, both on campus (disruption, non-attendance etc) and with the deterioration of the image of the college within the town as a safe and productive place for parents to send their children. The current approach, as described in the handbook ‘Getting On’, visible in practice and related by students is much more of the development of self-responsibility within broad guidelines. It comprises a structured and effective case program with considerable freedom of action that would be difficult to develop and maintain in an 8–12 traditional secondary school.
‘.. the capacity to take responsibility and to realize the consequences of their own sometimes wrong decisions’. ‘.. the freedom to fail and to be constructively rebuilt’.

d. The necessary parallel, resourced and supported development of the middle or junior high school.
There remains concern from college staff and the community regarding the relatively abrupt severance of the Years 11 and 12 from the local high school, the rapid removal of surplus facilities from the site, the perceived lack of choice of school within the town etc. It is the opinion of these observers that to ensure the long term future of both, the development of Middle or Junior High schools alongside senior colleges is an absolute imperative especially in rural areas.

The Single Negotiated Industrial Award
It was apparent that this award negotiation was critical in the development of the joint secondary/TAFE senior college.
Appendix 1 (E)

Overseas Trends in Post-Compulsory Education and Training
Overseas Trends in Post-Compulsory Education and Training

A. Themes and Schemes

1. Trends towards convergence between education and training

There is a growing consensus that education, training and work entry opportunities for the teenage cohort in the post-compulsory years should be more closely integrated. To distinguish between education and training on the grounds of institutional location—school or work for instance—is too simplistic. A great deal of sophisticated learning may take place in the work environment. Nor is there an overwhelming educational rationale for a distinction between vocational and general education. Often the literature on education and training distinguished between "broad" general education and "narrow" vocational training. However, it is evident that a growing trend in vocational education is towards the acquisition of broad (generic) employment-related skills and competencies.

At the March 1991 OECD conference on post-compulsory education and training, the various country participants noted a growing convergence between general and vocational education. There are various institutional forms for such convergence. For instance, education and training may be conducted through a single institutional provider (e.g., schools in Sweden). More commonly there are extensive examples of "blended" curricula in which vocational and general elements are mixed even where an institutional separation is maintained between schools and training providers. Convergence may also be evident through attempts to preserve common destinations such as higher education entry for vocational education students (the French technical Baccalaureate for example).

Many countries have evinced concern that secondary education does not provide adequately targeted and integrated education for those who do not choose or unable to go on to higher education. Often the result is that vocational education is treated as the "poor cousin". Practical vocational training is often devalued in systems with a clear separation between education and training. Little priority is accorded to vocational education in schools, general/academic education is given high status as the domain of high achievers and these students are
discouraged from pursuing vocational education. Training follows
education and is occupation-specific. In the UK, Canada and the
US, significant attempts are being made to redress the perceived
poor status of vocational education. Various reasons have been
advanced for this pressure to raise the its status such as a
desire to attract high achieving students, a commitment to
increasing participation in vocational education, particularly
among students who are unwilling or unable to achieve well in
general education, and a desire to weaken the distinction
between academic and vocational education. The British Prime
Minister, for instance, has outlined the objective of breaking
down “the artificial barrier which for too long has divided an
academic education from a vocational one” as “the heart of our
reforms” to the education and training system announced in the
May 1991 White Papers.

2. Institutional Models

There are varying models for an effective, comprehensive and
integrated education and training regime. One model is for a
comprehensive schools pathway for the teenage cohort which
covers both vocational and academic courses. A contrasting
model is for the streaming of academic and vocational students
into different institutions but with the latter being accorded
proper recognition and strong community support and strong
general education components built into the vocational strand.
These models can be exemplified by contrasting the Swedish and
the German systems—both of which have coherent and
comprehensive approaches towards post-compulsory education
and training, and forms of “blended” curricula. Sweden has gone
very far towards integrating general and vocational education
within the one institution (schools) and the curriculum blends
both vocational and general elements. School-based “lines” of
study of between 2 and 4 years length in the post-compulsory
years. Lines of study which were predominantly vocational have
strong general education elements and vice versa. The
integration has not been without difficulty. In the mid 1980s
various problems had appeared in the nexus to practical
employment based training and employment itself. Sweden had
effectively displaced traditional forms of structured entry-level
training such as apprenticeships and was forced to attempt their
revival. However, the school system was not intended to provide
full vocational qualifications. Originally it was expected that a
final year of in-house training would be given after the two year
vocational study program. This did not occur in all occupations.
The problem is being addressed by attempts to expand the
provision, quality and regulation of work-based training and its
consistent integration with school education.
The German system, while it maintains separate institutional pathways for academic/general education and vocational education after Year 9, provides an integrated general education to its "dual system" apprentices. The German system makes a virtue of early streaming of students into more or less vocational or academic pathways. Raffe points out that the success of the dual system might depend in part on the relative weakness of pathways leading directly to higher education. However the system is also sustained by close regulation of occupational entry which effectively supports the dual system pathway. There is some inflexibility built into a system of state recognised occupations and prescribed training regimes. Changes required to these definitions due to technological changes or changes in work organisation are time-consuming and resource intensive. More recently there has been criticism that the occupational training is insufficiently broad. The assessment mechanisms have also been seen by some as too inflexible, and as discouraging alternative delivery methods and different work experiences. The system cannot easily assess the more personal/subjective skills which are important in modern work organisation (co-operation, autonomy, planning etc).

Somewhere between these alternatives are such systems as in France which relies on a predominantly full-time-education system, but with a strong vocational academic stream through the technical baccalaureate and clearly defined career paths.

The reasons for the evolution of such differences systems most often rests on specific historical and social factors but some general points can be made about preferences. A key rationale for a school based model is that it maximises the options for students. In Sweden the impetus for the creation of an integrated upper secondary school was egalitarian/distributive (OECD, 1987). It was intended to widen the range of opportunities for those who had been denied access to higher education. The school model formally minimises the barrier between academic and vocational choices where these choices are not institutionalised under separate providers. The contrary argument is that a school-based system tends to diminish the responsiveness of the vocational system to the working world. It relies on an "education push" model of labour market outcomes rather than an "industry pull" model. The school system's broader educational responsibilities tend to make it less responsive to rapidly changing technological and organisational demands of industry and commerce than a dedicated post-compulsory training provider might be. In practice this problem may be attenuated by appropriate forms of industry consultation.
3. Pathways

The concept of "pathways" through education and training has been promulgated as an important tool for an effective and comprehensive articulation of the links between education, training and the world of work. In the past pathways merely provided a neutral description of the likely education and labour market outcomes of choices made by a student during his or her education. Pathways have more recently acquired a prescriptive and positive inflection for education policy makers. Its key underpinning is a commitment to both diversity and coherence. Pathways imply a diversity of education and training options which properly articulate into further education, training, and/ or employment. Clear points of progression are established through successive education and training milestones. Pathways are planned and "signposted" so that a student understands the outcome of a decision to follow a particular course of studies. Coherence is a critical concern for the pathways perspective. Pathways must be interlinked and cannot be designed in isolation. The pathway approach may also imply a commitment to competency assessment and progression and also to multiple entry and exit points. The model is useful even for education and training systems which are not closely integrated.

The pathways concept has been taken up by policy makers interested in improving the overall level and effectiveness of education and training provision. There is wide interest, especially for vocational education, in making more coherent and effective links between the education and training systems and labour market outcomes.

4. Growing Flexibility in Vocational Education

There are a number of difficulties for the training system in creating appropriate matches between educational provision and occupational opportunities. Technological and organisational change has accelerated the blurring of occupational profiles and occupational boundaries. Occupations are no longer fixed reference points to guide students in acquiring relevant competencies. The growing significance of internal labour markets as means of assigning occupational roles and responsibilities also shifts the focus for specific skills training away from the public entry level training system and onto the firm itself. Occupational mobility can also be a strong disincentive for orienting vocational education solely towards entry-level jobs. The match between education and occupation is particularly loose for disadvantaged groups whose employment is concentrated in more volatile segments of the labour market.
Post-compulsory training has responded to these pressures through attaching more importance to generic or transferable skills, and by developing pathways with broader occupational links. Mismatches between labour skill supply and skills in demand is less of a problem where training focuses on generic skills. France, the Netherlands and Sweden have merged vocational education studies into fewer and broader areas of study. Other countries are developing “generic” apprenticeships leading into families of occupation (the US, for example). Sometimes these attempts involve delaying the point at which students are required to specialise. Another option has been to increase the flexibility of subject choices, through modularisation (the Netherlands and Scotland, for example) and by defining vocational education paths in terms of competencies rather than occupations. Another response is to shift the balance of functions between pre-employment vocational education and post-employment, making the latter bear the responsibility for specific occupational training. Sweden has adopted this approach for some technical courses.

