

## Vocational education and training in Australian schools: Issues for practitioners

---

**Kate Barnett**

Kate Barnett and Associates [kate@katebarnett.com.au](mailto:kate@katebarnett.com.au)

**Robin Ryan**

The Flinders University Institute of International Education [robinryan@ozemail.com.au](mailto:robinryan@ozemail.com.au)

*Originally a series of local initiatives, Vocational Education and Training (VET) in Schools is now largely driven by policy makers and politicians who, too frequently, fail to appreciate the challenges the reform poses to teachers, school managers and workplace coordinators. Research has identified perceptions of poor quality in training, difficulties in curriculum development, assessment and accreditation, lack of opportunities for workplace learning, inadequate delivery methodologies, sometimes profound cultural incompatibilities and resourcing issues as barriers to successful implementation. Recent research has clarified many of these issues and provided some pointers to their resolution. These challenges should not detract from the positive achievements of VET in Schools that include a range of benefits to students of a personal and vocational nature as well as a broader impact on school culture.*

Vocational education and training (VET) in schools, Technical and vocational education and training (TVET), work based education, education policy, curriculum

### INTRODUCTION

The most significant curricular and program innovation in Australian schools in the last quarter of the twentieth century has been the development and expansion of vocational education in schools. Initially a scattered initiative of individual schools to support students uninterested in higher education entry, Australia's experience of difficult economic circumstances in the late 1980s, involving the substantial collapse of the full time youth labour market, led managers of education systems at state and federal levels, and even more enthusiastically political leaders, to adopt vocational learning as the principal policy instrument for facilitating the transfer of youth from schooling to adult economic and social roles.

Similar pressures led to parallel responses in many countries, especially in Europe and North America, but in most cases governments in those jurisdictions were more cautious when introducing vocational programs in schools, more wary of replacing the broader goals of schooling with a narrow instrumental vision, and more concerned to develop bridges between vocational and general or academic education (Ryan, 1999; Stern, 1999).

In Australia, policymakers' enthusiasm, expressed through a range of institutional encouragements and special funding initiatives, led to a vigorous expansion of programs and participants. There are difficulties in collating data on VET in Schools, including a diversity of definitions vocational learning programs, but numbers in courses within the criteria of the Federal-State Ministerial Council on Employment, Education, Training and Youth Affairs' Framework rose from 60,000 in 1996 to 170,000 in 2001 (ANTA, 2002). The National Centre for Vocational Education Research (NCVER) identified 202,900 VET in Schools students in 2003 (NCVER, 2004).

From the mid-1990s to 2003, the cohort involved in VET in Schools programs increased from 16 per cent of the age group to 44 per cent (ANTA 2002, MCEETYA, 2003). School-based New Apprenticeships, that entailed a contract of employment with a workplace, have experienced more limited and geographically uneven growth, rising from 1500 students in 1998 to 7390 in 2002 (MCEETYA, 2003). Numbers grew strongly the following year, to 12,300, mostly (76 per cent) at sub-trade level, 40 per cent in retail traineeships (NCVER, 2004).

The present participation rate for VET in Schools of around the mid-40s per cent seems to have formed a plateau, but during the November 2004 election campaign the Federal Government announced a scheme of federally supported Technical Colleges which, it was claimed, would attract more students and redress a national shortage of trade skills.

The impressive growth in vocational learning programs has led Australian education systems to face many of the same issues as their European and North American counterparts. The initial urge was to secure large numbers of enrolments in vocational programs of almost any description, and concerns that these programs were too industry and skill specific for school students were dismissed by some authorities (Australian National Training Authority, ANTA Ministerial Council, 1998, p.1). Subsequently, there has been a growing acceptance of the European position that school pathways ideally should lead both to tertiary education entry and to employment (Durand-Drouhin et al., 1998; OECD, 2000).

Moreover, it has increasingly become clear that employers seek generalist more than vocational skills in potential employees, and that training in job specific skills is misplaced when:

...report after report tells us that what employers value most in young people are the individual-focused, not the industry- skills focused qualities. Interpersonal skills, communication skills, problem solving abilities, independence, initiative, punctuality, work ethic, teamwork skills, personal pride, courtesy – these are the traits that employers consistently indicate that they hope to have developed in schools. (Smith, 2000, p.7)

As a result, much of the evolution of VET in Schools since the mid-1990s has occurred as educators and policy makers have tried to develop bridges between vocational and general education (Barnett and Ryan, 2005). However, while policy makers and system-level managers have accepted the need for greater integration of vocational and general education (Polesel, 2001, p.327), there seems to have been little awareness at central level of the problems caused to VET in School practitioners (teachers, school managers, work experience coordinators and employer liaison personnel) by the rapid expansion of programs, the shifting emphasis from utilitarian to broader educational objectives, the ever more complex assessment and certification criteria, or the deepening demands on school infrastructure and professional development.

Adding to practitioner concerns, system managers have come to the conclusion that, since VET in Schools should now be treated as a mainstream program, special funding regimes, and supporting agencies, such as the Enterprise and Career Education Foundation (ECEP, which had provided valuable assistance in supporting the workplace learning components of VET in Schools and in building the cross-sector relationships that underpin it), are no longer needed (Barnett and Ryan, 2005).

### **Issues for Practitioners**

Many of these changes take effect from the start of the 2005 school year, with the consequence that practitioners, who have for some time expressed alarm that the needs of teachers and coordinators in the field have been consistently overlooked (Currie and McCollow, 2002), must now deal with an expanding and changing program with notably diminished support. Although there has been a significant expansion in the research effort and knowledge base underpinning

VET in Schools initiatives since the NCVET first commissioned a review of research in 1997 (Ryan, 1997; Barnett and Ryan, 2005), too little attention has been paid by policy makers to the issues that face practitioners. This is in marked contrast to the intellectual effort devoted to central system issues, such as the need to reconcile and integrate conflicting assessment machinery and recognition protocols which apply to VET modules (assessed against industry standards) compared to senior school programs (assessed by more traditional academic criteria).

