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ABSTRACT

The literature on vocational education (VE) in secondary schools was reviewed. The main conclusion of the review of international and Australian policy trends and directions in VE was that, to date, Australian attempts to create a more vocationally relevant curriculum have resulted in a system in which the academic curriculum has remained central and vocational options are offered in only a piecemeal manner. It was therefore recommended that policymakers decide whether to pursue VE as a new and inclusive component of the secondary school curriculum or to retain vocational options for less able students. It was further recommended that policymakers consider the following issues when deciding secondary VE's future: equity, certification, supply side economics, the relationship between general education and VE, school-workplace links, the value of part-time work experience to secondary school students, and differentiation of the levels of VE. A model for VE in Australian schools was proposed that outlined the goals, features, benefits, and limitations of VE for students during childhood, adolescence, young adulthood, and adulthood. Implications of the literature review for the following areas of school-level practice were identified: coordination, curriculum, assessment, professional development, students, resources, and evaluation. (A 120-item annotated bibliography is included.) (MN)

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VOCATIONAL EDUCATION IN SECONDARY SCHOOLS

A REVIEW OF THE LITERATURE

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Introduction

This literature review is in two parts :

Part 1

An attempt has been made here to synthesize the literature under four broad headings:

- 1.1 Policy Trends and Directions in Vocational Education
- 1.2 Issues Arising from the Analysis of Policy Trends
- 1.3 A Proposed Model for Vocational Education in Australian Secondary Schools
- 1.4 Implications for School Level Practice

Part 2

Consists of a selected annotated bibliography of the literature that was reviewed.

It is hoped that the material contained in the two parts will provide some directions for those who have responsibility for implementing vocational education in secondary schools. In order to make it as useful as possible we have attempted to place vocational education in a broader context than envisioned by the present project. It seemed clear to us from the literature that Australian schools, unlike their counterparts in North America and Europe, lack a strong tradition of vocational education in schools. Since traditions cannot be created overnight, we have suggested a model that will help schools place vocational education in a context that is important to all students at all stages of their education. If nothing else, the model will create debate and discussion within the educational community. Hopefully, it might also lead to improved practice and outcomes for the students for whom we have responsibility.

Part 1

**A Synthesis of Policy Directions, Issues,
Models and Implications
for School Level Practice**

1.1 Policy Trends and Directions

International

Many industrialized nations are currently grappling with the issue of vocational education and training and its role in the education of 16-19 year olds. For some, vocational education is a well established track chosen by students either early or later in their school careers (eg Germany, Denmark, France, Finland). For others, a commitment to comprehensive secondary education has meant the development of vocational streams within the comprehensive high school (eg Sweden, England and Wales, Scotland, USA). The most pressing issues for all countries at the moment, especially in the light of increased participation rates in countries like England and Wales, Scotland and the Netherlands but also in countries like Germany, Sweden and Finland where participation rates have been historically high, is to ensure that vocational education is equally valued alongside traditional academic education. There are a number of approaches currently being used to achieve this objective.

Sweden.

- general education component of vocational streams has been increased.
- the number of vocational course options has been decreased.
- access to higher education has been enhanced for students taking vocational courses.

Finland.

- Curriculum collaboration between vocational and senior secondary schools has been encouraged.
- Students have been encouraged to take courses from both types of schools.
- Pathways to universities have been established for students from vocational schools.
- Vocational schools have been upgraded through regional amalgamations.

Scotland.

- Vocational modules are available to all students and it is possible to complete academic course that includes nationally certified vocational modules.
- The modules are available in both secondary schools and colleges of further education.

USA.

- Reforms are seeking to incorporate vocational education into all aspects of secondary school education.
- TECH PREP courses start in high school and are articulated with two year courses in community colleges resulting in the award of associate degrees, and curriculum to full degree courses.

There is little evidence as yet concerning the efficacy of these various reform efforts but the common features seem to be :

- 1 Breaking down the barriers between vocational and academic education so that elements of each are available to all students.
- 2 Broadening vocational education so that it focuses on more than a single occupation.
- 3 Providing pathways from vocational education to further education.

Some of the untested assumptions, about which there is some evidence to cause concern, are as follows:

- Are barriers broken down in reality when vocational courses are included alongside traditional studies in secondary schools?
- Are students able to apply so called generic vocational skills in specific occupations?
- Are alternate pathways to further education able to provide genuine opportunities for students who undertake vocational education courses in schools to transfer "up" to academic post-secondary education?

In Denmark, which in theory provides alternate pathways to higher education from two types of vocational upper secondary school and from gymnasia (academic high schools), only five per cent of school leavers entering University come from the vocational schools.

Australia

The Commonwealth made it clear as early as 1987 that skills formation would require a greater emphasis on technical proficiency than schools were currently delivering. The means of achieving this on the Commonwealth's part has been to provide support for a more common approach at a national level to curriculum for the lower secondary school and more emphasis on employment related knowledge and skills for the senior secondary school.