Only central and northern European countries have resisted the trend to mute ‘occupational identity’ as a central feature of the vocational education curriculum and as an important motivation for students. In Germany this might be because of the cultural importance of occupational identity but must also reflect the significance of formal qualifications as a necessary condition for occupational entry and advancement.

5. Generic Competencies

A number of countries have shown interest in developing education and training systems which provide a foundation core of “generic” competencies for all teenagers before they leave the education system. One objective in such an approach is both to ensure a basic range of foundation skills, or educational attainments, for a young person entering the world of work. Such competencies will commonly include literacy and numeracy skills. A second objective is to provide a balance of vocational and academic competencies. The requirement for generic competencies can be a means of providing the link between general education and vocational training provision. Generic competencies commonly listed in the American materials include basic skills in

- Learning to learn
- Reading
- Writing and Computation
- Communication
The United States Secretary's Commission on Achieving Necessary Skills (SCANS), established by the Secretary of Labour had the task of clarifying the basic skills required by the workforce. It reported in June, 1991, and provided a framework for the measuring of proficiency across a number of broad competency areas.

In the UK, the Department of Education and Science is currently consulting on the possibility of including of core skills in education and training programs for all young persons in the 16–19 age group.

6. Participation

A number of countries such as Germany, Sweden, the UK and Singapore have a national commitment to ensure that virtually all young people participate in education and training to age 19. The United Kingdom, for instance, has declared its intention that all young people in the country, up to the age of 19, will be encouraged and entitled to continue in education or training. The Government recently announced an offer of a training credit worth one thousand pounds to every 16 and 17 year old who opts to enter the training system after leaving school. The Government also has declared its expectation of attracting more people into the higher education system (which also covers polytechnical education)—from the current level of 1 in every 5 young people to 1 in every 3 by 2000. In the USA, a Summit convened by President Bush at Charlotteville, set a framework of objectives to achieve by the year 2000. One commitment was to a high school graduation rate of 90%. Another was that United States students would be first in the world in Mathematics and Science achievement. All students will leave grades 4,8, and 12 having demonstrated competence over challenging subject matter including in English, Mathematics, Science, History and Geography. The Summit also declared that "every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship."
7. Policies and Pitfalls for Pathways

David Raffe, in a paper to the 1991 OECD conference on post compulsory education, identified a number of policy issues and constraints arising for attempts to redraw the linkages between educational courses and occupational outcomes using the pathways model.

In the pathways perspective, teenagers' participation is secured through incentives, mostly labour market outcomes. Yet education policy makers do not have control over the total level of labour market incentives, nor of the way these incentives are distributed. Therefore attempts to improve incentives in one part of the system may, at least in the short term where labour market outcomes are relatively fixed, have deleterious effects elsewhere. For example, the ambitious French attempt to increase the number of students achieving the Baccalaureate, might result in a devaluation of the market value of the Bac., or increase the status differences between different types of Bac. Raffe concludes that it is important to balance the objective of achieving attainable standards for students against the need to maintain the exchange value of the qualifications.

A further constraint in part arises from the inability of educational policy makers to influence the manner in which labour market outcomes themselves are distributed according to education and training achievements. Employers often rely on "conservative credentialism"—favouring prestige courses because these are assumed to have attracted the brightest students. Such conservatism can work against attempts to raise the status of vocational education. For example, Raffe found that employers in Scotland who approved of the objectives of the innovative Technical and Vocational Education Initiative (TVEI) nevertheless still used traditional qualifications for selecting their own employees. Reform attempts must be accompanied by strong attempts to inform employers about new training initiatives in order to shift the traditional hiring practices.

The exception to this constraint exist where occupational entry is formally regulated through occupational qualifications (such as in Germany) or through industrial award systems (eg for trades entry in UK). This factor underlies the recent enthusiasm for moves to more formally and comprehensively regulate occupational entry through specified skill standards and training pathways (such as the NCQV in Britain).

Raffe also points out that systems of qualifications are a necessary but not sufficient condition for providing coherence to vocational education pathways. Where common qualifications are intended to provide coherence to diverse education and training pathways, it is crucial that selectors (employers and further
education institutions) accept the validity of qualifications. National systems of qualifications need to build acceptance at the local level.

As well as labour market problems the educational institutions themselves may resist restructuring attempts and the specification of new pathways. There may be a large gap between what “ought” to be happening and what is actually happening at the school level. Raffe uses the examples of modularisation reforms in Scotland whose “intrinsic logic” is overwhelmed by a conventional “institutional” logic: Higher education institutions and employers continue to select according to institution attended, period and mode of study, all of which are formally irrelevant in the new modular system.

Vocational and technical education also suffers from a chronic policy dilemma as distributional issues are fundamental to the debate about educational pathways. There is an apparent conflict between the desire to enhance the status of vocational education and the wish for it to cater for disadvantaged groups. Attempts to raise the status of vocational education—typically be making it more exclusive—may conflict with “more inclusive” strategies catering for disadvantaged groups.

The ‘inclusive’ British Youth Training Scheme reflected strategic priorities quite different to those of France, Germany, or the Netherlands, where vocational education remained clearly separate from schemes for unemployed or disadvantaged youth.

Innovative approaches to training disadvantaged teenagers themselves often acquire low status relative to mainstream vocational education pathways. Where these are extended to mainstream vocational education it can have a deleterious effect on these strands. Systems which give priority to low attaining students usually provide open access to vocational education, with less stringent assessment and no clear distinction between mainstream vocational education and provision for disadvantaged groups. As a consequence these systems are likely to have a less well developed vocational education sector and clear division between vocational education and academic and general education. Systems developed for middle attaining students tend to enhance the status of vocational education with a strong division between mainstream vocational education and programs for the disadvantaged. These systems may also have a stronger link between vocational and academic pathways, facilitating transfers between vocational education and higher education (France and Italy). There is some evidence to suggest that problems arise where different objectives such as unemployment relief and revitalising youth training are combined under a single scheme.
B. Reforming Vocational Education and Training—A Summary of the COSTAC 1990 Overseas Mission to Study Developments in Vocational Education and Training

1. School Reforms

There is a strong drive in the United States and England to reform schooling so as to ensure that all students achieve essentials skills and competencies. Sweden is also taking action in this area with a current reform of its upper secondary school system.

During the 1980s, educational reform in the United States has emphasised improving basic academic skills (reading, mathematics and the sciences); expanding the traditional curriculum, so it now includes the interpersonal, teamwork and organisation skills needed in the workplace; improving the quality of teaching/training; and testing both teachers and students for subject competency attainment. In the later part of the 1980s, there has been a growing awareness of the importance of ensuring that the benefits of these reforms also reach the vocational education and training system. Most States in the US now have mandated testing programs in schools and in September 1989, a President/Governors Education Summit at Charlottesville formulated national education goals, including ensuring school achievement and improving science and technology education. The SCANS Commission reviewing post-compulsory education and training in the USA presented its report last month. It provided a framework for measuring proficiency across five broad competence fields: resources, interpersonal, information, systems, and technology. The SCANS Competencies were not specific to vocational education, and all teachers, in all disciplines are expected to incorporate them into their on-going classwork.

The Departments of Labour and Education are co-operatively launching an intensive effort to develop a range of alternative approaches to assist American youth in making the transition from school to work. The primary focus of the initiative is the development and exploration of alternative models for assisting States and local communities to address the issue. One model would build on the community college framework which links the last two years of high school and a two year community college program, by adding variations of the generic model to strengthen the education-work linkage and introduce or expand the work connected learning component. The enhanced model would seek to intensify the work-education linkage as the
student moves through the program and would also encourage employers to become full participants in the formal "education" partnership and the development of a curriculum that is oriented to the basic needs of the workplace.

In the UK, the 1988 Education Reform Act established national curriculum to age 16; requires testing of all students at ages 7, 11, 14 and 16 to be phased in from 1991, and established a National Curriculum Council and an Assessment Council. The Department of Education and Science is now seeking to implement these reforms and is currently consulting on the possibility of inclusion of core skills in education and training programs for all young persons in the 16-19 age group. The recent White Paper initiatives in the UK included a commitment that every 16 and 17 year old leaving full-time education will be offered a training credit, within the lifetime of the next Parliament. For the first time, a new diploma will combine academic and vocational qualifications. Schools will be allowed to admit part-time and adult students to sixth forms and to accept training credits or to charge fees for them.

The UK Government also established the Technical and Vocational Education Initiative (TVEI) which emphasises a practical problem solving approach to learning for 14 to 18 year olds and encourages the use of new technology in the curriculum. TVEI projects improve skills and qualifications for all, particularly in the areas of science, technology, and modern languages. The projects provide young people with work experience and concentrate on developing the performance of young people on an individual basis.

