
Making VET in Schools work: a review of policy and practice in the implementation of vocational education and training in Australian schools

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A recurring theme

Pressure for schools to adopt a more vocationally oriented approach to the education of young people is by no means new, especially in times of economic dislocation. White has demonstrated considerable similarities in public policy responses to periods of youth unemployment in the 1890s, 1930s and 1990s (White 1995). In each case, demands for increasing vocational relevance were placed on education systems, at least until the peak of the crisis was perceived to have passed.

Australian education systems at the beginning of the twenty-first century are once more in a period in which great hope is placed on an expanded vocational dimension to school students' learning. Some of these initiatives are purely school-based and rely on school-oriented certification and recognition, such as the various State Higher School Certificates (HSC), School Certificates (SC) and Senior Certificates. Others attempt to utilise recognition arrangements under the Australian Qualifications Framework (AQF), which is intended to apply to programs in the national vocational education and training (VET) sector, primarily oriented to vocational preparation of adults.

My work in this paper builds on recent research on the Australian and overseas experience of VET in Schools and Work Based Education. I argue that not all innovations under the VET in Schools rubric are equally valuable. I suggest that programs and policies which depart from the traditional educative role of schools in favour of an unduly narrow concept of 'training' or work-relevance are likely to be self-defeating; that work itself may be a rich source of student learning and development; and that VET in Schools initiatives too frequently represent an evasion of a pressing need for more deep-seated reform of schools and schooling.

Conflicting views of VET in the school curriculum

Current Vocational Education in Schools practice in Australia reflects two differing perspectives of the role of vocational education in the school learning experience. In one, general education is seen to remain the school's primary concern, with vocational education viewed as an issue of curriculum reform. In the second, the world of work beyond schools is seen as normative and, for at least a segment of the school population, general education is held to be of lesser value than the acquisition of specific vocational competence.

Although the 1990s was the decade of the *new vocationalism* in school systems throughout advanced economies, it is a policy stance approached with considerable caution in many countries (Ball 1999).

A recent Organisation for Economic Cooperation and Development (OECD) review of twenty years of transition argues that, while the United States, United Kingdom and other countries have intervened to promote vocational education in schools, the issue remains in dispute. The OECD points out that many observers doubt the strength of the relationship posited between vocational preparation and economic performance, arguing that early vocational preparation goes largely to waste (Ryan 1999).

A similar caution led the United States, in its 1994 School to Work Opportunities Act, to reverse the philosophy of the 1917 Hughes Act that had established vocational education as a separate stream. The new Act did so 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).

The OECD has always warned about the conscription of young people into low-status vocational programs (McFarland & Vickers 1994) and placed strong emphasis on the integration of vocational and academic education. The OECD emphasises dual vocational/academic pathways that lead to tertiary education as well as to employment (Durand-Drouhin et al 1998).

In Australia, policy and practice have too often focused on attracting large numbers of senior secondary students into vocational programs of almost any description. There has been little concern for longer term consequences and policymakers have largely been dismissive of programs which seek to unite general and vocational education (see, for example, Australian National Training Authority Minco 1998, p 1). As Smith points out, Australian vocational programs, especially those accredited within the Australian Qualifications Framework (AQF), have focused on trade-specific skills and on industry identified competencies, while

... report after report tells us that what employers value most in young people seeking employment 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 most hope to have developed in schools.

(Smith 2000, p 7)

Australian policy and practice have paid little attention to a third option, in which work-based education is esteemed for its inherent value, without rigid linkage to direct occupational outcomes, and a strong general education is seen as vital vocational preparation. Following this least travelled road poses the greatest challenge to educators, system managers, policymakers and employers but the evidence suggests it is the one with the richest rewards for students and for society.

The OECD supports this approach in its recent review of a decade of intervention in the youth transition process. The most successful pathways were found to be those which allowed both a high level of general education and an occupational qualification. This model is highly valued by employers, as are combinations of work and study and some but not all forms of workplace experience (OECD 2000).

Reviewing current Australian practice reveals an increasing awareness of the need to elevate VET in Schools options from their traditionally marginalised position and to widen pathways. However, significant barriers remain to be overcome if Australian VET in Schools programs are to develop into anything like the role envisaged in the new American legislation or in OECD and European Union visions. Moreover, the suspicion is strong that many politicians and policymakers see VET in Schools as an alternative to, rather than a driver of, fundamental school reform.