The task has been made more difficult in Australia since there has been an erosion of the tradition in vocational education since 1950. The introduction of comprehensive schools in the 1960s and the separation of state departments for schools and for TAFE was accompanied by strong support for a general liberal education. In the senior secondary school, this became cemented as a traditional academic curriculum dictated by the needs of university entrance. It has only been with the increase in senior secondary participation rates during the 1980s that much thought has been given to transforming the curriculum. Very often, the changes introduced have been seen as alternatives to the traditional academic curriculum and thus two tracks have been established : one leading to university entrance and a second, more vocationally oriented, and intended to lead either to employment or to advance standing in TAFE.

Preface

We would like to thank a number of people who have made the task of preparing this report much easier than it would have been without such help.

The Centre for Educational Research and Development at the University of Southern Queensland made available the services of Ms Penny Young. She conducted the electronic literature searches on national and international data bases and skillfully negotiated with library personnel in getting copies of articles in a timely fashion. Her assistance was invaluable.

The Dean's Office in the Faculty of Education made available the services of the Dean's Executive Secretary, Ms Sharon Geise. She negotiated with each of the team members to get their contributions and put together numerous draft copies. She was responsible for producing the final draft. Her negotiation skills, not to mention her word processing abilities, were crucial in the development of the final product.

We trust that education systems, accrediting authorities and schools find the report useful in structuring their vocational education programs.

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November 1993

Since the late 1970s the following vocationally oriented initiatives have become part of most school systems :

- 1 Work experience programs.
- 2 School industry links programs.
- 3 Funding of specific vocational education initiatives (transition education, PEP, AVC)
- 4 The development of cooperative programs with TAFE often under the umbrella of a common certificate
- 5 The integration of employment related competencies into existing curriculum.
- 6 Formal career education or "World of Work" curriculum

The breadth of these initiatives could provide a platform for a comprehensive approach to vocational education in schools. Normally, however, these initiatives are not coordinated at the school level and sometimes are seen as options. This practice suggests a lack of clear vision for vocational education but also the lack of an existing platform within secondary schools relating to vocational education. At the same time it indicates that the way is clear for reconceptualising the field based on the needs of students and society.

Conclusion

Social and cultural factors will dictate how Australia responds to new imperatives. Lacking a strong tradition of vocational education in secondary schools, Australian education systems are not in a position where they can seek change and reform in the existing system : rather they are in the position of having to create vocational education as a valued component of the secondary school curriculum. This will need to be done in the context of the comprehensive secondary school where general education has been entrenched since the fifties.

Attempts to create a more vocationally relevant curriculum since the late 1970s seem only to have created a system in which the academic curriculum has remained central while vocational options have been added in a piecemeal way. What is more, such options have usually been designed for less able academic students. The vocationally relevant curricula have come to be seen as the way to cater for the increasing number of young people staying on at school. Rarely has the argument been advanced, as it is currently in the United States and as practice seems to be dictating in Scotland, that vocational education is for all students. There are some exceptions such as Electronics courses adopted in the NSW curriculum but these units are marginal to the main developments.

Australian policy makers must now decide whether to pursue vocational education as a new and inclusive component of the secondary school curriculum or to retain vocational options for less able students. The latter represents current practice while the former seems to be in line with international trends.

1.2 Issues for Consideration

There are issues that will need to be considered if the policy issue outlined above is to be addressed.

Equity

Any vision for the future must be capable of being implemented for all students. Groups with special needs in relation to vocational education include students with disabilities and isolated students. The latter did not have access to the range of programs available in most urban settings and the former can benefit from a wide range of training opportunities if they are provided access to them.

Certification

Vocational education courses are usually certified by traditional secondary education authorities so that students exiting from secondary schools can have their studies recognised as part of their secondary education. Yet the National Framework on the recognition of Training (NFROT) provides an alternative certificate process that is now available to secondary schools. certification in itself does very little : certification that meets NFROT standards is able to provide pathways to further education and training.

This raises the issue of the role of universities and their influence on the secondary school curriculum. Young people need to be encouraged to consider pathways to employment and further education other than that provided by university entrance. Universities also need to consider the legitimacy of vocational education courses as a preparation for university study.

Supply Side Economics

There are strong arguments supported by empirical data that where training is not targeted on an area of labour market demand that the social benefits to students and the economic benefit to the nation will be minimized. This means that extensive work needs to be done to identify those areas of economic growth that are likely to generate employment opportunities in the future. Not to proceed in this way is to put at risk the real contribution that vocational education can make to the lives of individuals and to society.

General and Vocational Education

School education is meant to provide a general education for all students. Vocational education in secondary schools should therefore not imply a narrow education. Rather it implies a broad general education that accompanies

occupational education capable of developing skills and understandings that are valued in the labour market.

While the average per capita cost of secondary schooling is less than the average cost in TAFE, and both are less again than the average in Universities, it does not follow that vocational education in schools will cost less than in TAFE or Universities. In fact it is possible that it will cost more. There is already evidence in the Joint secondary school/TAFE programs of additional costs associated with "double counting" of teaching resources and transport of students between institutions. If vocational education in schools is to be expanded using existing resources then there may be staff training costs, capital costs and costs associated with the possible underutilisation of equipment.

School/Workplace Links

There remains a need to foster links between schools and workplaces. Many programs of vocational education will require work experience and all current policies point to the workplace being the most relevant location for developing skills. This may involve the development of relationships that view workplaces as resources and draw on employers as partners in the education of young people. While there is now much experience in this area, the need for the future is to develop programs that can develop skills to acceptable national standards and provide a pathway to further education and training.