In Sweden, school curriculum and standards for each vocational stream within that curriculum are developed through an extensive process of consultation at a community level involving the industry parties. This curriculum is based upon objectives of skills and competencies. Reform is underway to

• increase the extent to which such training is competency based,
• increase the broad based content in the earlier stages of the training through reducing the number of streams
• introduce changes to curriculum which raise the educational and skill content
• add an additional year primarily focussed at increasing the amount of structured on-the-job learning to ensure skills and competencies are relevant and able to be applied.

In West Germany, the school curriculum of the Lander is heavily influenced by the on-the-job component of the dual system which is managed in a tripartite way at the Federal, Lander and local levels. This ensures that there is constant
pressure for the delivery of essential skills and competencies and an ongoing ability to monitor such delivery. Accompanying the moves toward more broadly based standards promoting analytical and adaptable skills in the on-the-job curriculum, there is also a review of the schooling curriculum to achieve a greater integration of schools subjects and their teaching in a manner relevant to their on-the-job and in-life application.

2. Entry Level Training

Entry-level training is institutionalised in the vocational school and college systems in the USA, Canada and Sweden. All of these countries have expressed concerns about their entry-level training arrangements. These countries do not have a work-based entry level training system. These countries are concerned that the “dropout” level for young people up to age 19 should be kept below 10% and that there be strategies to provide skills training to those who fall through the net. Canada, which has a more developed apprenticeship system than the USA, is introducing a co-operative education program which has many similarities to Australia's traineeship system.

In the early 1980s, the UK Government recognised the necessity, in a labour market exhibiting high levels of youth unemployment, to establish a mechanism directed towards those young people who had left compulsory schooling but who were experiencing difficulty in gaining permanent employment due to a lack of marketable skills. Thus in 1983 the government introduced the Youth Training Scheme (YTS) designed to assist the more disadvantaged youth to gain a foothold at labour market entry level. YTS offered a guaranteed training place to all 16 and 17 Year olds who chose to leave full-time education and could not find a job. This scheme is currently being reformed with a view to substantially raising skill levels. The scheme was designed to provide a year of training support (later extended to two years in some cases) during which time participants would undergo both on and off-the-job training in vocational skills and personal development with the object of developing for youth, a solid foundation for further working life.

The US has established an Office of Work-Based Learning to develop industry based training programs along the lines of the German Dual System. The US SCANS Report has recently recommended a major overhaul of school teaching practices to increase the teaching of employment related competencies. The UK has initiated the Technical and Vocational Training Initiative, to equip young people aged 14–19 for working life.

In Sweden the upper secondary school system is where the
greatest amount of structured vocational education and training is carried out. Sweden is extending its provision of vocationally oriented work experience as part of the school study ‘lines’. This system is being reformed through the abolition of the existing 2 year courses replacing them with 3 year courses which have a much greater emphasis on work experience. In future, it is expected that work experience will account for some 20% of the workload in the first year of a 3 year course rising to around 60% of the workload in the third year.

3. Industry/Occupational Skill Standards

A few countries have established formal bodies with a national standard setting function are West Germany (BIBB) and the UK (NCVQ and the Training Agency) although recently the European Centre for the Development of Vocational Training (CEDEFOP) has undertaken the development of a standards-based matrix which will facilitate the comparison of vocational qualifications normally required for the performance of occupations which are common across the member countries of the EEC.

West Germany has a well-established system of standards-based training. Standards are specified in national legislation and substantial resources are devoted to monitoring and updating skill standards. Germany has undertaken a rationalisation of occupational classifications. The acceptance of the need for training to be derived from standards of competence has been a historical feature of the West German training system. Prior to the passing of the Vocational Training Act in 1969, the development and maintenance of standards was a normal element of the responsibilities of the craft and industry chambers within the purview of their statutes. These statutes had been developed over a long period and were designed to ensure that quality and precision in the German product were maintained. The Act systematised these traditional practices and established them in Federal Law.

The promulgation of the Vocational Training Act caused little alteration to the training system in West Germany. Rather, it officially recognised a standards based training structure which had already evolved over a long period of time. This system met and continues to meet, the demands for quality, thoroughness and precision in workmanship which have been necessary for German industry to maintain a leadership position in many technical areas of the international trading community.

The UK has developed a framework for their system of standards directly related to four key levels of competence which serve as the key reference points for targeting activity
aimed at improving the skills of the workforce, for certification of competence based on outcomes of training and to facilitate the comparison of vocational qualifications across industries and occupations.

A fifth level is proposed to cover competences related to higher level occupational requirements and qualifications (generally at the professional level) than those encompassed by the existing fourth competence level.

To support this system, the UK Training Agency has established a network of more than 150 industry "Lead Bodies" to develop standards, on a 50/50 shared cost basis, for endorsement by the NCVQ. A lead body is expected to represent the interests of the major users, particularly employers in outlining relevant training standards. Importantly, a lead body is also expected to establish the credibility to be able to secure the acceptance by major users of the standards it has developed. At present, only a small part of the task of establishing standards is complete and many of those approved are interim. However a start has been made and many of the issues applying to the standards setting process in the UK education and training environment have been addressed. The recent White Paper announced that National Vocational Qualifications will be introduced as fast as possible and that colleges will be required to adopt them.

In Sweden there is a process for the formal setting of standards in the education system through Boards in all subject areas, at all levels in the school system through to technical training, and at the national level feeding down through the system. Similarly in the training system there is a process through the Labour Market Board and its system of boards to set standards in all discipline areas.

In this system, the nationally recognised standards levels relate to the national system of qualifications levels

* skilled worker—school graduate (vocational)
* advanced skills worker
* technician
* technical officer
* professional.

Substantial work on the comparability of vocational qualifications across the EEC and CEDEFOP has developed a framework based on a five level standard of competence model which provides both for comparison of qualifications and for the recognition of experiential learning. A framework based on levels of competence was adopted in preference to one based on equivalence of qualifications, as it was considered that it would be more relevant to economic, industry and workforce needs and
would provide the only effective method for the comparison of vocational qualifications.

In the USA, the "Work-Based Learning: Training America's Workers Report" has proposed standards-based training and certification. Linkages were being drawn between the urgency for US manufacturing industry to become more competitive and the need to improve the basic education and skills base of the workforce. However, the present fragmented and unco-ordinated approach to establishing and maintaining standards across the US would be a major obstacle.

In Canada, there is a recognition of the need for higher quality education and training focussed on competence. One response to these circumstances in Canada has been the development of the 'Red Seal' apprenticeship program as a means of attaining common standards across provinces and improving the quality of training. Under this program, tradepersons in certain designated trades (about 30) undertake nationally standardised training programs and gain nationally recognised qualifications marked with a 'Red Seal'. A Task Force on apprenticeship has recommended that the 'Red Seal' program be extended to all apprenticeable trades which are conducted in two or more provinces.

4. Competence assessment and credentialling

The USA, Canada, Sweden and the UK have all expressed concern about standards for vocational training and are moving to restructure courses in performance-objects format, to pursue more uniform and consistent standards and to change examination and credentialling processes to competence assessment rather than knowledge/theory testing.

The West German Dual System has a comprehensive competence-based assessment examination at the completion of training which must be passed in order for an individual to obtain a credential as a skilled worker (or tradesperson).

The examination is predominantly practical, based on project work which is aimed to test both knowledge and skill and their application at a defined level of competence i.e. it tests not only task-specific skills but also conceptual, analytical and problem solving abilities. Elements of theory testing are also included.

The competencies examined are increasingly related not to specified single tasks but to the integration of tasks. Competencies must be increasingly demonstrated in the real work situation, or, in a modelled/simulated work situation. Thus the dichotomy between exam and work, theory and practice, exam and training is broken down.
- The examination procedure, conducted and assessed by a panel of practical experts, is quite rigorous; in many cases extending over several days. It applies equally to youth completing initial training and adults seeking to demonstrate competence acquired through experience and/or training.

- The competence standards for the examination are set in the Regulations to the Vocational Training Act, the content is set by tripartite examination boards and the examinations are administered by the Industry and Handcraft Chambers which are also the certificate issuing bodies.

- To undertake Meister level training, a minimum of five years work experience in the trade is mandatory, coupled with performance competence across both vocational and general (business) education content areas.

In the UK the Training Agency, through the NCVQ and Industry Lead Bodies, is trying to move away from examinations based on ‘the capacity to write an essay’ to a system of assessment of competence based on agreed standards. A precondition of approval by the NCVQ of a National Vocational Qualification is that the training/certificate issuing organisation be able to demonstrate that an effective standards-based assessment process is in place. This may take the form either of actual performance assessment or a simulation exercise. The UK is attempting to move to a process similar to that adopted in West Germany, whereby credentialling is not based on completion of a specific training period or on theoretical examinations but rather on a process of assessing whether the appropriate levels of skill, knowledge and application can be demonstrated. This is not to say that nominal training periods are no longer relevant but, rather that competence is the determinant of credentialling rather than the passage of time.