VET in Schools: a contemporary stocktake

School programs

School options in VET grew with great rapidity in the 1990s. In fact, programs described as VET in Schools have multiplied to the point of confusion, especially for industry (Australian TAFE Teacher 1998).

Malley et al (2001) classify programs into:

- *VET in Schools*, which incorporates non-waged training complying with AQF requirements and frequently also capable of State Board of Study (ie secondary education) certification;
- *School Based New Apprenticeships*, involving a mix of school attendance and contract of training (waged) employment; and
- *Other vocational learning*, such as work-based learning of traditional subjects, work experience and locally developed programs. For example, data from the State of Queensland indicate that about 10% of VET achievement is not recorded on the Senior Certificate (Board of Secondary School Studies 1998).

It is difficult to develop an accurate statistical picture of the various VET in Schools initiatives because of definitional differences, unrecorded programs, and above all because VET in Schools is a continually moving target. The National Centre for Vocational Education Research (NCVER) estimated that in 1998, 80 000 secondary students were studying within the VET sector and that about 1900 students had commenced traineeships or apprenticeships (which require a contract of training with an employer). They further estimated that 117 000 students were undertaking some form of VET in Schools, probably overlapping the 80 000 in VET (NCVER 2000).

Malley and collaborators found 129 582 Year 11 and 12 students in VET in Schools programs in 1999, up from 60 000 in 1996 and from an estimated 26 300 in 1995 (Malley et al 2001). The rapid growth of recent years appears now to have tapered off and programs may stabilise at some 36-40% of Year 11 and 12 enrolments, covering a broad range from slight 'taster' experiences to full certificates at levels recognised by the AQF. On the other hand, a new curriculum framework introduced into schools in New South Wales in 2001, allowing greater use of vocational subjects for university entrance, has seen a resumption of growth in that State (Department of Education and Training 2001).

Secondary schools running VET programs have increased from 1441 in 1997 to an estimated 1845 in 1999, with the greater pace of growth being in non-government schools. Malley et al (2001) suggest that the (now slowing) growth in VET in Schools programs comes from the entry of new schools rather than an expanded reach into the student cohort. This stabilisation at somewhat over a third of Year 11 and 12 populations has to be considered in the light of recent declines in Year 12 retention.

Work experience

There is no doubt that the vocational education options that school students most value are those which give them real experience of workplaces. Unfortunately, this is not what is most easily provided. The typical VET in Schools experience is of a school-based subject, possibly with syllabus rewritten to AQF competency-based 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. Around half of VET in Schools enrolments are in subjects in hospitality, office studies and information technology, which are new versions of traditional school curricula (Malley et al 2001).

Where actual industry experience is incorporated in VET in Schools programs, it is frequently slight - the policy goal is to provide some involvement for a wide range of students, rather than in-depth work-based learning (Fullarton 1998; Ryan 1997). In a 1996 review by the Australian Student Traineeship Foundation, for example, only 3% of participants in school/industry programs experienced more than 20 days in the workplace (Australian Student Traineeship Foundation 1996). Fullarton (1998) found that the most common experience was five days.

Throughout Australia, 37% of Year 11 and 12 students were involved in VET in Schools programs in 1998, of which 57% had a workplace learning component. This means that 43% of VET in Schools programs contained no workplace experience, so that the great majority of school students are not involved in any form of work-based learning. Malley and collaborators (2001), who provide these data, comment that unless underlying factors change, there are likely to be only marginal increases from now in the number of workplaces providing structured work placements.

Work-based learning

There is a substantial body of research that supports the value of learning at and from work, not simply for vocational skills but for its contribution to general education (Ainley 1996; Hawke 1995; Ryan 1997). Sweet (1993) argues that research demonstrates that flows exist from problem solving to understanding of basic principles, 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.

The *new vocationalism* in the United States (US) is centred on a renewed emphasis on work-based learning as an integrating factor between academic and vocational pathways and a realisation that the vocational pathway had become too closely linked to specific vocational preparation (Stern 1999). The modern view is that work-based learning should involve authenticity, academic rigour, applied learning, active explorations, adult connections, and appropriate assessment practices which are as suited to the academically talented as to those with vocational interests (Stern 1999).

Australian practice has not made similar headway in the integration of academic and vocational education. The essence of the problem is the difficulty of ensuring knowledge transfer from specific vocational competencies, which may or may not benefit students in later life, to the generic competencies which are vital to survival in the new economy (Sheldrake 1998; Smith 2000).