Valuing the Part-Time Work Experience of Secondary School Students

Recent ABS figures indicate that 26% of students in schools aged over 15 years are in paid employment. Given the lack of a vocational education tradition in Australian secondary schools, this experience of students should be integrated into a coherent curriculum related to skills development and work education. Research is needed on the range of the experiences of work gained by these students.

Distinguishing Levels of Vocational Education

Given the various activities that often come under the heading of vocational education it would be useful to develop a conceptual model that distinguished between different levels of vocational education (eg between work experience, in an electronics factory, a trades course in electronics and a course in electronics engineering design). At the same time it would be helpful to sequence these activities at appropriate stages in student's career.

1.3 A proposed Model for Vocational Education in Australian Schools

1.3.1 Introduction

As part of this literature review, a model for vocational education has been developed. This model is an attempt to identify some of the key features of vocational education as they exist in the early 1990s, while simultaneously conceptualising them in a way that encompasses

current policy initiatives and emerging trends. It is a way of viewing 'what is' in a context of 'what could be', by means of a framework that reflects sequential, coherent and holistic perspectives.

An outline of the model is provided in Table 1. The vertical columns on the right-hand side of the table (ie. examples, goals, features, benefits and limitations) represent an analysis of contemporary vocational education practice. The horizontal rows represent four sequential phases of growth and development (ie. childhood, adolescence, young adulthood and adulthood). A significant feature of the model is the changing focus for vocational education that can be generated and maintained as young people reach new levels of physical, intellectual and social maturity.

1.3.2 Four Phases of Development

The concept of sequential phases of personal development linked to an evolutionary approach to vocational education provides a useful framework for review and development. It is certainly in line with current proposals that seek to change traditional patterns of structural rigidity associated with many schools, colleges and institutions. A recommendation from the Schools Council's final report on the Compulsory Years Project Five to Fifteen (1993), for example, was that the 'primary/secondary' description for the stages of schooling be relinquished in favour of a categorisation that reflected phases of individual development.

The **childhood** phase involves children from five to nine or ten years of age and coincides with the early years of schooling (Kindergarten through to Year 5. During this phase the focus for vocational education is on exposing children to people and activities that lie beyond the classroom and the home. The general aim is to establish links and connections with the community and to raise awareness of the world of work. For many teachers in the early years, visits to nearby work places (eg. the local bakery) or guest speakers (eg. the local police person) have long been an established part of learning and teaching practice. More recently, a number of school communities have introduced activities that engage parents, business people and community representatives actively in ways that stimulate and support children's learning. The significance of the early years in developing student attitudes and behaviours is well documented and many teachers have adopted affirmative action approaches designed to counter stereotypical images, perceptions and preferences among young children with regard to the world of work. As teachers in the early years of schooling have noted, many children come to school with relatively well-formed views with regard to issues such as: men's versus women's work; high versus low status work; as well as expectations regarding their own futures — both at school and beyond.

With the onset of **adolescence** comes significant physical, emotional, intellectual, psychological and social changes for students in the age range ten or eleven to fourteen or fifteen. The main emphasis for vocational education during the middle years of schooling (ie. Years 5/6 - 9/10) is on implementing a curriculum that is relevant and responsive to student needs. Essentially, the thrust is on providing an 'orientation' to the world of work through a range of practical experiences and experiential learning. Given that significant numbers of

young adolescents are already participating in part-time employment and that the choices regarding possible courses, careers and lifestyles are on their minds (and those of their parents), opportunities are often concerned with expanding student horizons and encouraging them to accept greater responsibility for their own learning and development. Contact and interaction with adults other than teachers (eg. through mentoring, work experience, community and action research projects) has proven to be not only an effective motivational strategy for young adolescents but also a means of increasing their personal and social skills.

In **young adulthood**, the focus for vocational education is on the construction of pathways that will lead to productive and fulfilling lives in the future. The final years of schooling (ie. Years 10/11 - 12/13) provide a setting within which older adolescents can construct approved courses from a diverse range of accredited modules, units and subjects. The convergence of vocational and general education should be most clearly in evidence for students aged 16-17 years, especially in terms of flexible entry and exit points. The concept of 'workplace learning', where students participate in some form of structured learning by means of a vocational placement, is becoming a more common feature of courses and programs in the final years of schooling. By the end of their formal schooling, these students need to be able to demonstrate that they have acquired a comprehensive range of general understandings and employment-related competencies, and that they possess the capacity for further training and development. It should be noted that in order for this age-group to have access to appropriate vocational education and training opportunities, high level collaboration and cooperation among major interest groups and providers is required.

Once students have reached the age of 17 or 18, and have completed their formal schooling they are deemed to have reached the status of **adulthood**. The focus is now on vocational training and formal preparation for paid employment. By this stage in their lives, these young people should be advancing along a pathway that is linked to an employment-related destination in the short or medium term. A variety of pathways has been developed including apprenticeships, traineeships, cadetships and internships which are designed to provide individuals and groups with the skills, knowledge and attitudes that will prepare them for employment in a specific occupational area or industry sector. Entry level training generally combines both on-the-job and off-the-job training with a view to producing a more highly skilled and productive workforce. The implementation of the Australian Vocational Certificate Training System, with its emphasis on training which is competency-based, work-based and outcome-based, will ensure that adults are better prepared not only to enter the workforce, but also to undertake higher levels of training with a commitment to life-long learning.