In the UK skill standards are being progressively introduced and the issues of articulation and credit transfer have been worked through under a national framework established by the NCVQ. The NCVQ has established a system of national vocational qualifications which, to be accredited with the NCVQ, must be based on competences. A key element in this strategy is the National Record of Vocational Achievement which allows elements of competence acquired at different times and in different places to be recorded in a standard form and to build up into a full national qualification. This individual record of training is maintained in a “presentation pack” which is held by the individual and can be used to market skills acquired both in institutional training and on-the-job, in either seeking to undertake further education and training or to obtain employment.
Germany has a system of vocational education and training which is rooted in the cultural traditions and history of the country. The system enjoys considerable prestige, and is well coordinated with the general education system. Its centrepiece is the dual system which is based on collaboration between training institutions and employers and which integrates formal instruction and on-job experience.

Under the German federal system, education is mainly a responsibility of the States (Lander). Nevertheless, the Federal Government is able to exercise influence on vocational training arrangements through the powers assigned to it under the Vocational Training Act of 1969 and associated legislation. This law gave the Federal Government responsibility for vocational and further training with the exception of courses conducted in the vocational schools established by the Lander.

The Vocational Training Act of 1969 largely codified existing training practices established by bodies like the Chambers of Industry and Commerce. Historically Chambers have played a key role in vocational education and training in Germany. Another aspect of the German arrangements is the role of 25,000 local authorities which have defined institutional rights in the fields of education and training. Thus the German System of vocational education and training is a complex arrangement involving the interaction of Federal, Lander and local authorities, with chambers of industry and commerce playing a major role.

School System

Germany has comprehensive educational planning for both general and vocational education. It has a differentiated system.
with a number of streams directed to different vocational pathways. While the pattern differs somewhat between the Lander, the general structure is reviewed in Table 1.

Beyond full time compulsory schooling, a number of choices exist in the highly differentiated German system. Those proceeding to higher education do so through the Gymnasium (High School) which leads to a higher education entrance certificate (Abitur) or a Fachoberschule which leads to the Fachhochschule Sector of higher education which offers specialised courses with a strong practical orientation in scientific fields.

**TABLE 1 German School Structures**

<table>
<thead>
<tr>
<th>School Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>Grundschule</td>
<td>The Primary School which caters for children aged 6 to 9.</td>
</tr>
<tr>
<td>Orientierungstufe</td>
<td>An Orientation State of 2 years following the Grundschule which can be tied to a particular type of primary or secondary school.</td>
</tr>
<tr>
<td>Realschule</td>
<td>An intermediate school which caters for the middle ability range and which includes some foreign language teaching.</td>
</tr>
<tr>
<td>Hauptschule</td>
<td>These schools cater for the least academically able students.</td>
</tr>
<tr>
<td>Gesamtschule</td>
<td>Comprehensive school.</td>
</tr>
<tr>
<td>Gymnasium</td>
<td>The grammar school which caters for students wishing to progress to higher education.</td>
</tr>
</tbody>
</table>

Large numbers of students enter one of the vocational training streams after completing 9th or 10th grade. Most enter the dual system of vocational training which combines part-time schooling with on-the-job training. A number also enter full time Vocational Schools. In 1987 while 1.6 million students were in the Gymnasium, some 1.8 million were being trained in the dual system. The full-time vocational schools provide training in business, nursing and administrative occupations. There is a reluctance to expand general secondary education at the expense of vocational training.

While Germany has retained a "streamed" system, for vocational and academic education, there is a provision for students to transfer between these streams and the vocational education
Vocational education has considerable prestige and status in Germany. The dual system in Germany covers a wide range of occupations and provides structured entry-level training for a large proportion of school leavers. Entry level training under the dual system is provided through some 380 officially recognised training occupations which lead to some 20,000 qualified occupations and which provide for over 1.7 million trainees. In recent years 80% of school leavers have wished to enter training under the dual system.

The main features of the dual system are:

- it integrates on-job experience with formal learning in vocational schools;
- it gives effect to a qualifications policy directed at all school leavers securing a vocational qualification;
- it incorporates broadbased, mobility-oriented vocational training;
- it is based on voluntary participation by firms;
- training can only be provided in State regulated training occupations;
- standards are set through a framework of Government regulation for each training occupation, but are administered through industry self-regulation by means of the Chambers of Industry and Commerce and Handicrafts;
- regulations specify required skills and competencies for each occupation so that the whole training system is competency-based;
- administrative arrangements are tripartite at each level with employer, union and government involvement.

A key characteristic of the dual system is the role of employer bodies in supervising training provided under this system. These functions are carried out through the Chambers of Industry and Commerce and the Chamber of Handicrafts. The Chambers supervise training contracts in enterprises. The work of the Chamber in the delivery of training is exercised through the appropriate vocational training committee of each chamber. All
employers belong to the relevant chambers. Chambers spend around half their income on training and the rest on industry development and promotion. Half of the Chambers' income comes from compulsory fees levied on industry.

A major component of the dual system is the provision of off-the-job training in part-time vocational schools (berufsschule). Their purpose is to convey general and professional knowledge, with particular regard to the demands of vocational training. 40% of classes taught are general education (ie) German, Civics/Social Studies, Economics, Physical Education, Religious Instruction. The other classes provide specialised vocational courses which are tailored to the training regulations of the various occupations. Classes are taught on part-time basis up to 12 hours/week or in continual segments (Blockunterricht). Graduates with a successful pass in an examination certificate may enter schools offering advanced vocational training.

Skill Standards

A framework for national dimensions for skill standards is provided through national training regulations which are prescribed for all training occupations. The Federal Minister issues regulations for all prescribed training occupations. Each training regulations sets down the following:

• the title of training occupations;
• the length of training period;
• the knowledge and skill to be acquired;
• examination requirements.

Training regulations are revised regularly. A Federal research institute investigates issues relating to training regulations in view of new technological, economic and social developments. The competency approach is put into effect through role of the chambers in supervising training and in conducting examinations. The German arrangements have the merit of associating national skill standards with industry self-regulation within the prescribed standards.

Assessment and Credentialling

Assessment and credentialling arrangements under the dual system are in accordance with the principle of industry self-regulation of standards. Assessments of trainees is undertaken by the Chambers of Industry and Commerce and the Chambers of Handicrafts and these Chambers issue certificates to trainees on the completion of training. The Chamber administers both interim and final examinations and then issue certificates to
Active participation by unions
arrangements is a central feature of the German system. This
occurs at all levels both in policy development and the
determination of standards, and in the delivery of training.
Germany has developed a strong culture of training in industry.
The German system owes much to the tradition and the power
of the craft chambers. The Vocational Training Act of 1969
largely gave legal sanction to the system with roots extending
back through German history. There is a strong belief that
training is a social responsibility.
Industry in Germany meets the major share of training costs.
There is little opposition in Germany to investment in human
resources and there appears to be a consensus involving all
parties that it is necessary to continue this investment for both
economic and social reasons.

**SWEDEN**

Vocational education and training enjoys a considerable prestige
in Sweden and has the strong support of employers, unions, and
education agencies at all levels. Sweden does not have
apprenticeship arrangements along the lines found in England,
Germany, the United States or Australia, but rather the upper
secondary school plays the major role in entry level skill
formation. The Swedish upper secondary school, which is unique
in the way it combines general and vocational education, has
been under continuing review and development since its
establishment.

**Reform of Schooling**

The reform of schooling in Sweden has focussed over the past
decade on the upper secondary school which has a key role in
the Swedish arrangements for vocational training education.
Sweden has a 9-year comprehensive school as a compulsory
school operating under municipal sponsorship within national
guidelines. This is followed by a 2-3 year upper secondary school
which has evolved to its present form throughout the 1960s and 1970s after considerable experimentation. In the initial stage of development the traditional gymnasium, with its focus on academic or general education, was amalgamated with the technical gymnasium and commercial gymnasium to form a single 3 year gymnasium. Then in 1972 the gymnasium, continuation school, and vocational school were amalgamated to form an integrated upper secondary school providing both general and vocational education.

More than 90 percent of all compulsory school leavers go on to the upper secondary school, where they can acquire a vocational education or prepare for higher education. Upper secondary schools can also organise education and employment programs for unemployed youth between the ages of 16 and 18 and a form of apprenticeship exists which combines apprenticeship training with attendance at the upper secondary school.

A distinctive feature of the upper secondary school is that most students choose vocational programs rather than general education which is designed to lead to higher education. About 65 per cent of students opt for vocational lines with around 35 per cent studying general and theoretical lines. This balance reflects the high prestige of vocational education under the Swedish arrangements.

The upper secondary school is divided into 26 study lines with some 500 different courses. The lines vary in duration from 2 to 4 years, although most are 2 or 3 years, and have varying degrees of occupational emphasis. The specialised courses range in duration from a week to several years. They provide vocational education in a wide variety of fields.