US research indicates that vocational education can impact on academic skills, but only if sustained efforts are devoted to using vocational curricula to teach higher order thinking skills (Copa & Bentley 1992). Transfer from specific vocational competencies to generic competencies will not happen spontaneously and requires explicit provision for the teaching of skills transfer (Misko 1995).

In summary, evidence is strong that the ideal way to incorporate vocational objectives into schooling is through the harnessing of real work experience to secure transfer of specific learning to generalised competencies, and to place them within a broader educational framework. This rarely happens in Australia, and, indeed, is seldom sought by those who plan and promote vocational education in schools.

Implementing VET in Schools

Problems and challenges in implementing VET in Schools programs abound. Ken Boston, New South Wales Director General of Education, has listed some (Boston 1998):

- Industry critics question the quality and experience of teachers and the standard and relevance of school facilities.
- The relevance of school-based programs to national recognition frameworks is uncertain.
- There are limited in-depth programs leading to more than basic skill qualifications.
- Dropout rates from the Year 12 VET HSC programs are high.
- VET in HSC students perform below the norm.
- Only about 11% of students complete VET HSC programs which carry a tertiary entrance score.
- Pathways to further training and employment are not clear and employer recognition is intermittent.
- There is a negative streaming into VET in Schools along socioeconomic status and gender lines.

From the perspective of schools, practical difficulties continually intrude. Arrangements such as timetabling and school and system allocation of resources are not yet adequate. The academic curriculum has remained central and vocational options are offered only in a piecemeal manner. Other problems include:

- Work placements are insufficient
- Structured workplace learning and workplace assessment are difficult to implement
- Status of VET in Schools programs depends on how VET subjects are promoted in the school
- Rapid change across all industries limits the relevance the vocational preparation schools can provide

(Australian Educator 1999).

As Watson summarises:

Everywhere, issues like staffing, timetabling structure, funding, complementarity and local provision of courses appear to be major impediments to the successful implementation of VET in schools ... In rural areas, isolation, equity of access to training and opportunities for long term work cloud the VET agenda.

(Watson 2000, p 18)

Accreditation, certification and articulation

Different States and Territories have adopted a range of approaches to the recognition of VET in school credentials. Models range from a full VET/AQF approach, with VET curriculum delivered and assessed against prescribed industry competency standards, to the embedding of VET competencies in secondary subjects (Malley et al 2001). Attempts have been made to incorporate VET subjects into normal end of schooling certification, with the problems Boston (1998) described.

The Schools Council pointed to the difficulties created by the Australian VET system's version of competency-based training (CBT) for articulation of vocational with general education (Schools Council 1994). Spark has demonstrated anomalies that allow students to gain HSC or SC success while failing CBT assessment and the reverse (Spark 1998). Grading of CBT remains an issue (Kirby 2000). This is also true of adult VET and options are being explored to introduce graded assessment along with competency criteria (see, for example, Russell et al 2001).

Curriculum and assessment

A problem with the development of vocationally relevant curricula is that they may narrow as easily as they may expand options for students. There is a strong case for valuing the benefits of local initiative and experimentation in VET in Schools initiatives (Ryan 1997). However, that spontaneity is put at risk first by the need to develop curricula which conform to both State Board of Studies and AQF rules and, even further, by the restrictions entailed in Australian National Training Authority (ANTA) training packages where these are used in schools (Malley et al 2001).

Assessment is a central issue: most students undertake placements in workplaces lacking qualified and experienced workplace assessors, with competencies being merely ticked off (Spark 1998). Employers complain that log books are complex, bureaucratic and time consuming (Cumming & Carbines 1997, cited in Malley et al 2001), exacerbating the already serious problem of accessing a suitable range of workplaces.

Vocationally specific curricula may not be what most benefits students in later employment. The OECD, while supporting vocational education in schools, argues that studies show the most advantageous options are those which qualify young people for tertiary studies as well as for work (Durand-Drouhin et al 1998). A strong body of evidence indicates that school subject choice is crucial for later life

employment experience and that the critical choices involve academic subjects, especially mathematics (Lamb & Ball 1999; NCVER 2000).

Expanding the range of subjects may not open up genuine options for young people if they do not lead to further study (NCVER 2000). The Kirby Report in Victoria (Kirby 2000) notes that VET in Schools may not be a good answer for many students with low educational achievement and, in relation to new apprenticeships in schools, emphasises the need for good links to general education. The Report points out that the danger of relying on a narrow set of trade-based skills is recognised in many OECD countries (Kirby 2000).