Table 1: A Model for Vocational Education from Childhood to Adulthood

PHASE	FOCUS	EXAMPLES	GOALS	FEATURES	BENEFITS	LIMITATIONS
Childhood	Vocational Awareness Year Level: P - 5 Age: 5 - 10	<ul style="list-style-type: none"> visits and excursions guest speakers intro. to technology 'adopt-a-class' 'twinning' sponsorship 	<ul style="list-style-type: none"> establish links and connections with local community raise awareness of the world of work 	<ul style="list-style-type: none"> high level of parental interest/involvement focus on various aspects of work (eg. 'who, what, where, how and why?') 	<ul style="list-style-type: none"> prevention of stereotypical student views and choices rapport established with people other than parents/teachers 	<ul style="list-style-type: none"> limited only by the imagination of teachers, parents, students & local community reps.
Adolescence	Vocational Orientation Year Level: 6 - 10 Age: 10/11 - 14/15	<ul style="list-style-type: none"> work experience work shadowing work simulation mentoring mini-enterprises student researchers careers education counselling 	<ul style="list-style-type: none"> actively engage students in meaningful activities integrate 'key comps.' expand student horizons through greater access to the world of work 	<ul style="list-style-type: none"> focus on 'relevance' raft of activities often classified as 'school-industry links' potential to build on parttime employment outcomes recorded in student portfolio 	<ul style="list-style-type: none"> increased student motivation students gain 'real world' experience interaction with AOTs (non-teachers) personal & social development (all) 	<ul style="list-style-type: none"> can be 'one-off' may not be mainstreamed fragmentation quality assurance structures & time (ie. flexibility required)
Young Adulthood	Vocational Preparation Year Level: 11 - 12 Age: 16 - 17	<ul style="list-style-type: none"> courses (eg. 'HSC Pathways', 'VCE', 'E', 'Vocational pilots') structured programs (eg. TRAC, TVEI) vocational subjects (eg. tourism, SBM, industry studies) 	<ul style="list-style-type: none"> formulate effective pathways/destinations converge 'general' and 'vocational' approaches demonstrate student performance in authentic contexts 	<ul style="list-style-type: none"> wide student choice multi-tracking flexible entry & exit extension of time for completion of course sharing of sites and facilities/equipment 	<ul style="list-style-type: none"> customisation of courses by students formal accreditation and credit transfers synergy between sectors & providers greater potential for equity (eg. outcomes) admin. complexity 	<ul style="list-style-type: none"> preferred student destination may not always be reached high and low status subjects can emerge limited availability of placements admin. complexity
Adulthood	Vocational Training Year Levels: 13+ Age: >17	<ul style="list-style-type: none"> Apprenticeship Trade (eg. food, building, printing etc) Traineeship Non-trade areas (eg. service, retail etc) Cadetship Para-professional (eg. defence, commerce) Internship Professional (eg. medical, legal) 	<ul style="list-style-type: none"> provide vocationally-specific training for employment CBT & RPL Traineeship provide broadly-based training assist youth to respond to changing technologies & employment patterns 	<ul style="list-style-type: none"> on-the-job training + technical education minimum of 15 years four years training on-the-job and off-the-job training school leavers <19 12 months (13 weeks minimum off-the-job training) 	<ul style="list-style-type: none"> linked directly to employment 4 year indenture wage for apprentice access and equity (preference to those without Yr 12) provides a 'foothold' to increase prospects employer incentives 	<ul style="list-style-type: none"> sensitive to changes in the economy (reduction in downturns) no guarantee of employment limited availability of appropriate work placements

1.3.3 Common Principles

Emerging from the literature and underpinning the conceptual model for vocational education is a set of common principles (see Table 2). The nine statements of belief are generic, applicable to each of the four phases outlined above as well as to contemporary practice cited as examples in Table 1. They could also serve as criteria by which the quality or effectiveness of vocational education might be measured.

The principles can be grouped under three broad headings. The first is **equity and social justice**, which is based on the proposition that all students have the right to participate in and derive significant outcomes from high quality vocational education. Traditionally, certain groups (eg. girls and young women, those with disabilities and the geographically isolated) have not been well represented in the full range of vocational education and training activities that have been offered. While significant efforts have been made to increase the participation of young people from various backgrounds and experiences (eg. girls and young women entering non-traditional occupations) there is still a long way to go.

The second is **teaching and learning**, and focuses on integrated approaches that result in worthwhile outcomes for all parties involved. The convergence of vocational and general education as well as work and learning has been advocated universally in the 1990s. If this convergence is to be achieved, then teachers in the early, middle and senior years of schooling together with trainers and adult educators need to work towards a shared vision that encompasses a commitment to 'life-long' and 'self-directed' learning for all. There is a particular need to ensure that learning experiences are connected to students' past experiences as well as their intended destinations.

The third is **structures and organisation** which emphasises the importance of flexibility and productive partnerships. Much has been written recently about the need for organisations to overcome the rigidity (eg. with regard to the use of time, facilities and other resources) that has tended to limit the potential for skill and knowledge enhancement in many individuals and groups. High level cooperation is required between sectors and providers to ensure that they share common goals and objectives and that resources are used to maximum effectiveness.

