# HOUSE OF REPRESENTATIVES STANDING COMMITTEE ON EDUCATION AND TRAINING INQUIRY INTO VOCATIONAL EDUCATION IN SCHOOLS SUBMISSION BY TAFE DIRECTORS AUSTRALIA

#### 1. Introduction

TAFE Directors Australia (TDA) is a national association representing TAFE Institutes and the TAFE Divisions of multi-sector institutions, with its members being the CEOs of those bodies. As such, TDA is the peak body for the TAFE sector and represents Australia's public providers of vocational education and training.

TDA welcomes this opportunity to provide comments on matters relating to vocational education in schools.

TAFE Institutes and Colleges work closely with secondary schools and colleges in areas of program delivery and policy development relating to vocational education and training.

Recent years have seen an increasing emphasis on offering vocational education and training (VET) in schools, and programs and the numbers of students involved have grown rapidly. In 2000 over 150,000 students were enrolled in Australia in VET in schools programs, equal to nearly 40 per cent of year 11 and 12 enrolments<sup>1</sup> and the numbers grew further to reach 170,000 in 2001<sup>2</sup>.

The Ministers of Education have a commitment to increase the proportion of Years 11 and 12 students undertaking VET in schools to reach 40 per cent by 2004 and it seems this is being achieved Australia wide though not quite yet in Victoria.<sup>3</sup>

This submission explores some of the differences between school based and other vocational education and training programs, challenges in implementing VET in schools, the role the TAFE sector can play, and some particular issues of concern to TAFE including the adequacy of funding, short-comings in current funding models, quality assurance, the need for more emphasis on work based learning, better pathways, and some of the challenges involved in providing for students with special needs. Our comments reflect the experience and perspectives of our member Institutes. We have also drawn on a paper prepared by the Centre for the Economics of Education and Training for Chisholm Institute (*Costing Issues for VET in Schools: Secondary Colleges and TAFE*)

# 2. Some General Comments

There is a wide range of programs that are described as VET in schools: programs that provide non-waged training complying with National Training Framework (NTF) requirements and frequently also capable of State Board of Study certification; school based New Apprenticeships, involving a mix of school attendance and contract of training employment; and other vocational learning, such as work based learning of traditional subjects, Year 11 and 12 programs not complying with NTF, work experience and locally developed programs. Students are able to take vocational subjects as part of their tertiary entrance qualifications. In Victoria, a vocationally oriented secondary school certificate program is being introduced as an alternative for those whose needs are not being adequately met by the VCE. The Victorian Certificate of Applied Learning will provide a

program of studies in four compulsory strands: literacy and numeracy, work-related skills, industry-specific skills and personal development.

This range of programs reflects in part differences in philosophy and approach to vocational education in schools and the academic-vocational divide. For many, general education remains the primary concern of schools with vocational subjects being available as additional options. On the other hand, for some sections of the school population the acquisition of specific vocational competence is considered to be more relevant than the pursuit of further general education and a vocational pathway is provided. In general these vocational programs focus on trade specific skills.

TDA supports the view that vocational learning has an important role in facilitating school to work transition and career development of all young people, across the total education and training spectrum. It also strongly supports the provision of a good vocational alternative for those students for whom further general education does not suit. TDA is acutely aware of the importance of increasing the successful participation of young people to year 12, or its equivalent, and beyond to further education and training. We are particularly aware of the importance of arresting the high drop out rate of young males from the education system and ensuring that they continue to be engaged with education and training and are given the opportunities they need to build the skills necessary for successful participation in the labour market and society. Broadening the opportunities available to students in the senior years of school through the provision of vocational courses has an important role to play.

However, while there is some evidence that enrolment in a VET course is useful in helping to increase school retention rates<sup>4</sup>, we need also to be confident that students undertaking vocational courses are actually gaining outcomes that will prepare them for effective entry to work or further study.

Quality of provision and the most effective use of resources are key issues. While TDA strongly supports the provision of VET courses for school students, we consider that such courses are not necessarily best provided by the schools themselves. The most appropriate approach is "VET for schools" rather than "VET in schools".

# 3. Differences in school based and other VET programs

The major differences between schools and the VET sector in the programs offered flow from differences in the mandate and orientation of the two sectors. As noted above, the main emphasis in schools is to offer a well balanced general education that prepares students to enter further education, training or employment. TAFE on the other hand is primarily focused on providing industry based vocational education within an adult learning environment. Courses are designed to lead to an industry recognised qualification under the Australian Qualifications Framework based on assessment of competency.