The NCVET over recent years has commissioned a suite of research activities into VET in Schools including an up-date of the 1997 review, supported by an interview program involving state VET in Schools managers. In the course of this research the problems facing practitioners emerged as a significant element in, and potential barrier to, the sustainability of vocational learning in schools as currently envisaged. The purpose of this paper is to outline and clarify those challenges, to indicate where research evidence provides direction for their resolution, and to highlight areas where concerns remain unsatisfied.

The paper outlines these practitioner concerns and practical challenges under the following headings:

- Perceptions of inferior quality,
- Issues in curriculum, assessment and certification,
- Approaches to workplace learning,
- Delivery,
- Cultural differences and partnering challenges, and
- Resourcing vocational learning.

### QUALITY

A recurring feature of VET in Schools programs has been that the quality of the learning experience both in schools and in job placements has been questioned, often in ways that revealed a depth of mistrust and cultural difference between the parties, especially between school educators and industry representatives, but also within education (Barnett and Ryan, 2005).

Schools may deliver vocational subjects of their own devising if they fit within the curriculum and assessment frameworks determined by the state certification bodies, commonly known as Boards of Studies. However, there is strong pressure for vocational modules to receive not merely secondary schooling certification but also recognition on the same basis as adult vocational training. In order to achieve this, schools must either achieve acceptance as Registered Training Organisations (RTOs), eligible to provide training meeting the industry-backed standards of the Australian Quality Training Framework (AQTF), or combine with existing RTOs, either those in the private or community sectors, or the RTOs managed by State Governments, the Technical and Further Education (TAFE) Institutes.

In practice, certification of school vocational subjects to the industry standards purportedly guaranteed by the AQTF is often insufficient to convince employers about the standard achieved. It is not difficult to list industry complaints about the quality of learning outcomes from VET in Schools programs (see, for example, Currie and McCollow, 2002, pp.54-56). Similar sentiments have been expressed to the House of Representatives Inquiry into VET in Schools (for example, HIA, 2002; VACC, 2002). Essentially the industry view is that, "few schools have adequate staff, experience and facilities to deliver vocational programs to the level required in the standards" (VACC, 2002, p.5).

TAFE Directors have argued that schools were frequently unable to maintain the integrity of training quality systems and credibility with industry (TDA, 2002, pp.3-4), while Group Training

Organisations were dismissive of training achieved through institutional pathways, whether school or TAFE (GTA, 2002, p.7).

Despite substantial evidence that industry perceived significant quality problems in school delivered VET, the major finding of an investigation conducted by the Australian National Training Agency (ANTA) National Training Quality Council in February 2002 was that schools registered as RTOs were generally compliant with the AQTF (DEST, 2002). However, some of the responses made during the consultation phase of the investigation indicated potential problems for some schools in attempting to comply with the AQTF (ANTA, 2002). The Australian Industry Group, surveying its members for the House of Representatives Inquiry into VET in Schools, noted complaints about schools' attempts to deliver training package outcomes while failing to produce adequate achievement in general education, above all mathematics capability (Ghost, 2002). Moreover, they felt that schools should focus on future skill needs of the economy rather than following current labour market requirements.

An approach to VET in Schools that has a focus on generic work skills, may deliver more appropriate outcomes for industry into the future. A recent paper by the Australian Industry Group on skill needs for emerging technologies determined that significant skill sets required for employment in emerging industries do not yet exist, and consequently the generic skills and knowledge that underpin the capacity to efficiently and effectively embrace new technology skill sets are critical to the success of new industry in Australia. (Ghost, 2002, pp.62-63)

On the other hand, there are serious concerns about the quality of learning in the workplace, which is frequently a required and always a desirable element of VET in Schools. Some of this concern focuses on assessment practices, which are claimed to be superficial and mechanical. However, a larger issue is the lack of clarity and agreement on the purposes of work placements. Malley and collaborators reported that their case studies showed that while placement aims were generally met at the lower end of the skills continuum, policy assumed that placements should also provide for the upper end. Yet there was little evidence of extensive formal learning occurring only in the workplace (Malley et al., 2001a).

ANTA's response to quality issues in VET In Schools has been to propose more rigorous adherence to AQTF requirements (ANTA, 2002), but this assumed that the needs of school aged students did not differ from the vocational outcomes sought by young and older adult students already embarked on specific career training. As Currie and McCollow argue

VET in Schools is about such things as increasing student knowledge, motivation, self-esteem and self-awareness as well as providing specific employment related competencies. Valid judgement about the quality of VET in Schools programs would need to consider and weigh up the sometimes competing claims of the various agendas that are driving it. (Currie and McCollow, 2002, p.57)

Despite the considerable questioning of school capacity, the major national study of Quality in VET in Schools (KPA Consulting, 2004) found no evidence of lower or different standards in schools than for other RTOs, but noted that the difference in delivery and registration models created a confusing and complex picture.

## **ISSUES IN CURRICULUM, ASSESSMENT AND CERTIFICATION**

### **Curriculum Design and Development**

As the comment of the Australian Industry Group implied, too often discussions of VET in Schools spoke of quality in terms of industry specifications; it was useful that an industry body should emphasise that the quality of the student experience should be paramount. This

encompassed the whole educational experience, beginning with curriculum design and development and culminating in assessment, ranking and certification.

The evolution of curricula for vocational learning has resulted from the interplay of sometimes conflicting forces. Vocational learning innovations were originally largely local initiatives, sometimes facilitated by external catalysts such as the Dusseldorp Foundation. As vocational subjects gained in importance and popularity, however, it became necessary for them to be redeveloped in standard forms to ensure recognition in secondary credentialling systems, and sometimes to secure funding support. This development put at risk the spontaneity and experimentation which had been a strength of early programs (Ryan, 2002).