Vocational lines cover a wide variety of craft, industrial, technological, and service occupations. These include such fields as agriculture, horticulture, nursing building and construction occupations, food processing, carpentry and electrical occupations. There is a single 4 year technology line while general lines in fields such as liberal arts, social science, natural science and economics cater for students proceeding to higher education.

Each year the Swedish Parliament decides the number of places to be made available nationally in the various lines. The National Board of Education then collaborates with county education boards in the distribution of places between countries. Allocations have regard to both student demand and labour market requirements for skills. Most students secure admission to the field of first preference. Guidelines laid down by Parliament require upper secondary schools to have sufficient places to cater for all 16 year olds.
Vocational and general lines are grouped into broad sectors to assist students with their educational and vocational decision making. These broad sectors include industry and crafts; agriculture, forestry and horticulture; technology and science; economics, commerce and office work; the caring professions, social services and languages; social sciences and the arts.

A national curriculum is set for the upper secondary school along the lines of that set for the compulsory stage of schooling. This contains goals and guidelines, time allocations, and some syllabus direction. Local authorities can adapt this curriculum to local conditions.

Because the upper secondary curriculum is highly differentiated, with most lines vocational in character, the curriculum is under constant review and is adapted in line with changing conditions in the workplace and higher education.

All lines have a balance between general and vocational subjects which varies with the particular vocational or general orientation of the line.

Some examples are:

<table>
<thead>
<tr>
<th></th>
<th>Vocational Subjects</th>
<th>General Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 year operative and maintenance line</td>
<td>65</td>
<td>35</td>
</tr>
<tr>
<td>2 year nursing line</td>
<td>65</td>
<td>35</td>
</tr>
<tr>
<td>Other 2 year vocational lines</td>
<td>80</td>
<td>20</td>
</tr>
<tr>
<td>3 and 4 year general lines</td>
<td>30-40</td>
<td>60-70</td>
</tr>
<tr>
<td>2 year general lines</td>
<td>40-45</td>
<td>55-60</td>
</tr>
</tbody>
</table>

This approach ensures that all students study some vocational subjects and that vocational lines include a reasonable amount of general education which ranges between 20 and 35 per cent of the time.

Foreign languages are widely taught with English, for example, being compulsory or optional depending on the line. The Swedish approach aims to make initial vocational education broadly based and general education subjects have an important role in this approach.

Sweden has kept the integrated upper secondary school under constant review since its establishment in 1971. An Upper Secondary Schools Commission (GU) was set up in 1976 and reported in 1981. Its proposals were judged too expensive and
were not implemented. Then in 1984 Parliament decided on a 5 year program of experimentation and development which generated more than 1,000 different projects in municipalities throughout the country.

In 1986 a study group established to review upper secondary vocational education (OGY) submitted a report which recommended, in part, 3 year vocational lines with part of these programs based in the workplace.

Experimental 3-year vocational lines were set up throughout Sweden in 1989. The proposed reform of the upper secondary school was still under consideration by the Swedish Government at the time the Mission visited Sweden in May 1990. It was expected then that the Government's proposals would be submitted to Parliament by November.

The Government has asked the National Board of Education to reduce the number of lines and the National Board has consulted widely on proposed changes. A model with 22 lines and 90 branches within these lines was under consideration. Other key aspects of the proposed changes are:

- vocational subjects should not include experience and instruction in the workplace;
- subjects would be divided into modules with required competences based on skills and competences required in the workplace;
- subjects providing basic knowledge and skills (Swedish, Mathematics, English in particular) should be strengthened.

The Swedish upper secondary school is distinctive and unlike upper secondary schooling in any other country visited by the Mission. Its strength lies in the integration of general and vocational education in the one institution and in the considerable prestige of vocational education. The systematic Swedish approach to review and further development of this level of education means that schooling is responsive to changes in the workplace and in society. The approach adopted to curriculum appears to achieve a good balance between national standards of achievement and adaptation to local conditions.

**Entry-Level Training**

Entry-level training occurs predominantly in the upper secondary school, although some firms have their own schemes to supplement the training given in the upper secondary school.

While this approach has some strengths, such as allowing for integration of general and vocational education and possibly facilitating links between entry-level and continuing education and training, there has been a problem with the inadequacy of
on-job experience to supplement formal training provided in school. This issue has been recognised in the current proposal to extend vocational lines from 2 to 3 years to allow more workplace experience.

The Swedish approach also means that the traditional apprenticeship model has not been a principal form of entry-level training. However, a system of upper secondary apprenticeships has now developed and municipalities have been allowed to organise upper secondary school apprenticeship schemes since 1980. Under such a scheme, an apprentice working for a firm can also be an upper secondary student, if the training provided by the firm conforms to regulations issued by the education authorities.

Administratively, this training is geared to the upper secondary school and comes under the supervision of the local education authority which consults with the local vocational training committee. The education authority draws up a syllabus for each apprentice following such consultations. County education boards distribute upper secondary apprenticeships between municipalities as part of over-all educational planning.

Skill Standards

Sweden has not adopted a structured national approach to skill standards such as exists in Germany and which is evolving in England and Australia. Entry-level standards, however, are fostered by the Swedish approach to school curriculum in both the compulsory and upper secondary stages. As national curriculum guidelines are prescribed for courses, including vocational lines at the upper secondary level, these national guidelines contribute towards common standards across the country. The on-going review and revision of curriculum in Sweden assists in adapting courses to changing conditions and so maintaining standards.

The extensive Swedish use of research in education and training, and the active involvement of employers in education at national, regional and local levels also contribute to Swedish vocational education and training being responsive to changing skill requirements.

There does not appear to be as strong a concern with skill standards as in a number of other countries. The Ministry of Education has indicated that Sweden is moving away from the close regulation and credentialling of skill standards towards arrangements that fostered broad, life-long learning by the workforce.
This general approach by Sweden to skill standards is reflected in assessment and credentialling arrangements. The decentralisation of delivery arrangements for education and training means that local authorities have the main responsibility for assessment within a framework of central monitoring. The Swedish system is relatively unstructured with credentials appearing to play less a role than in countries such as Germany and England.

UNITED KINGDOM

The United Kingdom has undergone a number of reforms to its education and training system. Some of these are reviewed below. In May this year the British Government released two White Papers outlining further reforms to its education and training systems, including the higher education sector. The key points in these White Papers are also outlined below.

Vocational Education and Training Arrangements

Recent Changes

A number of changes foreshadowed in the Government Employment White paper of December 1988 and in the Education Reform Act 1988 are being implemented along with companion reforms emanating from the establishment of the National Council on Vocational Qualifications (NCVQ) in 1986.

In the area of vocational education and training the changes included:

- the implementation of strategies to involve employers as full partners in training along with a policy of localisation in the delivery of training services;
- development of a system of nationally recognized qualifications by the NCVQ;
- development of a competency-based system of training;
- measures to strengthen basic skills in schools and to promote a greater vocational orientation in the work of schools;
- implementation of a more market oriented and less bureaucratic arrangements for the administration of training.

The 1988 Employment White Paper established a new framework for training and enterprise development and the general thrust of a number of these reforms was towards a separation of policy and delivery mechanism for training and the development of a system which combined national setting of standards for vocational education and training with localised delivery systems.
A key objective in localising delivery systems was to involve employers more fully in the planning and administration of training as full partners, and hence to increase the commitment of industry to training. In this general approach England appeared to be moving towards the German system of combining national setting of training standards with the local delivery and supervision of training, largely through employer bodies.

The new English framework for training will operate at three levels:

- the national level where the main task is to develop and implement policies for promoting training;
- the industry level where the main task is to set standards and monitor the quality of the training provided by employers;
- the local level where the main tasks are operating training programs for unemployed people and ensuring that employers' training efforts are of the scale and quality required to meet the needs of the local labour market.

The main tasks of the Training Agency as defined by the Government in its Employment White Paper were:

- to encourage employers to develop the skills and experience to their employees of all ages;
- to provide and encourage appropriate training for young people when they leave full-time education;
- to help the long-term unemployed acquire the skills and experience that will help them find regular employment;
- to help the education system to become more relevant to working life and more responsive to changing demands and opportunities in the labour market;
- to ensure that the distinctive needs of the self-employed and small firms for training, counselling and other support are met.

This focus on assisting employers and promoting training, providing training for unemployed people, and meeting the training needs of small firms indicated current priorities at the national level. A point of particular interest in this mandate was the requirement to help the education system to become more relevant to working life and to Training Agency, like its predecessor, was seen by the Government as an instrument to help bring about desired changes in the education system and make education more relevant to employment.
Training and Enterprise Councils

A key aspect of the British training reforms has been to set up a national network of Training and Enterprise Councils (TECs). The Councils are envisaged as locally based bodies intended to marshall local resources for training and enterprise development in an area. Their functions include examining the local labour market, identifying key skill needs, developing a plan for the area to foster training and enterprise development, and managing training programs within the framework of this plan. The Councils will be the delivery mechanism for government training programs so that TECs will bid for funds provided initially through the Training Agency and now through the Employment Department. In their role of harnessing local resources for training and development they will also have the task of supporting small business enterprise in collaboration with local enterprise agencies.