While increasingly schools are offering AQF Certificate course at the I, II and sometimes III level, the majority of enrolments in VET courses in schools are still in traditional school curriculum areas such as hospitality, business and IT and general studies. Many of the courses offered do not have a major involvement with industry and use curriculum that is developed independently of existing TAFE curriculum and outside of the existing

relationships that exist between industry and TAFE. They often have a greater focus on academic content.

The difference in mandate and orientation of the school and VET sectors means that they have different strengths. Teachers from the two sectors hold different qualifications, have different industrial experience and different underpinning pedagogical philosophies. Schools typically do not have teachers with VET skills and do not have staff experienced in industry while TAFE Institutes do. There are also significant differences in the facilities that are available. TAFE Institutes have industry standard facilities and equipment. They have been specifically designed for the delivery of VET programs and to provide work place simulation.

There are a number of reasons why schools can benefit from utilising the TAFE sector to support VET in schools. TAFE Institutes have an extensive presence in both metropolitan and regional Australia. They have well developed and extensive links with industry. TAFE staff have the relevant expertise and skills, with industry experience, and their facilities and equipment have been developed specifically for delivering VET programs. Quality assurance models and systems, aligned to the Australian Quality Framework requirements, are in place. As a general rule, TAFE Institutes are therefore usually much better placed than schools to provide quality VET programs to school students

# 4. TAFE participation in VET in Schools

Some schools are Registered Training Organisations (RTOs) and deliver most or all of their programs themselves. But schools often contract part of their delivery of VET programs to outside providers. Some purchase the auspicing of their training from an external RTO.

TAFE Institutes are involved in supporting VET in schools both through providing programs and through providing auspicing arrangements. By way of example, Chisholm Institute of TAFE in metropolitan Melbourne provides some VET in schools for approximately 45 secondary colleges. It provides programs in Automotive, Electronics, Engineering, Horticulture, Sport and Recreation, Furnishing, Laboratory Skills, Food Processing, Wine, Hospitality and General Construction. It is also involved in auspicing arrangements.

# 5. Difficulties and Challenges in Implementing VET in Schools

The major challenges in implementing VET in schools relate to the existing funding models and issues of quality assurance. There are also issues of professional development, adequate provision of work placement, articulation beyond their school course, and catering for students with special needs.

#### **Quality Assurance**

If VET in school programs are to have credibility with industry, and sound pathways are to be developed to higher level vocational courses, it is very important that appropriate quality systems and processes are in place and that the overall integrity and characteristics

of VET, as contained within the principles of the AQTF and requirements for RTOs, are maintained. It is TAFE Institutes' view that this is not always the case and it makes the process of auspicing schools' programs increasingly difficult, both in the amount of resources required and the lack of control over how schools conduct their assessment and delivery.

The application of the TAFE quality assurance model and systems for VET in schools would improve outcomes and promote pathways into further study and work.

# **Funding**

VET in schools provision is under-resourced. VET in Schools programs need more resources than the average year 11 and 12 programs<sup>5</sup>. While the extent of additional costs can vary, a number of factors contribute to additional costs including class size, the facilities required and costs involved in work placement. The cost per student is much more substantial when the groups are small and three-quarters of VET in schools groups have less than 10 students.<sup>6</sup> As Burke, Beavis and Underwood have pointed out, there is also variation in who carries the burden of the cost – the school, supporting agencies, TAFE and other non-school VET providers, students and employers.

Funding of both government schools and TAFE remains tight making it difficult to cope with the costs of providing VET in schools. It is often difficult for schools to fund VET in schools as well as academic programs within existing global budgets. Moreover the differences in funding models for schools and TAFE can be an impediment to collaboration and cooperation between the two sectors.

The funds received for VET in schools by TAFE Institutes appear to be less than they receive on average under profile funding, the funds received from the government for the delivery of publicly funded VET, plus student fees. But the TAFE Institute's costs of delivery of VET in schools may be higher than for similar TAFE courses provided under profile funding, not 20 per cent or more lower. The reason is the extensive list of administrative arrangements and services involved.