Although the intervention of State and Territory Boards of Studies promoted the standardisation of VET programs to some extent, from a national perspective great diversity remained, implying significantly different approaches in the purpose of VET in Schools around Australia. Differences were evident in:

- the number of modules available to students, with implications for the amount of credit transfer possible;
- variations in the extent to which the subject was seen as standard or additional; and
- whether the subject was listed on the secondary credential.

In 1998 the Federal-State Ministerial Council on Employment, Education and Youth Affairs (MCEETYA) agreed to involve the Australian Curriculum Assessment and Certification Authority (ACACA) in developing a national approach to the implementation of VET in Schools. The National Framework was the eventual outcome, along with a range of support resources (Malley et al., 2001a).

Despite benefits, the nationally consistent approach is not without its drawbacks. There is a risk that programs developed by individual schools, which are not designed to meet the standards of the Australian Qualifications Framework (AQF), but which do meet the identified needs of their students, can be stifled. Students who have benefited from the blurring of boundaries between VET and other school programs, such as community based learning, may be disadvantaged.

A further difficulty may arise in the case of academically less able students. While there remains an attitude in many schools that VET in Schools is best suited to the least academic (NWG, 2001, Part 4) it is in fact far from clear that vocational education best suits their learning style and educational needs. The Kirby report on senior secondary education in Victoria noted that VET in Schools might not be a good answer for many students with low educational achievement (Kirby, 2000).

Moreover, indefinitely expanding school options is not necessarily an enhancement of student opportunity. A strong body of evidence indicates that school subject choice is crucial for later life employment experience and that critical choices involve **academic** subjects, especially mathematics (Ball and Lamb, 1999; NCVER, 2000). Expanding the range of subjects available to school students may not enhance options if they do not lead to later study (NCVER, 2000).

### **Assessment, Tertiary Selection and Secondary Certification**

According to the Ministerial Council [MCEETYA] National Working Group on the Recognition of VET in Schools:

All states and territories would claim that at least some VET in Schools programs contribute, in one way or another, to [their] tertiary admissions index. Most commonly, however, this occurs when the competencies are embedded in senior secondary certificate subjects that, in turn, count towards the calculation of the index. (NWG, 2001, p.13)

There are also arrangements in some states and territories that permit stand-alone VET courses to be included in the index, using graded (rather than competency-based) assessment as an option. Additionally, there are approaches that avoid the issue by employing alternative university admission schemes.

The National Working Group has undertaken considerable work on technical issues in developing graded assessments within competency assessed subjects. However, the issues involved are more than technical and it lists the following barriers:

- The difficulty of aligning statements of competency to the outcomes of university courses or other senior secondary subjects. This may reinforce the perceived incompatibility between the content of vocational education courses and university subjects and may contribute to inadequate recognition of student achievement.
- Perceptions about narrowness and lack of depth of knowledge and understanding in vocational courses.
- A desire to judge vocational courses on a terminology of equivalence rather than recognition of distinct value as another kind of education (NWG, 2001, pp.14-15).

At the school level, difficulties with the two systems of assessment persist. Not infrequently, students achieve successful assessments in the senior secondary qualification while not achieving competency in the AQTF assessment and vice versa (Spark, 1998; Currie and McCollow, 2002).

There are concerns also about the validity of workplace competency assessments. Most students undertake placements in workplaces lacking qualified and experienced assessors, with competencies being merely ticked off (Spark, 1998; Malley et al., 2001a). Employers complain that logbooks are complex, bureaucratic and time consuming (Malley et al., 2001a).

The National Working Group pointed to dilemmas in approaches to the inclusion of VET in university selection calculations. The embedding model, in which VET modules were contained within school subjects, tended to downplay the significance of the VET component. On the other hand, not all stand alone VET In Schools subjects counted for selection purposes. ANTA and the NSW Board of Vocational Education and Training have provided funding for further research on these issues (DEST, 2002).

### **Workplace Learning**

School students place most value on vocational education that provides real workplace experience. However, this is not easily provided and the typical VET experience is school-based, albeit structured to achieve AQF competency-based requirements, with a small or simulated workplace component. The research evidence is clear that real work experience is the ideal means of incorporating vocational goals into school programs, enabling a transfer of specific learning to generalised competencies, and placing them in a broader educational framework. However, this rarely occurs in Australia (Ryan, 2002, pp.4-5). About half of VET in Schools enrolments are in subjects that are easily developed from traditional school curricula, for example, hospitality, office studies, information technology (Malley et al., 2001b).

The trade-off between depth and breadth in workplace experience continues to lean to breadth, with data showing increasing use of workplace training, but with a reduced number of hours involved; the most common experience is five days (Fullarton, 1998). About 40 per cent of VET in Schools programs have no workplace experience at all (Ryan, 2002). Although the number of VET in Schools programs entailing participation in workplace learning has been rising (DEST, 2002, p.58), average exposure is well short of ideal. Where it is included, work placement is more likely to be associated with general work experience than with structured workplace training and

assessment, that is, a planned work-based learning program associated with identified units of competency (KPA Consulting, 2004, p.59).

There is a shortfall of willing employers able to provide workplace placements. Unless significant changes are introduced, there are likely to be only marginal increases in the number of workplaces providing structured work placements (Malley et al., 2001b). The abolition of the Enterprise and Career Education Foundation will exacerbate this problem.

At a deeper level, there is a lack of appreciation of the real potential of workplace education, which is not excessively concerned with the gaining of specific workplace skills. Research supports the value of learning at and from work, not simply for vocational skills but for its contribution to general education (Ryan, 1997; Ryan, 2002). This research indicates that learning about abstract thought and symbolic manipulation follows from teaching meaningful practical content, and that work-based problem solving involves a combination of social, technological, material and symbolic resources (Sweet, 1993).