Equity

VET in Schools has the potential to help students dissatisfied with school subjects and school culture, but since schools are concerned to meet employer expectations of students sent to them, they are often selective in the students they admit to VET in Schools programs (Malley 1999). However, Malley and collaborators argue that VET in Schools is beginning to provide an option for disadvantaged groups, particularly indigenous Australians, rural and isolated students, as well as students with disabilities (Malley et al 2001). The benefits of work placements for indigenous students are supported by the indigenous Training Advisory Council (Aboriginal and Torres Strait Islander Peoples' Training Advisory Council 1998).

Rural schools face special problems in implementing VET in Schools. Research at Melbourne University indicates that a range of commitments are needed if rural schools are to achieve successful programs, including local partnerships. These are not different in kind from those needed by any school VET program, but may be harder to achieve (NCVER 2000).

Evidence on VET in Schools programs for girls is scarce, although it seems gender streaming is prevalent (Boston 1998).

Overall, it seems 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, limiting opportunities for the most disadvantaged students (Ryan 1997).

Practicalities

A number of practical challenges face those wishing to introduce VET in Schools programs. Problems with accessing industry experienced teachers and industrial equivalent equipment and facilities have been noted. Access to a sufficient number of worksites for work placement is a frequently reported issue (Misko 1998; Spark 1998). Timetabling work experience is difficult and students are often forced to make up missed schoolwork (Ainley & Fleming 1997). Successful programs require dedicated coordinators, perhaps best organised on a regional or cluster basis (Hill 1997; Ryan 1997; Spark 1998).

Some employers are strong supporters of VET in Schools programs but many do not fully understand them and are minimally involved (for example, in student selection) (Misko 1998). Relations with employers are best when based on local initiatives (Ryan 1997; Sweet 1993) but this becomes difficult as programs expand and become generalised on a statewide basis.

Many VET in Schools programs are delivered in partnership with registered training organisations, especially Technical and Further Education (TAFE) Institutes. This has often created tensions, with school educators believing TAFE staff are unsuited to teaching school-aged children, while TAFE is concerned with the quality of delivery in schools (Keating 1995, 1998; Malley et al 2001; Spark 1998). Inevitably, there are pressures for separate pathways for general education and vocational education. This is strongly resisted by school educators, for example by Boston, who insists

There ... is no respectable case to be made in learning or education theory for separate pathways, nor is there a social case to be made either.

(Boston 1998, p 33)

VET in Schools is resource intensive, especially when there is a substantial component of work-based learning (Ryan 1997). Related issues concern the distribution of funding between government and non-government schools, uncertainty of future funding, and issues of sponsorship and general fund-raising (Malley et al 2001). Many teachers believe that VET in Schools will not be sustained once seed funding expires (Spark 1998).

Underlying many of the challenges facing implementation of VET in Schools are deep cultural divides - what Boston describes as 'deep prejudices and misconceptions' (Boston 1998, p 93). Tensions exist between teachers in vocational and general education subjects, between educators and industry, and between schools and post-school VET (Ryan 1997).

Benefits

Listing the challenges and difficulties involved in developing successful VET in Schools programs might lead to the conclusion that the game is not worth the candle. However, the benefits of successful initiatives can be substantial.

The most important evaluations are those of students. Generally, they like VET in Schools experiences, at least the work-based components:

It was the 'realness' of the experience in work based placements that captivated students. The theoretical learning began to make sense when the students were able to apply the theory.

(Grosse 1993, p 31)

Most participants in an NCVER evaluation of work-based programs said they found the experience worthwhile and 'real world'. Both students and teachers believe that work placements work best when students have meaningful things to do, but this involves careful planning by the school and by the employer and good coordination between the two (Misko 1998).

Evaluations of the TRAC program (an initiative of a private foundation originally focused on the retail industry), which includes a substantial work based component, report considerable learning benefits for students (Scharaskin 1995). A majority of students in Teese's study found that they were challenged and interested most of the time (though many were not) (Teese et al 1997). However, actual cognitive improvements are harder to demonstrate than social and personal benefits (Keating 1998; Misko 1998).

Benefits have also been identified for teachers (NCVER 2000) and for participating enterprises (Figgis 1998).

Students' own work

One oddity of the present debate is that it largely ignores the fact that school students are by no means unacquainted with the real world of work. Australia is one of the countries where student part-time employment is relatively high, both in numbers of students and hours worked (Ainley 1996; Ryan 1999). This experience is almost entirely absent in many countries, such as France, Greece, Italy, Portugal and Spain.