It has been the experience of many TAFE Institutes that they have been subsidising VET in schools delivery, implementing a break even program delivery cost that in the main, does not include associated infrastructure costs. In a climate where TAFE Institutes are expected to maximise efficiency and returns on investment, Institutes find it increasingly difficult to allocate resources on low return activities such as VET in schools.

The resource demand on both sectors determines the quality of VET in school programs. There is a danger that the pursuit of lower cost training by schools will lead to teaching methods that are inappropriate for the lower achieving students, as well as reducing the range of courses available.

The issue is complicated by different funding arrangements and guidelines that have applied to the two sectors and have caused tensions within TAFE and with their VET in schools partners. In at least some jurisdictions the funding model employed means that schools are reluctant to outsource as they want to retain staffing points and activity and the associated funding that goes with it. This means in turn that there is an incentive for schools to offer VET courses that are within their own capabilities, e.g. IT, rather than offering courses where specialised expertise is required.

Often the current method of funding and organisation of VET in schools makes charging substantial student fees by schools a necessity. These fees for courses that make up only part of a student's total program can be significantly greater than the fee the student would be charged in a TAFE for a full year, full time program. School principals have indicated that some lower income students are discouraged from VET in schools by the fees.<sup>7</sup>

At the same time TAFE institutions are not gaining the government revenue that they would receive if the VET in schools students were funded in the TAFE institutions' regular government profile funding, nor do the TAFE institutions collect tuition fees from VET in school students.

Options that have been canvassed<sup>8</sup> include

• Maintain something like the present scheme for government schools with a per capita grant and partial assistance where the school needs to purchase training

This would lead to continuation of present problems

• Fund schools according to the students in VET in school programs and the relative expense of the various programs (not linked to whether the school purchases training). The school would decide about becoming the RTO or purchasing training

This would increase the extent to which schools become RTOs though it may be associated with more cooperation and specialisation among schools. Our concerns are two-fold: the quality and recognition of the provision of VET by schools and unnecessary duplication of resources and facilities.

Allow VET in school students to count in the profile for the VET sector. Schools
would not count students as enrolled in the school for that part of their program taken
at a VET institution

This would encourage enrolment in TAFE or other external VET providers and would mean a reduction in school budgets in line with the reduction in enrolments in full-time student units. Such an arrangement would increase the funds received per contact hour by TAFE institutions and other providers

As Burke, Beavis and Underwood have pointed out, combinations of the options may be possible. TAFE Institutes and other external providers could be funded for a range of specified programs that clearly require specialised staff and facilities and schools funded for the teaching of relatively low cost programs and provided with some funds for their overall management of VET in school students. Consideration would need to be given to how the model would work in a range of metropolitan and rural settings.<sup>9</sup>

While VET in schools needs to be more adequately funded, it is crucially important that this not be done just by shifting funds from one sector to another. The resources of TAFE Institutes and Colleges are already stretched in meeting the demands on them. A reallocation of funds to the VET in schools sector would have a very detrimental impact on the extent and quality of what TAFE can offer their students. If VET in schools is to

be a priority, funds need to be sought from new sources, without doing it at the potential expense of the student group currently served by the TAFE sector.

# **Workplace Learning**

A key challenge is ensuring that students are exposed to relevant learning environments when undertaking VET in schools. This is particularly important where students are enrolled in programs leading to recognised VET qualifications given the emphasis placed by National Training Framework standards on work experience and assessment of competence in a work-based context.

There is little doubt that what school students most value about vocational education options are those which give them real experience of workplaces. Overseas experience especially in the United States is that work based learning is as beneficial for the academically gifted as for those with vocational interests and that it provides an integrating factor between academic and vocational pathways. Unfortunately, work based learning is not what is most easily provided. The typical VET in schools experience is of a school based subject, possibly with syllabus rewritten to NTF requirements with some workplace component, taught in a fairly standard school environment, albeit sometimes one that requires a considerable and perhaps risky investment of school resources. <sup>10</sup> But significant numbers of students have no workplace experience through the school program.

It is consistently difficult to organise work placements for all students across the educational spectrum. Industry is inundated with requests from students undertaking Certificate, Diploma and Degree level courses. Industry reports that to provide the appropriate amount of supervision and training support to a work-placement student is becoming increasingly taxing on their time and resources. Secondary level students are generally less likely to secure work-placement experience than their counterparts undertaking higher level courses.

The strong pressure on the limited opportunities for work placements is especially acute in regional areas.