Current United States practice, for example, is based on using work-based learning as an integrating factor between vocational and academic pathways. Work-based learning ideally involves authenticity, academic rigour, applied learning, active explorations, adult connections and appropriate assessment practices as much suited to the academically talented as to those with vocational interests (Stern, 1999).

### **Culture and Partnering**

The 1997 NCVER review commented that:

more important than the costs and logistical difficulties are the sometimes profound incompatibility between school and work cultures. Sometimes this emerges in practical matters like timetabling and organisation but also reflects fundamentally different outlooks on society and the position of the individual. (Ryan, 1997, pp.17-18)

The evidence from the literature suggests that cultural barriers remain between educators and employers and within schools but are diminishing as an issue. Earlier research found that many school VET programs were of low status and seen as a soft option. Where VET students undertake discrete courses and are segregated from other students, VET is sometimes marginalised (Spark, 1998). Currie and McCollow (2002) report complaints from academic teachers about timetabling problems and the funding requirements of additional professional development for VET teachers. Case studies indicate that academic teachers sometimes believe that students' broader education is disrupted (Green and Boylan, 2001).

Beyond these issues, many teachers remain unconvinced about the educational value of VET programs (Currie and McCollow, 2002) and some VET teachers complain of lack of support from principals or the school generally (Polesel et al., 2004). However, a recent study reported significant change in cultural attitudes within schools. The study was designed to investigate the place of VET in school policy and culture and sought information from 12 schools and six TAFE Institutes in three Eastern states. The data represented the views of more than 300 teachers, 1100 Year 11, and 400 exit Year 12 students. There was a majority perception that -

...VET plays an essential role in making the curriculum inclusive of a broader range of needs. VET was also viewed as a useful means of improving learning, giving many students a chance of success at school, some for the first time. (Polesel et al., 2004, p.7)

The study also found that cultural barriers, although they existed as outlined here, were less important to growth of VET programs than issues involving resources, the provision of infrastructure and training and the costs of delivering VET. While students were found less likely

to enrol in VET when they had university-oriented goals, negative perceptions of VET were given relatively little importance (Polesel et al., 2004, p.11).

### **Delivery**

Delivering VET in Schools programs places unusual burdens on schools, their teachers and their students, because it entails working in environments – of adult learning with workplace disciplines and expectations – which are far from the normal experience of schools and their personnel. A simple example is timetabling, which features quite disproportionately in discussions about the practicalities of delivering VET programs. Lack of flexibility in school timetables is one of the most frequently identified problems in the field (Watson, 2000; Jung, et al., 2004; Barnett and Ryan, 2005).

Intended learning in VET is not specified in traditional curriculum or subject outlines, but in terms of Training Packages, which specify industry relevant outcomes to be achieved. Schools face particular challenges relating to flexibility and responsiveness in delivering Training Packages. Training Packages are reviewed and redeveloped every three years: schools find it difficult to adjust curriculum so quickly, to retrain teachers and develop new syllabuses (Barnett and Ryan, 2005).

Insufficient time allocated for practical training is a concern expressed by TAFE lecturers, school teachers and VET coordinators (Jung, et al., 2004, p.63), while in rural areas, there are concerns expressed about the time and distance involved in students participating in VET programs outside of the school (NCVER, 2000; Watson, 2000; Jung, et al., 2004).

Contentious issues which arise between schools and TAFE Institutes are not merely cultural but relate also to student learning. Because schools frequently prefer to deliver programs at least in part through registered training organisations, especially TAFE, or under auspicing arrangements with RTOs, rather than undertaking the expensive and convoluted audit processes entailed in registering as an RTO, it is necessary for school students to fit in to the climate of TAFE Institutes. This is often difficult.

- School students frequently are not able to work in an adult learning environment, as exists with TAFE (Jung, et al., 2004, p.66).
- Students often lack the numeracy and literacy skills required by TAFE providers (Jung, et al., 2004, pp.9-10).
- Students often lack the study skills and work habits needed to participate effectively in TAFE (Jung, et al., 2004, pp.9-10).
- TAFE staff question their capacity to meet the needs of younger students (Polesel et al., 2004).
- Partnering requires an input of time in building relationships and in ongoing liaising, and all this adds to time loads (Polesel et al., 2004).

Schools also face burdens in arranging for the work experience components of programs. Schools are dependent on the goodwill of local employers to provide work placements and on workplace supervisors to provide time and attention to students (Jung, et al., 2004, p.70). Therefore, partnering is of crucial significance to the success of VET programs in schools.

### **Resourcing Vocational Learning**

The 1997 NCVER review noted the lack of systematic and detailed analysis of the resource implications of VET in Schools (Ryan, 1997) and this has remained true, although the Commonwealth has analytic work underway to assess the costs of VET programs in schools (DEST, 2003). Schools with VET programs needed to employ program coordinators, provide



professional development for teachers, develop learning materials and purchase services from TAFE or other RTOs, leading to considerable costs to schools (Schools Council, 1994). Many schools passed on costs to parents, especially where training was provided by TAFE or another non-school RTO; these fees have been as high as \$2 000 (Currie and McCollow, 2002, p.63). Research by Polesel et al. (2004) identified fees as a key barrier to student participation in school VET programs. There seems little doubt that VET in Schools is resource intensive and that this is a constraining factor throughout the life of VET programs.

Often, State or Federal Government assistance is given as start-up or seed funding, which seldom covers the full cost of programs and will end before the program does. It is clear that there are shortfalls between numbers of students funded by state sources and those actually participating (Malley et al., 2001a). There are restrictions by funding agencies on the use of funds for capital purposes, although this may be needed to meet industry standards (Spark, 1998; Keating et al., 1998).