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Table 2: A Selection of Principles for Vocational Education

Vocational Education should:

be **accessible** to all students

Factors such as intellectual or physical ability, socio-economic status, gender, geographical location or ethnicity should not restrict any student's participation in vocational education.

lead to worthwhile **outcomes** for all participants

At the completion of vocational education activities all participants should be able to demonstrate an enhanced level of competence in ways that reflect an inherent as well as an instrumental value.

be **resourced** adequately

Well-trained personnel with access to quality facilities and equipment should be engaged to guide and support young people in safe and challenging environments.

be **integrated** across each phase of an individual's development

There should be a convergence of general and vocational approaches to education rather than a separation of roles and functions which begins in childhood and extends through to adulthood.

be **connected** to both prior experiences and intended destinations

Activities, programs and courses should build on existing student understandings and competencies, while at the same time be explicitly linked with higher order education/training/employment opportunities.

incorporate **assessment** techniques that are fair, valid and reliable

Students, parents, teachers, employers and other interest groups should understand the purposes, outcomes and currency of competency-based and other forms of performance measures and records.

be developed within a **flexible** framework

Maximum structural and organisational flexibility should be maintained to enhance student learning and progression (eg. multiple entry and exit points, credit transfer and articulation arrangements).

be built on productive **partnerships** involving key sectors & providers

Education, training, industry and community groups should work cooperatively in ways that generate a mutually beneficial sharing of goals, expertise, resources and outcomes.

be subject to regular monitoring and **evaluation**

There should be an emphasis on quality assurance and continuous improvement through regular review and development activities focussed on outcomes and processes.

1.4 Some Implications for School Level Practice

When vocational education is conceptualised as a long-term process that extends from childhood to adulthood — as distinct from a particular option that is offered to a targeted group of senior secondary students — there are significant implications for a range of key players. Given the scope of this literature review, the **school community** will be the focus in this section, however, it needs to be recognised that many other sectors including business and industry; TAFE and higher education; research agencies and professional associations; and municipal/shire groups and community organisations also need to be considered.

For many practising teachers and school administrators, the integration of vocational education across the various phases of young people's development will pose a number of potential problems and difficulties. In cases where no established tradition of vocational education exists, for example, or where its status has been relatively low, individuals might well raise a number of fundamental questions, including:

- **Coordination:** Whose responsibility is it and where should it be implemented?
- **Curriculum:** What are its objectives and what level of priority does it have?
- **Assessment:** What should be assessed and reported, plus when and how?
- **Professional Development:** Who should teach it and what expertise is required?
- **Students:** What are their roles, rights and responsibilities?
- **Resources:** What kind of facilities and materials are required?
- **Evaluation:** What criteria should be used to measure its effectiveness?

One way of approaching these questions is to apply the set of common principles to the various phases of development identified in the preceding section. The aim of such an exercise is to identify not only the observable gaps, but also the strong points pertaining to vocational education. Essentially, it is a strategy for constructing an action plan designed to plug the gaps and build on the strengths. An illustration of the way in which this strategy might be pursued (eg. in a workshop or staff meeting) is shown in Table 3.

In the early years, for example, it may be that integrated teaching and learner-centred approaches are firmly established and that more attention needs to be placed on the formulation of whole-school policies that promote a common sense of purpose and direction for vocational education. In dealing with young adolescents, while a number of work experience and related programs have had very positive outcomes to date, greater emphasis could be placed usefully on making much stronger and more practical connections with employers of teenagers and other youth service providers (eg. health, welfare and sport).

In the final years of formal schooling, there are a number of encouraging developments regarding more flexible structures, however, there are still perceived shortfalls in relation to students who are dropping out or who are not well represented in contemporary programs and courses. For students who have left school and are engaged in entry-level training programs, there has been significant progress with regard to competency-based assessment and course articulation, however, there would appear to be room for improvement in the sharing of sites, facilities and resources.

This very brief consideration of some of the implications for school communities has been designed to highlight the need for a comprehensive approach to vocational education. If schools are to respond to the challenge of integrating vocational education and general education then significant change will be required. While schools have a major responsibility for bringing about this change it is unlikely that they will be able to achieve it on their own. Most people would agree that productive partnerships are the way of the future, however, vigilance will be required to ensure that each partner contributes in ways that are not only mutually beneficial, but that also lead in very practical ways to high quality learning outcomes for all young people.