Nevertheless there are ways in which "out of school" learning opportunities can be maximised. One is to look beyond traditional industry based work placement to community projects and the like. It is also important to involve employers and community agencies as stakeholders in the design of work placements that will be part of a coherent vocational plan for each student. Further, if TAFE Institutes/Colleges are included in collaborative arrangements, the schools will benefit from the existing credibility that TAFE institutions have within industry. There are a number of examples where schools, TAFE and employers have worked very effectively together in a network to organise work placements. Research has also shown that work placement arrangements improve when schools have a dedicated member of staff allocated to VET in schools.

Another issue is that present funding models do not always recognise the high cost of implementing quality work placement, although the Commonwealth (through the Enterprise and Careers Education Foundation) does provide support funding for structured workplace learning organised through cluster network arrangements. Conservatively the implementation of an efficient work placement program requires around 3-4 hours per student to prepare and deliver.

Industry could be encouraged to support work placement for VET in schools by the introduction of appropriate incentives. We suggest that consideration be given to possible ways of doing this in any review of resourcing arrangements for VET in schools.

# **Flexibility**

We have commented about the benefits of a more flexible approach which uses VET providers to a greater extent. As part of a more flexible approach, it would be desirable for schools to introduce more flexibility into their timetabling. The current practice of allowing only a very narrow window for VET classes (typically one half day on a set day each week) is a real constraint for external providers.

# **Pathways**

Improving pathways for school students to work and to further study is an important objective for VET in schools.

VET in schools programs have faced significant difficulties in assessment, accreditation, certification and articulation. This is partly because education in schools and in post school institutions especially in the VET sector serves different purposes and is often assessed in different ways with competency based assessment being the rule in the post school VET sector. Assessment in the workplace appears to be limited in VET in school programs.

At present there is no conclusive evidence that VET in schools promotes more entries into TAFE. Improved articulation arrangements between school and VET will only be possible if the quality of VET in school programs and resultant outcomes are maintained at an appropriate level. The development of more direct and clearer pathways from school to VET would be assisted by:

- the same curriculum, i.e. training packages are used in schools without the confusion of hybrid offerings
- the same quality assurance systems, including assessment and moderation, being implemented
- the same reporting system and requirements being used as are utilised in the TAFE sector.
- degrees, graduate certificates and graduate diplomas being officially introduced into the VET stream, which would offer students a complete pathway for future studying.

The present experience is that TAFE Institutes often find it difficult to provide appropriate pathways for students beyond their school level courses especially if these have been at Certificate I or II level and delivered in a school environment. Where students seek entry to Certificate level III on the basis of their school studies, TAFE Institutes have found that full recognition and credit may not be warranted. To take but one example, there is evidence of significant differences in resources allocated to tourism and hospitality courses in a school environment compared with a TAFE NSW environment.

# How Industry views school based VET qualifications

TAFE Institutes are aware that industry often has reservations about the relevance and quality of VET in schools courses

Industry interest and cooperation with VET in schools could be increased substantially if this perception could be changed. Schools need to collaborate more with industry partners to ensure that their offerings are relevant and in line with industry requirements. As noted above, if TAFE institutions are included in collaborative arrangements, the schools will benefit from existing credibility of TAFE within industry.

TDA also notes that peak industry groups have argued for a greater focus on employability or generic skills. This is consistent with the view held by some educational researchers that vocational education in schools needs to be sufficiently general to develop the capacities needed in the new knowledge based economy eg communication, team work, problem solving<sup>11</sup>.

TDA has consistently argued that more emphasis needs to be given to generic skills in the VET sector and that this should be reflected in the standards set in Training Packages. Equally, generic skills have an important place in VET in school courses. The schools' role extends, however, more broadly than this and they have a critical responsibility in ensuring their students acquire the literacy, numeracy and other skills essential both for the workplace and for lifelong learning.

# **Professional Development**

A greater investment in professional development is needed whether it is to help school teachers to acquire the skills required for delivering vocational courses or for TAFE staff to help them deliver to school age students and to meet the rather different requirements set by Boards of Studies in the school sector (e.g. the requirements set for NSW Board of Studies Framework Courses)

Professional and resource development is needed for TAFE teachers delivering the industry curriculum framework courses where students need to be prepared for an HSC exam. Although these courses are based on national training packages, their delivery changes with the added focus of a theory based HSC exam. Revision of these two-year courses also needs to be incorporated in the training plan.