MCEETYA has accepted that VET in Schools is more expensive than general education and surveys of schools show that most school managers and teachers believe that, if ANTA funding ceased as planned, States would not be able to provide the resources needed for a sustainable program (Currie and McCollow, 2002). The issue was clouded by insistence from some State and Federal Government funding agencies that VET in Schools should be no more costly than mainstream school programs, but this seemed to refer to simpler activities which were essentially renamings of traditional subjects. According to the DEST commissioned research, these simpler modules were cost neutral or entail a loading of no more than 1.01 or 1.02. Where additional support is provided, cost loading estimates rose as hours were purchased from providers and Structured Workplace Learning was added, to a 1.06 to 1.08 loading (DEST, 2003, Table 19, p.122).

Interviews reported in the recent NCVET research identified concerns among system managers that vocational education cost more than general education, and that this was not acknowledged in current funding models (Barnett and Ryan, 2005). Those interviewed expressed mixed views about the planned termination of ANTA seed funding, with some jurisdictions seeing this as a major issue while others took the opposite view, pointing out that States and Territories were already making substantial funding contributions to VET In Schools.

Other research continued to highlight the cost differences between VET in Schools and orthodox curricula, noting the following problems:

- the shortage of adequately trained teachers ;
- additional workloads associated with VET teaching – for example, increased paperwork, liaising with employers and TAFE;
- costs associated with training teachers to meet AQTF compliance – including time release for industrial experience;
- providing adequate facilities for delivering VET within the school;
- the costs of purchasing RTO services; and
- fees charged to students act as a barrier to participation (Polesel et al., 2004).

While many of the costs incurred in maintaining VET in School programs were measured in dollar terms, as the 1997 NCVET review pointed out it was important to bear in mind that the primary resource required was human:

The burdens placed on individual employers and teachers and school administrators by work-related education are considerable and may limit the extent to which initiatives

can be applied...The fundamental resource issue, therefore, is the continued readiness of both employers and teachers to participate in learning partnerships. (Ryan, 1997, p.18)

## **RESPONDING TO THE CHALLENGES**

Despite the enormous range and significance of the challenges involved, the increased uptake of VET programs in schools suggests that their benefits outweigh the difficulties. Systems across Australia have taken up this challenge, developing a range of structural reforms designed to create smoother links between the education and training sectors and expand the range of learning opportunities for students (Barnett and Ryan, 2005). Increasingly, systems are meeting the need to respond not only to national training packages and university entrance criteria, but are also providing for locally designed courses that retain these benefits. Many jurisdictions have made changes that move away from centralised to local delivery of VET programs (Barnett and Ryan, 2005).

### **Benefits to Students**

Schools and state systems persist with VET in Schools programs, not only because of their politically appealing character, but because of real if not unqualified benefits to students, benefits which recent research has increasingly been able to identify and in many cases quantify.

One early study, reporting on students who were in Years 11 and 12 in 1991-93, found that vocational students were less likely to go to university than non-vocational classmates (Malley et al., 2001a), but a number of later investigations have suggested that school VET provided an effective pathway to later study, with higher proportions of school VET students continuing on to post-school VET studies (Ball and Lamb, 1999; Fullarton, 2001).

Promising results have come from five years' destination data involving Victorian VET In Schools graduates:

In broad terms, over half of the leaving cohort are consistently going on to further study either at a university or a TAFE institute, with the majority of these students choosing to continue their schooling at TAFE....Labour market transitions, too, have been effective, with high rates of transition to full-time employment, and apprenticeships and traineeships. (Polesel, 2001, p.331)

Of the total 1998 Year 12 cohort:

- 28 per cent entered post-school VET,
- 22 per cent university,
- 18 per cent New Apprenticeships,
- 14 per cent were in full -time work,
- 7 per cent were in part-time work,
- 4 per cent returned to school,
- 6 per cent were unemployed. (Polesel, 2001, p.332)

Polesel noted that, controlling for achievement, the relative outcomes for the VET group were more impressive, with a greater transfer to further study for academically weak students than for their non-VET in Schools counterparts. On the other hand, academically stronger VET in Schools students were less likely to transfer to university, but more likely to undertake further study in TAFE (Polesel, 2001, p.332). It was noted that an increasing proportion of VET in Schools graduates were enrolling at university, with 80 per cent reporting that they were coping well (NWG, 2001, p.30).

Small scale studies of specific groups have shown mixed results for rural students (Bell, Kilpatrick and Kilpatrick, 2001; NCVER, 2002) while private school students, in a small pilot study, reported little influence from their VET experience (Lambert and Stahlik, 2002). Outcomes for indigenous students were insufficiently reported but there were some small scale successes (for example, Bennett and Edwards, 2002) and the opportunities provided have been praised by advocacy bodies (ACACA, 2002). There have also been promising outcomes from small scale programs for the disabled (Barnett, 2002).

Studies of employment outcomes indicated that school VET programs were associated with higher employment levels (Johns et al., 2004), particularly full time employment (Fullarton, 2001), and the link between school VET and employment has been found to increase beyond the first year after leaving school (Johns et al., 2004, p.11). Work placements have been associated with positive employment outcomes (ECEP, 2002a).

A range of studies show that benefits to students abound in relation to confidence, maturity, independence, improved motivation and reduced absenteeism (Malley et al., 2001a, 2001b; Barnett and Ryan, 2005).