Table 3: Applying Vocational Education Principles to Different Phases of Development: Some Implications for School Communities

	CHILDHOOD	ADOLESCENCE	YOUNG ADULTHOOD	ADULTHOOD
EQUITY AND SOCIAL JUSTICE Accessible Outcome-Based Adequately-Resourced	<ul style="list-style-type: none"> establish the world of work as a theme, project or activity for all students capitalise on parental interest and enthusiasm 	<ul style="list-style-type: none"> pay particular attention to 'at-risk' students (eg. truants) work on key competency development gain support of employers of teenage part-time workers 	<ul style="list-style-type: none"> ensure 'special needs' students participate (NB. both ends of ability spectrum) provide opportunities to allow for student demonstrations of performance in 'real' contexts promote 'work-based learning' in a broad range of settings raise status of vocational ed. 	<ul style="list-style-type: none"> provide parity of esteem (eg. common credential) avoid reinforcing 'high' versus 'low' status courses through skewed resource allocations
QUALITY TEACHING AND LEARNING Integrated Connected Adequately Assessed	<ul style="list-style-type: none"> provide in-service education for teachers --- network within and between schools 	<ul style="list-style-type: none"> promote experiential learning and student participation increase challenges and maintain high expectations build on student part-time work experiences utilise career education/plans expand student portfolios and self assessment develop 'learning how to learn' 	<ul style="list-style-type: none"> generate curriculum breadth and depth expand competency-based assessment techniques blend internal & external ass. 	<ul style="list-style-type: none"> generate open and flexible learning promote networking & exchanges (eg. other sectors/industries) apply NFROT and NTB standards
EFFECTIVE STRUCTURE AND ORGANISATION Flexible Cooperative (partnerships) Continually Evaluated	<ul style="list-style-type: none"> promote multi-age and mixed ability grouping to foster cooperation and teamwork exercise care (eg. sponsorship) to ensure ethical and moral responsibility is maintained develop a whole-school policy with criteria to measure performance and progress 	<ul style="list-style-type: none"> work with other youth services (eg. health, welfare & sport) 	<ul style="list-style-type: none"> promote modular approaches expand use of ed. technology create 'lar'ders' and 'bridges' 	<ul style="list-style-type: none"> promote sharing of sites, facilities and resources recognise prior learning endeavour to establish assurances with regard to intended destinations implement TQM principles ensure ongoing monitoring --- especially with regard to technological change

Glossary

ACTRAC	Australian Committee for Training Curriculum
ANTA	Australian National Training Authority
ASF	Australian Standards Framework
ATS	Australian Traineeship System
AVCTS	Australian Vocational Certificate Training System
AVCTS	Australian Vocational Certificate Training System
CBT	Competency Based Training
CSB	Competency Standards Body
DEET	Department of Employment, Education and Training
ESFC	Employment and Skills Formation Council (A Council of NBEET)
ITAB	Industry Training Advisory Body
MOVEET	Ministers of Vocational Education, Employment and Training
NBEET	National Board of Employment Education and Training
NFROT	National Framework for the Recognition of Training (August 1992)
NOOSR	National Office of Overseas Skills Recognition
NTB	National Training Board
RPL	Recognition of Prior Learning
TAFE	Technical and Further Education
VEETAC	Vocational Education, Employment and Training Advisory Committee

Part 2

Vocational Education in Secondary Schools

A Select Annotated Bibliography

RESEARCH

Ashenden, D (1990). The student workers: The extent, character, consequences and possibilities of part-time work by secondary students. DEET. AGPS, Canberra, 58p.

A report containing information about current patterns and trends together with suggestions for the future with regard to secondary students in part-time work in Australia.

The Australian Longitudinal Survey 1985-1988 - Dynamics of the Youth Labour Market (1990). Monograph Series No. 4 Department of Employment, Education and Training, AGPS, Canberra. 94p.

A report in which data reflecting the dynamic links between the background, education and training and employment of young people are presented and analysed.

Beare, H & Millikan, R (1988) Skilling the Australian community: Future for public education, Australian Teachers Federation & the Commission for the Future, 22p.

A report of a research project which sought the advice of those groups or sectors which employ, train or educate school-leavers, and also of those people who are the direct clients of schools. The skills asked for by each user groups are identified and the implications for schools and the business sector discussed.

Business Council of Report on Education. (1986) Prepared by K Sinclair, University of Sydney, BCA, 36p.

A report in which the views of a sample of business people from member companies are collated and analysed. Concerns about the written communication skills, business knowledge and understanding of work sought by recruits direct from school are raised.

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A study of school students' views of TAFE as a post-school option.

Hill, D et al (1987) Is McDonalds a better place to work than school? Independent Education. Vol 17 No 1, p11-14.

In this article the authors report on their investigation of the perceptions of students working at McDonalds and find that many aspects of students' lives improved as a result of their work.

Howieson, C (1990) Beyond the gate: Work experience and part-time work among secondary school pupils in Scotland, British Journal of Education and Work, Vol 3, No. 3, p 49-62.

McRae D ed. (1989) Students at work: School students in part-time employment. Curriculum Development Centre, Canberra, 18p.

A report of a research project focussed on a group of Year 11 students in part-time employment in South Australia.

Ministerial Review of Work Experience, (1988). Ministry of Education, Victoria, 80p, Ministry of Education. Victoria, 80p.

A report of the first major evaluation of the work experience program in Victoria since its inception in the late 1960s.

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The report concludes that the majority of students undertake their first paid employment while still at school, but know little about the mechanisms which exist for the protection of workers.

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This article contends that the fundamental changes in wages, jobs, and future opportunities in the labour market since 1980 have had negative effects on non-college bound students' school outcomes and motivation and discipline as new workers and that the literature and the author's case study suggest that these economic changes have played a major role in shaping the current 'educational crisis'.

Schools and Business: A new Partnership, (1992). Centre for Educational Research and Innovation, OECD, Paris, 109p.

A report which focuses on links between schools and businesses. It claims to be the first major attempt to survey links at the international level.