TECs have a central role in the English reforms as the main instrument of the localisation policy of the Government. In many cases they will be developed from existing employer bodies such as the Chambers of Commerce and Confederation of British Industry. There is no requirement for TECs to be tripartite and union representation is not obligatory. They will have substantial resources at their disposal and it is envisaged that each TEC will have sources in the range of 15 million to 50 million pounds.

TECs represent an attempt to secure a greater employer involvement in and commitment to training. In some respects they parallel the role of the employer Chambers in the German training system and their success as a strategy for adapting training to local conditions and for securing a greater commitment of employers to training will be a matter of considerable interest.

Reform of Schooling

Strong criticism of the work of schools led the British Government to enact an Education Reform Act in 1988 as a central component of a package of measures designed to upgrade the British education and training system. This Act established a national curriculum for the compulsory years of schooling, introduced a system of national testing of all students at ages 7, 11, 13 and 16 and set up a National Curriculum Council and Examinations and Assessment Council to carry through key aspects of the reform. The Act also provides for city technology colleges in disadvantaged urban areas and for a "more open enrolment" in secondary schools.
These reforms are directed at ensuring appropriate standards of achievement in schools as a response to the view that standards in British schools were lower than in other leading European countries, and to adjust education to the needs of a modern technological society. Associated action is being taken to give a stronger vocational orientation to the work of schools in response to the widely held view that the British education system is biased towards the academic at the expense of the practical. The associated measures include the Technical and Vocational Education Initiative (TVEI).

England has traditionally had a decentralised system of education in which power and responsibility is diffused among a large number of autonomous bodies. These include local education authorities and voluntary bodies which conduct schools and technical colleges, independent schools, as well as autonomous universities and other higher education institutions. While this had led to considerable diversity in the system, it has also produced uneven quality and has made education reform across the system difficult.

Prior to the 1988 Education Reform Act, the usual strategy was for the central government to seek to influence the work of schools through programs such as the Technical and Vocational Education Initiative (TVEI). TVEI was introduced as a series of pilot schemes in 1984 and extended into a national scheme in 1987. It aims to foster a practical, problem solving approach to learning for 14 to 18 year olds in schools and colleges and to encourage the use of new technology in all areas of the curriculum. It is estimated that in September 1989 300,000 students in over 2,000 schools and colleges were participating in TVEI. This scheme was administered by the Training Agency and not the Department of Education and Science.

The 1988 Education Reform Act, however, adopted a more direct approach to influencing the work of schools through establishing a national curriculum for the compulsory years of schooling and a national system of testing all students so as to raise standards in the subjects taught.

The Act gives effect to the Government’s policy that schools should provide a curriculum which is broad and balanced, relevant to the needs of students, and which will prepare students for adult responsibilities and work. The Act accordingly provides for the core subjects of English, Mathematics and Science, as well as other foundation subjects of History, Geography, Technology, Music, Art, Physical Education and (for secondary students) a modern foreign language. Economics and industrial awareness are important cross-curricular themes in the National Curriculum.
The general requirements of the National Curriculum are being elaborated through the work of the National Curriculum Council. This process leads to the establishment of attainment targets and programs of study in each compulsory subject area which are then authorised in statutory orders tabled in Parliament. These Orders set standards of attainment and provide examples for each of the 10 levels set. The outcomes orientation of these school curriculum documents harmonises with the competency approach being adopted in training.

The National Curriculum is being implemented in stages and testing of all students at ages 7, 11, 14 and 16 will also be phased in. Testing will enable the progress of each student to be assessed against national standards and general progress in achieving the set standards will be regularly assessed and reported on.

In addition to the 1988 Education Reform Act and TVEI, the British Government has introduced other measures to give a greater vocational orientation to the work of schools and to strengthen links between school and work. These measures include a program of city technology colleges, which are sponsored by industry and commerce, and which offer a broadly based secondary education with a strong technological and business component. While state-funded, the colleges are independent of local education authorities.

A further significant initiative is this direction was taken in 1988 with the Enterprise and Education Initiative. This measure aims to give 10 per cent of teachers each year the opportunity to gain business experience and to ensure that all students have at least 2 weeks of work experience, and that all trainee teachers have an appreciation of the needs of employers.

In sum, these measures represent a major re-alignment of the work of schools and a bold attempt to make schools better oriented to contemporary needs in adult life and work in a modern technological society.

**Entry-Level Training**

England has introduced a number of changes in entry-level training over the past decade in an attempt to develop forms of entry level training adapted to changing conditions in industry and commerce. These have been built on the traditional apprenticeship system which has catered for a minority of school leavers and which has been substantially linked to declining industries. Apprenticeship training has also suffered from the fact that, as there has been no national standards framework, arrangements have been linked to industrial agreements which have varied between industries and in some
cases between enterprises. A further problem has risen from the high wage rates of apprentices which are substantially higher than in Australia.

The major developments over the decade include the introduction of the Youth Training Scheme (YTS) in 1981 which from 1983 guaranteed a full years' foundation training for all those leaving school at the minimum age of 16 without employment. In 1986 YTS was extended to two years for 16 year olds, with 1 year of training for 17 year old leavers.

Demography has had a strong influence on British policy for entry-level training with the need to cater for a large youth cohort in the early years of the decade. With the easing of demographic pressure with a smaller cohort of school leavers, further changes are to be made in entry level training arrangements. YTS will be replaced by a new Youth Training Program in 1990/91 following a review of YTS in 1988/89 in the context of the changed youth labour market. The new scheme will continue to guarantee the offer of a training place to all 16 and 17 year olds who choose to leave full-time education and who cannot find a job.

It is evident that the YTS scheme has had a considerable impact on the apprenticeship system with YTS becoming the major entry-level training scheme. Apprenticeship numbers declined through the nineteen seventies and nineteen eighties, in part because much apprenticeship training was linked to declining industries, but also because of the widely held employer view that the traditional model was no longer relevant to changing conditions especially with high wages in difficult economic conditions.

Shifting employer attitudes were reflected in a report prepared for the Manpower Services Commission in 1985 which reported employer views that the traditional apprenticeship model with its focus on training for a single craft occupation was no longer relevant to contemporary industry needs, not only because of the need for broader cross-sectoral skills, but also because it did not cover some of the skills in highest demand such as in electronics and optics. This report indicated that many employers preferred shorter training programs which included broad cross-sectoral skills and with an expectation of subsequent periods of re-training.

YTS has been developed to take account of these criticisms of the traditional apprenticeship model while at the same time incorporating some of the most valuable features of the traditional model. It has been developed as a more flexible system of entry-level training with substantial differences between the training provided in various industry sectors in order to cater for the distinctive needs of each sector.
YTS catered for substantial numbers of school leavers throughout the nineteen eighties. In 1989 some 390,000 young people were enrolled in the scheme, an estimated 15.7 per cent of the 16-18 age group. Government funding for YTS in 1988–89 totalled 1,071 million pounds. Since 1983, over 2 million young people have participated in YTS. Table 1 shows YTS enrolments from 1985 to 1989 in comparison with the other education and labour market activities of the 16–18 age group.

In November 1989 the Government announced changes to YTS to take account of the changed youth labour market, in particular the substantial decline in the number of young people entering the labour market, and to meet the need for higher level skills. YTS will be replaced by a new scheme to be called Youth Training. The main features of the new scheme are:

- raising the maximum attainment level of all young people on the scheme;
- an emphasis on higher level skills;
- the development of local arrangements for vocational education and training for young people;
- increased flexibility and cost effectiveness in the design of training programs and in funding;
- completion or substantial progress towards a NCVQ qualification is required.

Under the new arrangements the Training and Enterprise Councils (TECs) will have a major role in delivering youth training with the TECs required to meet more demanding targets for gradual increases in skill attainment. The existing guarantee of a training place for all school leavers up to the age of 18 will remain unchanged.

YTS operates with allowances for trainers which are topped up in some cases by employers. Allowances have declined in real terms in recent years. More employers have been required to top up allowances so that the employer contribution to YTS has increased over time.

The English experience with YTS and apprenticeship training over the past decade suggested the need to develop an integrated entry level training policy covering both schemes and with strong links to the school system and to continuing vocational education and training. England has moved in this direction and some of the measures adopted over the decade represent steps towards such a system.
Skill Standards

A particular feature of the current English developments in vocational education and training is the strong concern with raising skill standards. As pointed out above, this concern arises from a widely held view that the skill levels of the workforce were below those of Britain's main European competitors and it has led to concerted efforts to raise and ensure skill standards.