A major study by Polesel et al. (2004) identified a range of benefits and an increasing legitimization associated with school VET programs. Their findings were based on the views of over 300 teachers, 1100 Year 11 and 400 Year 12 exit students in three Australian States:

For most [teachers], VET plays an essential role in managing diversity, in improving learning and in securing a range of good outcomes for school leavers.... Among students too, VET is seen as providing opportunities and pathways which are essential.... The feedback from TAFE staff seems to confirm these views. There is an acknowledgment that schools and students are beginning to view VET (and consequently TAFE itself) in a more favourable light. (Polesel et al., 2004, p.12)

VET was regarded as playing an essential role in improving learning, and making the curriculum more inclusive. Teachers were generally very positive about the role and effectiveness of VET programs, and many saw a particular value for students who were interested in technology or business and for students with only average academic ability. Moreover, VET school programs were receiving increasing recognition for their equity benefits (Polesel et al., 2004).

Teachers valued work placement for its role in increasing student self-confidence, and endorsed the creation of linkages between schools and TAFE and employers (Polesel et al., 2004). Students regarded school VET programs as providing the opportunity to widen career options, to obtain valuable workplace experience and to obtain a VET qualification. More than half enrolled to enhance access to part time work. Work placement was seen as increasing their self-confidence, and contributing to more general learning, while facilitating entry to future employment (Teese et al., 1997; KPA Consulting: 2004; Polesel et al., 2004).

### **Meeting The Challenges**

In order to ensure that VET in Schools programs were sustained and able to build on these successes, it was important that policy makers continued to respond with adequate administrative and resource support. However, it was also vital that practitioners committed to continuous improvement. For example, there was a need for better collaboration between the VET/TAFE and school sectors to avoid duplication of resources (Polesel et al., 2004).

A vital issue was the resolution of timetabling issues. The integration of VET programs into mainstream school programs should enable timetabling to be aligned with the main timetable, avoiding the need for students and teachers to attend during school holidays, and to be more responsive to employer needs:

Unless schools are prepared to restructure school timetables so that VET studies and workplace training become mainstream programs, and schedules do not preclude students from also participating fully in their other general study programs, then students who undertake VET programs will continue to be penalised....Moreover, if [they] have experienced difficulties in the past with academic programs, then it seems unreasonable and naïve to expect that they have the capacity, maturity, motivation and time-management skills to be able to juggle three different sets of time commitments. (Jung, et al., 2004, p.70)

There was a need for schools to develop partnerships with training providers who had the expertise and experience to deliver VET programs which they lacked, or where they lacked the necessary resources, curriculum materials and equipment (Jung, et al., 2004, p.64). At system level, there was a need to free curricula from the narrow constraints of training packages, that is to supplement the current range of training package qualifications with additional more broadly based qualifications that are designed specifically for young people who have not yet entered the workforce to enter the workforce (rather than for those already in the workforce), and to develop this collaboratively between school and VET system accreditation authorities (KPA Consulting, 2004, p.61).

There was also a need for special attention to school-based New Apprenticeships (SBNAs), especially as the new federal Technical Colleges were rolled out. At present, SBNAs are among the less successful VET in Schools programs. Studies of school-based New Apprenticeships have indicated that the work experience of SBNA students was little different from that of other students (NCVER, 2002). Overall, a national evaluation of SBNAs indicated that outcomes were more varied than might be expected and that employment was not necessarily the next step for all young people. As the evaluation noted, however, data were at present very inadequate (Smith and Wilson, 2002).

One important reform was to extend the time available for students in SBNAs to participate in off-the-job training, (Jung, et al., 2004, p.63). Formalisation of articulation and credit transfer arrangements between schools and further training institutions was seen as an effective strategy for ensuring that SBNAs led smoothly into post-school apprenticeships and traineeship pathways and should be further developed (Jung, et al., 2004 p.64).

### **More Comprehensive Reform**

While the research indicated a substantial action list for policy makers and practitioners, the need for much practical activity should not distract from the possibility of using the growth of VET in Schools for more comprehensive school reform. Malley and collaborators claimed that there was no evidence that VET in Schools programs have assisted the major objective of encouraging increased school retention rather than providing a wider range of options for continuing students (Malley et al., 2001a). While this has been disputed, it would seem clear that to move beyond the present plateau would require more comprehensive reform to institutional form and structures as well as to curriculum and programs (Selby-Smith, 2002, p.28).

Many young people found their school environments stifling and lacking in enjoyment (Slade and Trent, 2000). Teese found that a third of lower achieving boys see school as a prison, a place of negative confinement (Teese, 2000, p.5). A successful VET in Schools program might exacerbate rather than assuage these negative feelings, as one of the most consistent findings from the research was the pleasure students find from being treated as adults in their work experience and the contrast they made with their school environments (Smith and Green, 2001). As Wiltshire has commented:

The reasons for the popularity of VET in Schools are not hard to find. They are closely related to the malaise which has struck young people all over the world over the past two decades. They are looking for relevance, hope and meaning. (Wiltshire 1999, p.26)

One suggestion for dealing with this angst is the further development of senior colleges, in which VET in Schools is a normal part of the experience. Related to this is the need to end the frequent marginalisation of VET in Schools programs by making it clear that there are challenging options available for all student ability levels and designing curricula and programs to this end. The experience of the United States is a useful model. There, the 1917 Hughes Act had established vocational education as a separate stream. In 1994 the new School to Work Opportunities Act reversed almost 80 years of practice, in large measure because of complaints from employers that vocational graduates lacked the academic knowledge and thinking skills needed to participate in the newly emerging economy, characterised by constant change. The idea of the new Act is to move beyond vocational pathways to career majors available to all students, including the academically talented (Stern, 1999).

Finally, there is the option of the Full Service School. Although the term is less commonly employed in Australia than in the United States, there are suggestions in the literature that vocational learning programs need to be accompanied by a repertoire of wider student services. During 1999 and 2000, the then Department of Employment Training and Youth Affairs (DETYA) implemented the 'Full Service Schools' project (FSS). This aimed to encourage young people under 18 years of age to return to or remain at school until the end of Year 12 so that successful transition to further education, training or employment could be facilitated. National evaluation of the program (DETYA, 2001) found that it had made a significant impact on young people said to be at risk, with key success factors being school-community relationships, developing a culture of innovation and enterprise, flexibility in curriculum design and delivery and the quality of student-teacher relationships.