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POLICY

1 Vocational Orientation of Secondary Education

Australia Reconstructed. ACTU/TDC Mission to Western Europe, AGPS, Canberra, 1987.

Seen as a seminal document which influenced the development of the current national training agenda.

Aring, M.K. (1993). What the "V" Word is Costing America's Economy. Phi Delta Kappan. 396-404.

Traces the history of vocational education in the US and argues the need to redefine it so that it can meet current needs.

Bengtsson, J. (1993). Labour Markets of the Future: the challenge to education policy makers. European Journal of Education. 28(2), 135-157.

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Catts, R. Linking business with Education. Paper presented at 1992 AARE/NZARE Joint Conference, November, 1992.

The Australian Vocational Certificate Training System (1992) Employment and Skills Formation Council, NBEET, Canberra, 184p.

A report in which a new entry level training system for Australia is proposed.

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Campbell, D (1991) Vocational education: Paper for the Industry Education Forum, seminar 8-9 August, 23p.

A paper in which the need to reform vocational education in Australia and to transfer the principles of the National Industry Education Forum (NIEF) into action is advanced.

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Dronkers, J.(1993). The Precarious Balance between General and Vocational Education in the Netherlands. European Journal of Education. 28(2), 197-207.

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A statement comprising broad objectives for education and training and a range of policies and initiatives.

Essential Features of Australia's Training System (1992) DEET on behalf of VEETAC, 154p. AGPS, Canberra.

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Grubb, W.N.(1992). Giving High Schools an Occupational Focus. Educational Leadership. 49(6), 36-43.

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House of Reps Standing Committee on Employment, Education and Training. (1991). Skills Training for the 21st Century. AGPS.

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HSC Pathways: Implementation Guidelines (1993) Board of Studies NSW, 16p.

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The paper looks at trends in Victorian post-compulsory education and training, with an emphasis on vocational education and training. Following an overview of recent trends, the paper turns to three scenarios outlining the possible shape of Victoria's post-compulsory education and training system by 2001.

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Report of the Overseas Mission to Study Developments in Vocational Education and Training, (1990) Commonwealth/State Training Advisory Committee (COSTAC), 67p. AGPS, Canberra.

A report containing a series of recommendations on vocational education and training for Australia.

Report of VEETAC Working Party on Recognition of Training (1991) 20p.

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A report in which a set of key competencies considered essential for all young Australians are identified and a means of describing them are presented.

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Naylor, M (1987). Articulation between Secondary or Postsecondary Vocational Education Programs and Proprietary Schools. Overview. ERIC Digest No. 64.

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2 Resources

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Sweet, R (1991) The youth labour market: The current recession in the context of longer term trends and future options, Dusseldorp Skills Forum, 18p.

A contemporary view of the youth labour market in an historical context.

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A research report that assesses the feasibility of the youth apprenticeship model in the US by examining US programs that include some components of the model.

Crawford, I and Williamson, J (1993) Progress or Promise. Transition from School to the World of Work: Initiatives Adopted by the Government of Western Australia, Youth Studies Australia, Vol 12 No 2, 51-54.

In this article initiatives taken by the government of Western Australia to facilitate the transition of students from school to the world of work are reviewed and the reaction of members of the community to one initiative - competency-based training - in the state's secondary schools is discussed.

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A paper in which it is argued that there is a need to focus on schools and to bring the two cultures of education and training closer together.

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A paper in which current developments in education and training in Western Europe are discussed.

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A paper in which models of work place learning are discussed and policy directions considered.

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A guide that aims to help schools and enterprises to work together to enrich students' learning.

ISSUES

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A paper drawing distinctions between training needs and educational processes.

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This report forms part of a major national project commissioned by the Advisory Committee to the Ministers of Vocational Education and Training (VEETAC). It tackles the critical issues in competency-based assessment.

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A paper in which it is argued that rather than 'connecting' education and industry, the challenge is to create a new culture by developing knowledge and practical approaches from the basis of shared understandings and genuine cooperative effort.

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Introduces a series of papers on the changing needs of post-compulsory education.

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This report is designed to draw together ideas and experiences gained in building education business partnerships, compacts and coalitions in twenty countries. It draws on evidence from a series of International conferences and reports and particularly the first International Partnership Conference held in England in June 1992.

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A comprehensive examination of school-industry links together with a discuss of the benefits of increased interaction for students, teachers, employers, unionists and parents.

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A paper in which it is argued that there is a need to come up with a new model of education and training for young people that will make them a part of a post-industrial technological world.

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Based on a case study on a particular US School/Industry partnership, the paper highlights conflicting conceptions of the problems facing labour market restructuring.

Roditi, H.F. (1992). High Schools for Docile Workers. The Nation. 16 March. 340-343.

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In this article is it argued that if the principle of 'entitlement' is not built into work-related provision, its key message - on relevance and incentives-are likely to be unrealised. That work-related curriculum needs to be developed through partnership between education and industry is now almost a truism; but partnership is harder to achieve than to eulogize.

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Turner, D (1988) It means a lot more than business: Young people and enterprise skills, Bulletin of the National Clearinghouse for Youth Studies. 7 (2) pp2-6.

This article examines the meaning and application of enterprise skills development to the education and training of young people. A number of reasons are put forward as to why enterprise development should be promoted to young Australians by secondary schools and training agencies.