Research indicates that students learn transferable skills in their part-time work, but also that they differentiate it from vocational placements experienced in school programs (Smith 2000). There would appear to be a case for utilising students' own experience of work to strengthen both general education and vocational awareness, but if the central issue is more one of school climate than lack of vocational relevance, benefits will be slight. But that would apply equally to conventional VET in Schools.

School climate

Wiltshire comments that

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)

It may well be that the attractiveness of the world of work is due to the simple fact that it is not school. Research into boys' education at Flinders University revealed the depth of alienation felt by most young males, including the academically successful, in the school environment. There is a demand for

vocational education, especially at TAFE institutions, without any strongly felt vocational purpose; rather, it is the adult climate which appeals (Slade & Trent 2000). This is supported by Teese's study of low achievers:

Every third boy who is a low achiever claims to be in a prison, in a place of negative confinement, governed by teachers who are no more than gaolers (and these had reached Year 12).

(Teese 2000, p 5)

Conclusion: making VET in Schools work

Too many vocational education in schools programs have been developed by educators and politicians driven by a need to be seen to be 'doing something' about the increasing disconnection between the worlds of education and work. Very little of what is happening is driven by research or by a careful attention to international experience.

Vocational education programs suffer from marginalisation in that they exclude higher achieving students, but they also tend to exclude the most disadvantaged students, especially if employer cooperation is needed. Vocational education programs suffer also from being seen as alternatives to general education, not as integral to it.

Insufficient thought has been given to the renovation of the senior secondary curriculum so that a vocational dimension, and the experience of learning from work, could be an entitlement of all students, assessed and recognised by high value educational qualifications which serve multiple purposes and users, including university entrance.

Such a goal is by no means easy, but it is not impossible. It is, in fact, a prime target of research and innovation in European countries, for example, through the DUOQUAL project of the European Union's LEONARDO partnership. The aim of that project is to review and learn from qualifications at secondary level, which combine vocational and general education and provide a dual orientation towards employment and higher education (Manning 2000).

The recently completed *Ministerial review of post compulsory education and training* in Victoria strongly supports the European perspective and the findings of the OECD transition study. The review found that, while VET in Schools is a welcome initiative, it faces problems of organisational complexity, cost and academic bias, as well as not being the answer for many students with low levels of academic achievement. It believes the present funding structure is unsustainable and that VET should not compensate for deficient school education (Kirby 2000; OECD 2000).

In summary, the research evidence indicates that an effective program for creating a vocational dimension in school education would involve:

- a developmental model of career education possessing a sufficient diversity of challenge to appeal to all ability levels;
- a strong integration of general and vocational education;
- a credentialling system which connects both to higher education and to employment;
- a curriculum which values learning from work rather than one which attempts to train for limited occupational outcomes;
- an emphasis on lifelong learning and learning to learn capacities rather than narrowly defined vocational competencies;
- a realistic approach to the needs of disadvantaged students, providing a range of pathways which do not close off future options;
- local initiatives to develop employer-school-community partnerships;
- resourcing on a sustainable basis, recognising the need for dedicated coordinators and specialist teaching skills;
- clearer delineation of the roles of school and VET providers, recognising that VET should not compensate for deficiencies in school education and that significant challenges exist in maintaining the recruitment pool of trade and technician students; and
- a sustained effort to breakdown cultural barriers between vocational and academic education in schools.

Of all challenges, the attitudinal and cultural are the hardest to crack. It is difficult to see how real headway can be made if present sectoral and institutional boundaries are maintained. There is a need to explore fundamental institutional change.

The work by Slade and Trent on boys' education and the Smith study of the real work experience of school students both reveal alienation from the culture and authority relations of schools (Slade & Trent 2000; Smith 2000; Smith & Green 2001). It is hard to believe that these entrenched feelings of discontent with contemporary schooling can be accommodated by minor changes to school routines.

The Kirby report recommends that Years 10-12 be taken as a whole (Kirby 2000) and this is supported by the Slade and Trent (2000) research, which is also supportive of the development of separate institutions with wholly new climates and organisational forms.

Proponents of reform in the schools' role in the transition process have long advocated new institutions and structures which promote a climate of adult learning and see the post-compulsory years as the first stage of lifelong learning (see, for example, Lundberg 1995; Ryan 1981). While there are benefits from the present enthusiasm for vocational programs in schools, the suspicion remains that they are seen largely as an alternative to the root and branch reform of secondary schools that has been so long neglected.

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