The approach adopted has been multi-faceted and involved reforms in a number of areas. These include the reform of schooling with the development of a national curriculum and the testing of all students, the development of a competency-based approach to training with the identification of occupational skill standards, and the establishment of the National Council for Vocational Qualifications (NCVQ) to link skill standards with vocational qualifications within a national framework.

The role of the National Council is central to these developments. The Council was established in October 1986 following the report of the Review of Vocational Qualifications in April 1986, and the subsequent White Paper Working Together: Education and Training (July 1986).

The remit of the National Council may be summarised as:

• to establish a framework of vocational qualifications which is comprehensive and comprehensible, and to facilitate access, progression and the continuance of learning;
• to improve vocational qualifications themselves by relating their standards more closely to the standards of competence required in employment.

The establishment of NCVQ followed concern at the morass of British qualifications and the absence of clear links between vocational qualifications and employment-led standards of competence. Over 1.75 million awards are made each year by some 300 different examining bodies so that NCVQ has been given the task of establishing a national framework to rationalise and simplify the structure of vocational qualifications.

The National Council does not have examining or certification powers, but will rather set a national framework for the operation of bodies with these powers.

Under the National Vocational Qualifications system established by the Council all vocational qualifications recognised by the system must be firmly based on employment-led standards of competence. Qualifications within this national framework will only be awarded by bodies approved by the National Council. Such awarding bodies must satisfy the Council that they have
recognised standing with the relevant sectors of industry, commerce or the professions. Qualifications accredited in this way may bear the NCVQ insignia.

A key element in the new system therefore is the requirement to link vocational qualifications with employment-led standards of competence so that vocational qualifications are relevant to the skill needs of industry and commerce. Standards of competence will be identified by industry Lead Bodies with the National Council acting as catalyst to foster the work of these bodies.

A further central aspect of the new system is the identification of a small number of levels within the NVQ framework to which vocational qualifications will be assigned. Progression up the structure will generally require:

• greater breadth and range of competence;
• complexity and difficulty of the required competences;
• requirements for special skills and the ability to undertake specialised activities;
• the ability to transfer competences from one context or work environment to another;
• the ability to innovate and cope with non-routine activities;
• the ability to organise and plan work and supervise others.

The Council in October 1989 issued a consultative document raising issues relating to the possible extension of the NVQ framework above Level IV.

**National Record of Vocational Achievement**

One of the more significant innovations of the National Council has been to introduce a National Record of Vocational Achievement (NROVA). This follows the introduction of a National System of Credit Accumulation in July 1988 and the development of the NCVQ database.

NROVA is supported by all the major awarding bodies. It will provide a cumulative record for individuals of qualifications gained within the framework of the national system of qualifications.

The National Record has a number of sections. These are:

• **Personal Record**: This aspect links the individual's experience outside the qualifications system with those within it. It may include a summary of a school record of achievement, a curriculum vitae, and summaries of work experience.

• **Action Plan**: This sets out achievement targets for the individual.
Assessment Record: This shows progress towards targets. Assessment sheets can be renewed on the completion of a qualifications.

Certificates: This records credits in NVQ's or other qualifications.

Other Qualifications or Credits: These qualifications are not part of NVQ but are issued by approved awarding bodies.

The NROVA system is still being developed. However, the concept appears to have considerable advantages for both individuals and employers in providing a comprehensive record of qualifications both in respect of the National Framework and other experience and qualifications acquired by an individual. The system provides incentives for individuals to acquire qualifications, facilitates recognition of these qualifications, and will aid employers in recruitment and staff development. The feasibility of a similar system in Australia could be worth examining.

Assessment and Credentialling

The development of a National Vocational Qualifications system as reported above will have a major impact in the traditional pluralist English arrangements for assessment and credentialling. While the English system has traditionally involved a large number of examining bodies with credentialling powers (there are some 300 different examining bodies), these will now operate within the NVQ framework in respect of vocational qualifications. This should lead to greater consistency in standards, facilitate recognition and credit transfer, and link vocational qualifications more closely to the skill requirements of industry.

This should also lead to greater objectivity in assessment as the system evolves and national standards of competence are developed by industry led bodies and endorsed by the National Council. The new system will operate within the criteria set by the Council with the key criteria being the following:

- "A vocational qualification is a statement of competence relevant to employment. It is this statement which specifies the competence to be achieved for the award of a National Vocational Qualification. It is the basis from which assessment procedures, recording and certification are derived."

- "The elements of competence, together with their respective performance criteria, specify what should be assessed and to what standard."
As the required standards of performance will be defined in NVQs, examining bodies should be assisted in developing reliable and valid examinations to assess the required competences. The National Council will not specify particular types of assessment to be used and examining bodies will be free to adopt the most appropriate types and methods in particular areas. The existence of a national framework for credentials will assist employers in assessing such certification in relation to the work to be performed.

The National Council has been actively disseminating information on the new system and has produced an information paper on assessment.

**Modular Training**

In Scotland, the technical education system has been restructured to cater for the needs of employers as well as providing flexibility for young people to undertake training whatever their employment status, with credits for achievement being cumulative. The major vehicle for the reforms is the 16+ Development Program.

In place of courses designed as a single package, new courses are constructed from modules of, normally, 40-hours study. The modules are designed to allow young people to progress from general educational or vocational preparation to more specialised needs. They may be taken by young people or adults in non-advanced further education or in the last two years of secondary education alongside secondary qualifications.

Employers can specify the combination of modules they require when recruiting staff to particular jobs. The modular structure also makes it easier for employees to "top-up" their initial education and training with new skills. Appropriate modules may also serve as entry qualifications for later education.

**May 1991 White Papers on Education and Training in the United Kingdom**

In May 1991, the British Government launched the Government’s proposals for education and training for young people over 16 in two White Papers. The first Paper "Education and Training for the 21st Century" outlined proposals for streamlining the vocational training system. The second paper set out future policies on the structure of higher education. In a speech outlining the rationale for the papers the British Prime Minister noted that

"At the heart of these reforms is the determination to break down the artificial barrier which has for too long divided
an academic education from a vocational one. In the past too many 16 year olds have been made to feel that further education or training is not for them. As a result we have too many young people without the skills of motivation to get off to a good start in their working life.”

The key proposals in the White Papers are as follows:

- every 16 and 17 year old leaving full-time education will be offered a training credit, within the lifetime of the next Parliament;
- the school leaving date would be adjusted to required all 16 year old pupils to complete their studies to the end of the summer term. This reform would prevent students from leaving school before the completion of the full year of study;
- National Vocational Qualifications will be introduced as fast as possible and colleges will be required to adopt them quickly;
- for the first time, a new diploma will combine academic and vocational qualifications. The diploma will be awarded both to students taking A levels, and to those gaining vocational qualifications to the same standard;
- schools will be allowed to admit part-time and adult students to sixth forms and to accept training credits or to charge fees for them;
- Compacts—bargains between young people, employers and schools or colleges leading to a guaranteed job with training or training leading to a job if goals are achieved—will be extended nationwide;
- the National Record of Achievement—a simple record, in summary form, of an individual’s achievement in education and training through their working life—will be used by the great majority of school leavers next year;
- new ways of managing the Careers Service according to local needs will be encouraged, including partnerships between education authorities and TECs;
- employers will be given more influence through Training and Enterprise Councils, with their expanded role in training credits, Compacts, the Careers Service and Colleges.
- the abolition of the distinction between universities and polytechnics and establishment of a single framework for higher education;
- the creation of higher education funding councils for England, Scotland an Wales to distribute public funds for both teaching and research;
• the extension of degree awarding powers to major institutions and the winding up of the Council for National Academic Awards;
• the extension of the title of university to polytechnics wishing to use it;
• institutions to develop their own quality control arrangements on a UK-wide basis. Funding Councils to establish quality assessment units to advise on overall standards.