PRACTICE

Arkansas River Education Service Co-operative (1990). Co-Op Based Integrated Basic Skills Program. ERIC Document. 334-439.

Describes a project that developed an integrated basic skills instructional program to service grades 7-12 vocational students in 13 rural school districts in Arkansas. The program was based on a vocational assessment process. The project was then refocused on average students in grades 7-12 across 5 different schools district. This involved restructuring the vocational education curriculum to include hands on as well as college preparatory course.

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Provides practical examples showing how vocational and general education are being integrated in classrooms.

Business alive: Teacher Consultant Manual, (1991) Prepared by Norris C and Wakelin King W. Young Achievement Australia,.

Material to support a program designed to provide junior secondary school students with a practical introduction to the Australian business system as a supplement to formal commerce studies.

Case Studies of Best Practice in Education Business Partnerships. (1993) New South Wales Department of School Education, Sydney, 70p.

A report in which fifteen case studies presented at a Statewide Best Practices Forum are documented.

Case Studies: School/Industry Links in South Australia. (1988) Prepared by Jennifer Neszpor, Department of State Development and Technology, 61p.

A series of nine case studies of school-industry links in South Australia.

Connections Interim Report: Best Practice in Industry-School Links. (1992) A Commonwealth Project of National Significance. Curriculum Corporation, 302p.

A report documenting the outcomes of a DEET-funded project conducted by the National Industry Education Forum. Contains models for past practice and lessons for schools seeking to develop school industry partnerships.

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A report in which the outcomes of a two-day workshop concerned with a range of "learning partnerships" are documented.

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Mulqueeny, J (1990) What Works: Improving School/Tafe Links. Curriculum Corporation, Melbourne, 170p.

A practical guide to successful strategies on strengthening the links between the school and technical education sectors.

National Audit of Vocational and Career/Work Education Materials for the National Element of the Country Areas Program for Country Secondary Schools, (1993) Department of Education, Qld. 102p.

TRAC Training for retailing and commerce: A competency based links between school, work and further education. (1991)Dusseldorp Skills Forum, 14p.

An updated report in which the key features of a pilot program designed to improve young people's transition from school to full-time employment in the retail, commercial and service industries in the Newcastle area are discussed.

TRAC Training for retailing and commerce: A progress report. (1989) Dusseldorp Skills Forum, 10p.

A report in which the key features of a pilot program designed to improve young people's transition from school to full-time employment in the retail, commercial and service industries in the Newcastle area are discussed.

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Provides a working model for school-industry partnerships based on two years of practical experience.

EQUITY

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Brolin, D. Refocussing special education for career development. The Journal for Special Educators. 19(4), 55-60.

Describes problems facing many exceptional students in gaining employment and highlights the role career education can play in facilitating the transition process.

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Clement-Heist, K., Siegel, S., Gaylord-Ross, R. (1992). Simulated and *InSitu* Vocational Social Skills Training for Youths with Learning Disabilities. Exceptional Children. 58(4), 336-345.

Report on the successful use of a model designed to develop social skills for youth with learning disabilities.

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Kokaska, C.J. (1983). Career Education: A Brief Overview. Teaching Exceptional Children. 194-195.

Suggests an approach to career education for exceptional students.

Lewis, D.R., Hearn, J.C. and Zilbert, E.E. (1993). Efficiency and Equity of Vocationally Focused Postsecondary Education, Sociology of Education Vol 66, July, 188-205.

The results of this research suggest that postcompulsory vocational education does have significant effects on individual economic outcomes, but those effects are not found among all who are targeted by the equity rationale. In particular, men from lower socioeconomic backgrounds do not appear to benefit appreciably. The analysis, however, provides striking support for the equity rationale as it applies to women.

Lombard, R. Hazelkorn, M & Neubert, D (1992). A survey of accessibility to secondary vocational education programs and transition services for students with disabilities in Wisconsin. CDEI 15(2), 179-188.

Reports the results of a survey indicating that while students with disabilities were gaining access to vocational education programs, they were often denied access to the full range of programs and services. Also highlighted in the data, an indication that vocational education enhances employment prospects for students with disabilities although males are liable to benefit more than females.

Lyall, K and Hawkins, S (1993) Different Futures: A study of the Critical factors Encouraging Women's Access to Non-traditional Entry-Level Training. A joint DEET/OSTB project managed by Affirmative Action in Training Inc on behalf of the VEETAC Women's Standing Committee, 48p.

A research report in which findings on what women want from work and how women learn about work are documented.

National Audit of Vocational and Careers/Work Education Materials for the National Element of the Country Areas Program for Country Secondary Schools. Department of Employment, Education and Training. 1993. 102pp.

Describes resources available for rural schools but also highlights the fragmented nature of that provision.

Roberts-Yates, C. (1990). Developing a Project to Improve Employability for Secondary Students with Special Education Needs. Australasian Journal of Special Education. 14(1), 38-42.

Provides background on social skills and employability project that was set up in South Australia. Highlights the needs for close cooperation with industry and the identification of training environments in high growth occupations.

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Describes project worth, a comprehensive set of activities for junior and senior high school handicapped students designed to ensure career awareness as specific training on job related skills.