Reviewing a number of case studies, the Enterprise and Career Education Foundation (ECEF) argued for drawing together a range of services in local partnership arrangements. These would include programs linked to the labour market, enterprise education programs and entrepreneurial activities, career guidance, counselling and advice services, the placement of teachers in industry and the training of industry personnel to deliver their aspects of programs, vocational learning activities, career and transition management support designed and driven by local partnerships (ECEF, 2002b, p.50).

Spring and Syrmas (2002) also saw the provision of student support services, especially comprehensive career advice linked to job opportunities supported by IT systems, as integral to the further development of vocational learning in schools. Special attention to broader service availability might be required in rural or remote areas. The National Council of Independent Schools' Associations (NCISA), reflecting the experience of its members' schools, argued that future development of VET In Schools would require

... much greater collaboration between government and non-government agencies across a range of portfolios (education and training, health, welfare, community services etc) that provide services to young people. NCISA considers that access to these support services should be considered an entitlement for students requiring these services, regardless of the school sector attended. (NCISA, 2002, p.i)

## CONCLUSION

As the VET in Schools innovation has grown, so has the supporting knowledge base derived from research. This has allowed for the evolution of more evidence-based policy and some practical concerns, especially in certification and recognition, have received intensive attention. Overall,

though, the concerns of practitioners in the field have received inadequate attention even while questions of sustainability have become more pronounced.

The expanded knowledge base has lessons for practice as well as policy, but it is not clear that assistance to practitioners is yet a major goal of system managers. VET in Schools modules are here to stay, but one form in which they may survive is through only slight modifications to traditional school subjects, taught within the cost constraints of mainstream subjects, with minimal exposure to the real world of work and certainly without the structured workplace learning opportunities which are potentially the program's greatest strength.

This would be a pity. Work is fundamental to human experience, to cultures and societies as well as to economies. VET in Schools provides an opening to bring that key well-spring of human creativity into the educational experience of young people. It should be available in as great a diversity as can be managed to all students, the academically able as much as those who need alternative options.

### REFERENCES

- ACACA (Australasian Committee of Chief Executive Officers of Curriculum, Assessment and Certification Authorities) (2002) *Submission to the House of Representatives Standing Committee Inquiry into Vocational Education in Schools*. Canberra: Parliament of Australia.
- ANTA (Australian National Training Authority) (2002) *Submission to the House of Representatives Standing Committee Inquiry into Vocational Education in Schools*. Brisbane: Australian National Training Authority.
- ANTA Ministerial Council (1998) *Principles and framework for new apprenticeships for school students*. Brisbane: Australian National Training Authority.
- Ball, K. and Lamb, S. (1999) *Curriculum and Careers: the education and labour market consequences of year 12 subject choice*, LSAY Research Report no.12. Melbourne: Australian Council for Educational Research.
- Barnett, K. (2002) *Creating Viable Pathways to Vocational Education and Employment for Students with a Disability: the ECEF Lighthouse Initiative Evaluation Report*. Sydney: Enterprise Career Education Foundation. [Online] [www.ecef.com.au](http://www.ecef.com.au)
- Barnett, K. and Ryan, R.J. (2005, in press) *Lessons and Challenges: Vocational Education in Schools: Research Overview*. Adelaide: National Centre for Vocational Education Research.
- Bennett, A. and Edwards, H. (2002) *VET on the Airwaves over South Australia. Vocal*, 4.
- Currie, W. and McCollow, J. (2002) *Vocational Education and Training in Public Schools: Enhancing Student Career Options*. Sydney: Australian Education Union.
- DEST (Department of Education, Science and Training) (2002) *Submission to the House of Representatives Standing Committee Inquiry into Vocational Education in Schools*. Canberra: DEST.
- DEST (Department of Education, Science and Training) (2003) *The Cost of VET in Schools: An Analysis of the Costs of Delivering VET in Schools including an Analysis of Cost Efficiencies*. Final Report, June 2003. Canberra: DEST.
- DETYA (Department of Education, Training and Youth Affairs) (2001) *National Evaluation Report: Full Service Schools Program 1999 and 2000*. [Online] [www.dest.gov.au/schools/publications/2001/fss/evaluation.pdf](http://www.dest.gov.au/schools/publications/2001/fss/evaluation.pdf)
- Durand-Drouhin, M., McKenzie P. and Sweet, R. (1998) *Opening pathways to education and work. OECD Observer*, 214, October-November.
- ECEF (2002a) *Destinations 2000*. Sydney: Enterprise and Career Education Foundation.
- ECEF (2002b) *Submission to the House of Representatives Standing Committee Inquiry into Vocational Education in Schools*. Canberra: Parliament of Australia.