References

Swedish Ministry of Education and Cultural Affairs Sweden's Vocational Education in Transition Stockholm, May 1986
COSTAC Report of the Overseas Mission to Study Development in Vocational Education and Training Canberra, December 1990. A number of the unpublished country reports were also used to prepare this summary.
OECD Education Monograph The organisation and content of studies at the post-compulsory level Country Study: Sweden, September 1987
Secretary's Commission on Achieving Necessary Skills (SCANS), US Department of Labour.
Appendix 1 (F)

List of Submissions
List of Submissions

1 Assoc. Professor Vandenberg
   The University of Queensland
   Queensland

2 Vincent C Rucks
   Katanning WA

3 Stuart Baird
   President,
   Tasmania University Union
   Hobart TAS

4 Mr Mike Amor
   Compuskill ITeC
   Footscray VIC

5 Professor G W Ford
   Industrial Relations Research Centre
   The University of New South Wales
   Kensington NSW

6 Mr Rob Baxter
   Accountant
   Action Group for the Compulsory
   Curriculum for Politicians and Aldermen
   Manly NSW

7 Mr Michael Kindler
   Blaxland High School
   Blaxland NSW

8 Mr Nigel Davies
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   NDA Computing Pty Ltd
   Launceston TAS

9 Ray Marmion
   Lower Templestowe VIC

10 Mr Darryl Driver
    Nambour District Special Services Centre
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11 Mr Don Mould
    Training Development Executive
    National Electrical & Electronic Industry
    Training Committee Ltd
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12 Manager
    Womens Interests Unit
    Department of TAFE
    East Perth WA
13 Mr Gerald Torpy  
Careers Consultant  
Caulfield Grammar School  
East St Kilda VIC

14 Mr Michael Rose  
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15 Mr Brian Hortle  
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Hobart TAS

16 Dr Brian Lawrence  
Edith Cowan University  
Perth WA

17 Dr Joan Abbott-Chapman  
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University of Tasmania  
Hobart TAS

18 Mr Graham Speight  
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Claremont TAS

19 Professor A C Shannon  
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Broadway NSW

20 Dr William C Hall  
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TAFE National Centre for Research & Development Ltd  
Leabrook SA

21 Mr John Edwards/Mr Peter Hobson  
University of Western Sydney Nepean  
Kingswood NSW

22 Mr Peter Gilchrist  
Elizabeth College of TAFE  
Elizabeth SA

23 Ms Marilyn Sleath  
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Elizabeth SA

24 Ms Mary Lowa  
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PO Box 323  
Curtin ACT
26 Professor Mairead Browne  
Professor of Information Studies  
Faculty of Social Sciences  
University of Technology  
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Western Area Office  
Whyalla SA
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Prahran VIC
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Bankstown NSW
30 Ms Wendy Morris  
Australian Council of State School Organisations Inc  
Hughes Primary School  
Hughes ACT
31 Mr Michael Rice  
EPM Consulting Group  
Blackburn South VIC
32 Greg & Pamela Telfer  
Clare SA
33 James S Davis  
Katanning WA
34 Professor Owen F Watts  
Dean  
Faculty of Education  
Curtin University of Technology  
Perth WA
35 Dr David G Beanland  
Director  
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Royal Melbourne Institute of Technology  
Melbourne VIC
36 Mr Barry J Grear AM  
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Dept of Employment and TAFE  
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University of Technology  
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Nambour Qld

40 Ms A Rutter  
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Williamstown VIC

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Department of Education  
Brisbane North Quay Qld

42 Mr John Pederson  
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Education Department  
Adelaide SA

43 Mr Peter Cerexhe  
Australian Consumers' Association  
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44 Ms Heather Crawford  
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C/- Wagga Wagga College of TAFE
Wagga Wagga NSW

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Footscray VIC

51 Mr D. Ian Allen
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Caulfield East VIC.

52 Mr Peter Meere
Australian Catholic University
Everton Park Qld

53 Mr Graeme J Plant
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Australian Textile Clothing Footwear
Industry Training Committee (SA) Inc
Dulwich SA

54 Professor Fay Gale AO
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Nedlands WA

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Preston VIC

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National Council of Independent Schools Asscns
Curtin ACT

58 Mr Paul Byrne
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Australian Teachers Union
Carlton South VIC

59 Ms Sally Watson
Team Co-ordinator
Adolescent Team
Tea Tree Gully Community Health Service
Modbury SA
60 Mr Kevin Vassarotti  
National Catholic Education Commission  
Canberra ACT

61 Mr Neil Hooley  
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South Melbourne VIC

62 Ms Judith Parker  
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Charles Sturt University—Mitchell  
Bathurst NSW

63 Ms Dawn Watson  
WREETAC  
C/- Victoria University of Technology  
St Albans VIC

64 Mr Julian Disney  
Australian Council of Social Service  
Sydney NSW

65 Dr David Warner  
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66 Mr Greg Ramsay  
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NBEET  
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67 Mr Roy Wallace  
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68 Mr Ian Ross  
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ACTU  
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69 Ms Lynette Sandford  
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Yooralla Society of Victoria  
South Melbourne VIC

70 Mr Fred Warmbrand  
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Portfolio Coordination Division  
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71 Professor Robert J Meyenn,
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   Charles Sturt University—Mitchell
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   Sydney NSW

73 Mr Barry Walsh
   C/- Centre for Continuing Education
   The Australian National University
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   Pt Kembla NSW

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   North Sydney NSW

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80 Ministry of Education, Employment and the Arts,
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   Fremantle WA
Appendix 1 (G)

Face to Face Consultations
### Face to Face Consultations

The Committee held face-to-face consultations as follows:

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<thead>
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<th>Date</th>
<th>Organisation</th>
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<tr>
<td>18/4</td>
<td>National Catholic Education Commission</td>
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<tr>
<td>18/4</td>
<td>Australian Council of Trade Unions</td>
</tr>
<tr>
<td></td>
<td>Union of Aust. College Academics</td>
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<tr>
<td></td>
<td>Federation of Australian University Staff Associations</td>
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<td></td>
<td>Australian Teachers Union</td>
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<td></td>
<td>Metal and Engineering Workers Union</td>
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<td>Youth Affairs Council of Australia</td>
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Appendix 1 (H)

Illustrative Draft Profile: Language and Communication
**Illustrative Draft Profile: Language and Communication**

For illustrative purposes, the Committee developed an example of a possible Key Competency profile in the area of Language and Communication.

This draft profile is for illustrative purposes only and is not presented as a proposal for possible adoption.

**Language and Communication Illustrative Draft People**

<table>
<thead>
<tr>
<th>Reading</th>
<th>Listening</th>
<th>Writing</th>
</tr>
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<tbody>
<tr>
<td><strong>LEVEL 1</strong></td>
<td>- Reads and understands information presented in simple written, tabular and graphic form (eg. signs, telephone book, instruction manuals, VDU timetables, forms).</td>
<td>- Responds appropriately to routine requests and instructions in one-to-one and familiar situations. - Identifies main ideas communicated in a simple conversation or oral presentation (eg. telephone conversation, instructional video).</td>
</tr>
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</table>
LEVEL 2  
Reads and understands information presented in a variety of forms and styles (eg. texts, reports, technical manuals).

• Responds appropriately to more complex requests and instructions in a variety of situations (eg. group, unfamiliar).
• Identifies and summarises main ideas communicated in a range of conversational and oral presentation situations (eg. meetings, lectures).
• Formulates, conveys and organises written information and ideas in a range of styles and forms appropriate for different purposes (eg. written passages, brief reports, resumes, formal letters).

LEVEL 3  
Reads and understands information presented in a variety of forms and styles (eg. texts, reports, technical manuals).

• Responds to and critically interprets and clarifies complex requests and instructions.
• Identifies and summarises main ideas and supporting ideas presented in a wide range of formal and informal listening situations.
• Formulates, conveys and effectively organises more complex information and ideas.
• Selects appropriate styles and forms in which to present written information for different audiences.
## Language and Communication Illustrative Draft Profile

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Speaking</th>
<th>Accessory &amp; Using Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Speaks sufficiently clearly and fluently to participate effectively in conversational, one-to-one and familiar situations (e.g. telephone conversations, face-to-face).</td>
<td>- Show some acquaintance with information sources (e.g. libraries, newspapers)</td>
</tr>
<tr>
<td></td>
<td>- Asks simple questions and conveys simple requests and instructions.</td>
<td>- Compile a list of relevant documents/items on a given topic.</td>
</tr>
<tr>
<td></td>
<td>- Responds clearly and audibly to simple questions in formal situations such as job interviews and customer contact.</td>
<td>- Capacity and willingness to seek advice/support from colleagues on information retrieval tasks.</td>
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</table>

<table>
<thead>
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<th>Speaking</th>
<th>Accessory &amp; Using Information</th>
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<tr>
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<td>- Speaks clearly and fluently in order to communicate effectively in a range of situations including groups and unfamiliar situations.</td>
<td>- Show facility with formal reference sources—library catalogues, databases etc.</td>
</tr>
<tr>
<td></td>
<td>- Asks questions to seek information and improve understanding.</td>
<td>- Ability to categorise documents/items compiled on a given study topic.</td>
</tr>
<tr>
<td></td>
<td>- Responds clearly to more complex questions in a range of situations, for example, job interviews and customer service.</td>
<td></td>
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</tbody>
</table>
LEVEL 3

- Speaks clearly and fluently in a variety of styles required to communicate effectively in a wide range of formal and informal situations.
- Asks questions to seek information and probes further to seek clarification.
- Responds with sufficient clarity and fluency to questions to maintain the confidence of listeners (e.g., interviewers, customers).
- Access database information sources for general information inquiries.
- Identify gaps in information on a given topic.
- Capable of listing some major database holdings
- Capable of significant and coherent interaction with colleagues/supervisors on information gathering tasks.