# 6. Vocational education in new and emerging industries

The identification of emerging skill needs is necessitating the development of new VET programs. Such programs are needed to overcome shortfalls in the availability of skills required to support future work requirements and economic development. There is a need for sound research to validate new skill areas and future skill demand to inform curriculum across the sectors, including the VET in schools curriculum.

It is important that a lifelong learning philosophy be adopted and that students be prepared to develop the generic skills to meet the challenges of a changing workplace

environment, rather than focusing only on specific vocational skills related to limited occupational areas.

# 7. Students with special needs

VET has the potential to help students who leave early because of dissatisfaction with school subjects and school culture. It also has the potential to assist disadvantaged groups. However some of the implementation problems experienced with VET in schools generally come into even sharper relief for these groups of students including in the regions. As one example, schools are concerned to meet employer expectations and are therefore selective in admitting students to work placements. Ryan has observed that vocational education remains limited, on the one hand, by the conception that it is for lower achieving students, while at the same time, many schemes rely on selectivity for success, constraining opportunities for the most disadvantaged students.

There has been a high growth in the numbers of students with special needs wanting to participate in VET in schools. In NSW for example the number of students with disabilities wishing to participate in TVET Courses has grown by over 100% in the last year. The funding model does not allow for the costs associated in interviewing and allocating students to appropriate courses (discrete group or otherwise). Special needs students have a much higher duty of care, particularly with work placement in Access courses e.g. Hospitality, Business Services, IT, Horticulture.

Arguably, because of the greater emphasis on academic content in school courses, some students with special needs may find TAFE a more sympathetic environment to study VET than school.

# 8. Indigenous students

Some TAFE Institutes have established excellent reputations in working with local Indigenous communities in learning partnership projects.

A major innovation in Indigenous education has been the development of the Coorong Tongala curriculum. Swinburne TAFE project managed the development of the Certificate I, II & III in Learning Pathways for Aboriginal and Torres Strait Islander People's (Coorong Tongala) in consultation with Indigenous communities and organisations throughout Victoria.

Coorong Tongala represents a holistic, culturally appropriate process and content that still delivers nationally accredited qualifications and direct links to the wider community through work placements and community projects. It is unique and radically different to the mainstream and what has been tried before with little success. Coorong Tongala offers a real chance for Indigenous students to significantly improve participation in compulsory and non-compulsory education.

It has the overwhelming support of local Indigenous Communities as expressed through their Traditional Owners, LAECGs and community organisation representatives. It has also received great support and interest from DEST, ATSIC, Parks Victoria, Department of Natural Resources and Environment, Business Council of Australia, Wurreker and Wadu representatives, and Indigenous students who have tested some of the approaches and contributed to the focus and development of the program over the past 12 months or so.

Coorong Tongala requires a 'whole of Department' approach to its pilot implementation funding as it addresses the fact that Indigenous students start turning off education around Years 6 and 7. The program draws in students from Years 7-12 at differing levels of participation.

Prospective pilot sites are looking to Coorong Tongala with the belief that it offers a promising way of improving educational participation and outcomes for Indigenous students. Many schools have also expressed interest in using the approach for their 'at risk' students.

It is important that the roll-out of this program is managed in a supportive and coordinated framework to ensure appropriate professional development and learning models are implemented.

# 9. Ways in which the TAFE sector can assist schools to develop quality VET delivery

There are a number of options that TDA suggests might be explored for utilising the TAFE sector more extensively to support VET in schools.

# • Outsourcing of aspects of VET in schools programs to TAFE

This is already occurring in many areas and would enable school students to benefit from TAFE Institute facilities and qualified staff. Encouraging local partnerships would enable TAFE Institutes/Colleges and secondary schools to negotiate at a local level, based on schools' specific needs or requirements and availability of TAFE resources in their area.

#### • Use of TAFE facilities

Facilities and resources at most TAFE Institutes and Colleges are mostly utilised to capacity during normal operational hours. However there is an opportunity to share infrastructure costs by making their facilities available to schools outside of these peak hours. This could include evening, weekend or holiday programs, which would also enable increased exposure of the 'at-risk' student groups to the TAFE environment.

# • Teacher training and mentoring

Partnerships in the design and delivery of vocational teacher education such as between the CIT / University of Canberra in the Bachelor of Education Secondary (Design and Technology)

#### Career guidance advice

TAFE counsellors could provide career guidance advice to school students who are considering VET in schools programs.