- Fullarton, S. (2001) *VET in Schools: Participation and Pathways*. Longitudinal Surveys of Australian Youth (LSAY) Research Report No 21. Melbourne: Australian Council for Educational Research.
- Ghost, S. (2002) VET in Schools: the needs of industry. *Unicorn*, 28 (3).
- Green, A. and Boylan, C. (2001) *Vocational Education: Voices From the Field*. 10<sup>th</sup> National Vocational Education and Training Research Conference, Deakin University, July 2001.
- GTA (Group Training Australia) (2002) Submission to the House of Representatives Standing Committee Inquiry into Vocational Education in Schools. Canberra: Parliament of Australia.
- HIA (Housing Industry Association) (2002) *Submission to the House of Representatives Standing Committee Inquiry into Vocational Education in Schools*. Canberra, Parliament of Australia.
- Johns, S., Kilpatrick, S., Loechel, B. and Prescott, L. (2004) *Pathways from Rural Schools: Does School VET Make a Difference?* Adelaide: National Centre for Vocational Education Research.
- Jung, T-H., Misko, J., Lee, K., Dawe, S., Yee Hong, S. and Lee, K-C. (2004). *Effective Measures For school-to-work transition in the vocational education system: Lessons from Australia and Korea*. Leabrook: NCVER. [Online] [http://www.ncver.edu.au/research/core/cp02\\_03.pdf](http://www.ncver.edu.au/research/core/cp02_03.pdf)
- Keating, J., Kell, P., Lynch, G. and Freeman, B. (1998) *VET in Schools Delivery Analysis: Report to Professional and Leadership Development Centre*. Melbourne: RMIT.
- Kirby, P. (Chair) (2000) *Ministerial Review of Post-compulsory Education in Victoria*, Melbourne: Government of Victoria.
- KPA Consulting (2004) *Review of the Implementation of the AQTF Standards*. Brisbane: Australia National Training Authority.
- Lambert, H. and Stehlik, T. (2002) *School-based Vocational Studies and the Transition to Further Education and Employment: Report of a Pilot Study into the Destinations of Independent School Graduates*. Proceedings of the 10th annual conference on Post Compulsory Education and Training, Gold Coast, 2002.
- Malley, J., Keating, J., Robinson, L. and Hawke, G. (2001a) *The Quest for a Working Blueprint: VET in Australian Schools, Vol 1*. Adelaide: National Centre for Vocational Education Research.
- Malley, J., Keating, J., Robinson, L. and Hawke, G. (2001b) *The Quest for a Working Blueprint: VET in Australian Schools, Vol 2*. Adelaide: National Centre for Vocational Education Research. [Online] [www.ncver.edu.au](http://www.ncver.edu.au)
- MCEETYA (2003) *The Growth of VET in Schools Programs: A National Overview*.
- NCISA (National Council of Independent Schools' Associations' Australia) (2002) *Submission to the House of Representatives Standing Committee Inquiry into Vocational Education in Schools*. Canberra: Parliament of Australia.
- NCVER (2000) *A Focus on VET In Schools*. Adelaide: National Centre for Vocational Education Research.
- NCVER (2004) *Australian Vocational Education and Training Statistics: VET in Schools, 2003*. Adelaide: National Centre for Vocational Education Research.
- NWG (National Working Group on the Recognition of VET in Schools) (2001) *Expanding Opportunities for Youth*. Sydney: Department of Education and Training.
- OECD (2000) *From Initial Education to Working Life: Making Transitions Work*. Paris: Organisation for Economic Cooperation and Development.
- Polesel, J. (2001) Vocational education and training in schools in Victoria: an appraisal six years down the track. *Journal of Vocational Education and Training*, 53 (2).
- Polesel, J., Helme, S., Davies, M., Teese, R., Nicholas, T. and Vickers, M. (2004) *VET in Schools: Culture, Policy and the Employment and Training Impact*. Adelaide: National Centre for Vocational Education Research.

- Ryan, P. (1999) The school to work transition twenty years on: issues, evidence and conundrums. In *Preparing Youth for the 21st Century*. Paris: Organisation for Economic Cooperation and Development.
- Ryan, R.J. (1997) *Vocational Education in Schools*. Adelaide: National Centre for Vocational Education Research.
- Ryan, R.J. (2002) Making VET in Schools work: A review of policy and practice in the implementation of vocational education and training in Australian schools. *Journal of Educational Enquiry*, 3 (1).
- Selby-Smith, C. (2002) A Stock-take of the Economics of Vocational Education in Australia: some implications for career development. *Australian Journal of Career Development*, 11 (2) Winter.
- Slade, M. and Trent, F. (2000) Are they the same? A project to examine success among adolescent males in secondary and tertiary education. Paper presented to the Australian Association for Research in Education Conference, Sydney.
- Smith, E. and Green, A. (2001) *School Students Learning from their Paid and Unpaid work*. Adelaide: National Centre for Vocational Education Research.
- Smith, E. and Wilson, L. (2002) *Learning and Training in School based New Apprenticeships*. Adelaide: National Centre for Vocational Education Research.
- Smith, L. (2000) VET in Schools: it's not just a training agenda. *Vocal*, 2.
- Spark, M. (1998) *Vocational Education and Training in Senior Secondary Schools*. Sydney: Vocational Education and Assessment Centre.
- Spring, G. and Syrmas, J. (2002) What's in a Name: the meaning of vocational in changing times. *Unicorn*, 28 (3).
- Stern, D. (1999) Improving pathways in the United States from high school to college and career. In *Preparing Youth for the 20th Century*, Paris, Organisation for Economic Cooperation and Development.
- Sweet, R. (1993) Learning in the Workplace: A policy perspective. *Australian TAFE Teacher*, 27 (2).
- TDA (TAFE Directors Australia) (2002) *Submission to the House of Representatives Standing Committee Inquiry into Vocational Education in Schools*. Canberra, Parliament of Australia.
- Teese, R., Davies, M. and Ryan, C. (1997) *Work Placement Experience: The Student Perspective*. Melbourne: Educational Outcomes Unit, University of Melbourne.
- Teese, R. (2000) Academic culture and economic self interest: The case for VET in Schools. *Vocal*, 2.
- VACC (Victorian Automobile Chamber of Commerce) (2002) *Submission to the House of Representatives Standing Committee Inquiry into Vocational Education in Schools*. Canberra: Parliament of Australia.
- Watson, S. (2002) Education for tradesmen: VET and the NSW principal. *Vocal*, 2.
- Wiltshire, K. (1999) Good work at school. *Australian Training Review*, 29.