- Establishing strong networks across sectors
- Exchange of information on career pathways and collaborating to improve articulation
- Cooperative research projects
  - Continued research in tracking the experiences/outcomes of young people in the transition from school to employment.
  - Research to inform the enhancement of enterprise and careers education as an integral aspect of schools education, TAFE and higher education.
  - Research to inform the development of effective partnerships and innovations
     telling the stories.

As VET in schools develops, there is an increasing need to systematically review the framework in which both sectors operate to find new pedagogies for teaching and learning that satisfy the needs of a diverse cohort of young people.

# 10. Models of TAFE/School Co-operation

While we do not believe that there is any one size that fits all, we are aware of a number of successful examples of TAFE/school collaboration and cooperation that might be useful models for others. We have set out some details below.

RMIT, for example, is involved in the Northern Interactive Education Coordinated Program (NIECAP) <a href="http://www.rmit.edu.au/departments/niecap/">http://www.rmit.edu.au/departments/niecap/</a> and the City Interactive Education Coordinated Area Program (CIECAP) networks. A range of models of successful collaboration are cited in research literature, for example, Dusseldorp Skills Forum. (<a href="http://www.dsf.org.au">http://www.dsf.org.au</a>)

Swinburne is involved in several programs:

#### VET in VCE

Swinburne has adopted a coordinated approach to the delivery of VET in VCE programs. A VET in VCE Coordinator sits within Regional Learning Networks and is the central point for organising and coordinating VET Course offerings, distributing and communicating these to all schools in the area. This position includes supporting and resourcing a team of departmental VET Coordinators and involves negotiations with internal teaching Departments who are offering VET courses. This approach has proved extremely effective in fulfilling administrative and accounting requirements, overseeing results collection and ensuring there is a good balance of VET programs offered at Swinburne. VET offerings have expanded each year under this model.

# Vocational Introductory Program (VIP)

Regional Learning Networks, through the VET in VCE Coordinator established in June 2002 the Vocational Introductory Program. This program arose from schools expressing a great need for an introductory VET program targeted at Year 10 students who were 'at risk' of early school leaving. VIP is the Certificate I in Vocational Education and Training and is a semester long program where students attend TAFE one day per week. It provides short 'taster' modules in a range of vocational training areas such as Automotive, Carpentry, Horticulture, Electronics and Retail Services. Swinburne funds the VIP program from profile hours. As students undertake this program in addition to their year 10 course, it is not envisaged that the schools will ever be in a position to purchase this program under 'fee for service' arrangements.

The VIP has proved extremely successful with both the schools and students. Anecdotally Swinburne has heard from schools that students highly value the program and have improved their attitudes towards staying at school as they now are able to focus on a clear vocational goal. It is expected that the VIP will become a feeder into the newly introduced VCAL program.

# TAFE Directors Australia October 2002

<sup>&</sup>lt;sup>1</sup> Burke, Gerald, Beavis, Adrian and Underwood, Catherine *Costing Issues for VET in Schools: Secondary Collages and TAFE*, Report by CEET to Chisholm Institute of TAFE, Monash University-ACER Centre for the Economics of Education and Training, August 2002

<sup>&</sup>lt;sup>2</sup> Media release by the Minister for Education, Science and Training, *Vocational Education and Training Conference Aims to Inspire*, 23 October 2002

<sup>&</sup>lt;sup>3</sup> Burke Beavis and Underwood p 6

<sup>&</sup>lt;sup>4</sup> See for example an article in Campus Review Vol 12 No 32 August 21-27

<sup>&</sup>lt;sup>5</sup> Burke, Beavis and Underwood p 7

<sup>&</sup>lt;sup>6</sup> *Ibid* p2

<sup>&</sup>lt;sup>7</sup> *Ibid* p3

<sup>&</sup>lt;sup>8</sup> *Ibid* p 18

<sup>&</sup>lt;sup>9</sup> Ibid p 19

<sup>&</sup>lt;sup>10</sup> Ryan, Robin A Review of Research and Policy on Vocational Education in Schools (unpublished study undertaken for TDA), 2000

<sup>&</sup>lt;sup>11</sup> For example see Gonczi, Andrew Future Directions of Vocational Education in Australian Secondary Schools in Australian and New Zealand Journal of Vocational Education Research Vol 5 No 1 May 1997