

# **Learning about work in general secondary schools**

John Ainley

Australian Council for Educational Research

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In most OECD countries interest in the transition from school to work was quickened by the advent of high levels of youth unemployment, and of higher unemployment more generally. Inevitably the role of the school in the transition to work became the subject of considerable interest. Much research had pointed to the relationship between low relative levels of achievement at school and poorer labour market outcomes (Williams et al, 1980) and special programs focused on those at risk of leaving school early and not making a successful transition to the world of work (Withers & Batten, 1995). Although youth unemployment remains an issue there is now an even wider concern with the efficacy of arrangements to facilitate the transition from school to work.

One aspect of this wider concern has been the extent to which general secondary schools provide opportunities for students to learn about work. This paper will examine some of the arrangements for learning about work that have emerged in OECD countries with a strong emphasis on general education at the secondary school level. In a number of instances these arrangements go beyond “learning about work” by providing links to programs of vocational education and training. It begins with a brief overview of some aspects of the context in which the transition from school to work is being considered and then proceeds to examine the potential roles of arrangements such as recognising part-time work, work experience programs, school-industry programs, and structures through which vocational studies are linked to the programs of general secondary schools.

## **CONTEXT**

The growing interest in the ways in which students learn about work while they are in general secondary schools is set against a context of rising (or already high) levels of participation in the upper secondary years; changes in the opportunities for full-time work by young people; a recognition of the consequences of deferred entry to work for social development; and new considerations of student learning which emphasise the importance of the context in which learning takes place.

### **Participation in the Upper Levels of General Secondary School**

Through the 1980s there was a growth in participation rates in the upper secondary school years in many developed countries. For example, in Australia from 1983 to 1992, apparent retention rates to Year 12 rose from 35 per cent to 77 per cent, although it has since declined a little. Although participation in extended formal schooling confers a number of benefits on individuals, a major concomitant consequence has been a deferral of entry to the workforce for many young people. For a proportion of those people this has resulted in a restriction on the opportunities to learn employment-related skills through working in a job.

### **Opportunities for Full-time Work**

Concurrent with this rise in the holding power of secondary schools there has been a change in the nature of opportunities for full-time work by young people. The process of transition from school to work has always involved some difficulties in choosing jobs and careers, and in adjusting to the requirements of a workplace which seemed so different to those of school. During the late 1970s rising levels of unemployment generally impacted most dramatically on the youth labour market. In many countries there was a decline in the availability of full-time jobs for young people in the age range from 15 to 19 years (Sweet, 1988). In Australia the number of full-time jobs held by young people in this age range fell significantly over the past 20 years even when the number of full-time jobs held by those over the age of

20 years has grown (Sweet, 1993). In staying longer at secondary school, young people were not just responding to a decline in the availability of jobs but to a view that their long term employment prospects would be shaped by the level of education and skills which they attained in their youth. Studies of young people remaining at school, and even public opinion polls, consistently show that young people remain at school in the expectation that it will help them get a job or provide the basis for a career (Ainley & Sheret, 1992). In part, this reflects government policy initiatives which stress the need for higher levels of skill to provide a basis for a stronger more competitive economy (Poole, 1992). Recent analyses (e.g. Bengtsson, 1993) have indicated qualitative changes in the nature of jobs likely to emerge in future years; and are broadly consistent with the assessments made by young people in seeking a longer period of initial education.

### **Consequences of Deferred Entry to the Labour Force**

Being full-time school students for a longer time has meant that young people experience a longer period of economic dependence and fewer opportunities to interact with a range of adults as work colleagues. Some time ago Coleman et al (1974) contended that in a school, students were in a dependent position because of the basic custodial function of that institution but that, in order to be able to develop, they needed to be given responsibility for making decisions themselves. They argued that an important part of the maturation of youth involved working with people of different ages in responsible interdependent activity. Erikson (1968) argued that the experience of work during adolescence provided a valuable contribution to identity formation through which an individual comes to know themselves in relation to their own capacities. There has been evidence for some time in Australia that young people engaged in apprenticeships and hospital-based nursing training report greater levels of satisfaction than young people who were full-time students (ACTU, 1975).

### **Student Learning**

There has also been some concern with the effects of having a larger percentage of youth in school rather than work on the quality of skills that the education and training system provides to the economy. On a more general basis there have been arguments advanced that lack of participation in work-like environments may be detrimental in terms of the cognitive development of many young people. Resnick (1987) argued that school learning differs from other learning by being based around: individual rather than shared cognition; thinking about abstract issues rather than using available tools to solve problems; the manipulation of symbols rather than the application of contextualised reasoning; and generalised rather than situation-specific competencies. She argued that schools provide an ineffective setting for job training, but that most on-the-job training is also deficient, and that more effective forms of education and training are needed. Most importantly Resnick (1987:18) argued that “educating people to be good learners in school settings alone may not be sufficient to help them become strong out-of-school learners” and that “modifying schooling to better enable it to promote skills for learning outside school may simultaneously renew its academic value”. This literature suggests that successful programs designed to teach thinking skills, learning skills and higher-order cognitive skills incorporated three key features: characteristics of out-of school learning (shared intellectual work and the joint accomplishment of tasks with the elements of a skill acquiring meaning in the context of the task); aspects of apprenticeships (such as student observation and commentary and allowing skills to build incrementally as a result of sharing tasks); and having a basis in particular bodies of knowledge rather than general abilities.

## **PART-TIME WORK BY FULL-TIME SCHOOL STUDENTS**

Even where there have been declines in rates of full-time participation in the labour force part-time work by full-time students has remained significant in some countries. The differences between countries in the extent of part-time work by school students caused Greenberger and Steinberg (1986) to describe it as a “distinctly American phenomenon”. In fact part-time work by school students is significant in a small group of OECD countries: the United States (44 per cent), Canada (41 per cent), the United Kingdom (45 per cent), Denmark (52 per cent) and Australia (37 per cent) (OECD, 1990). These official figures include students seeking work as well as those actually in work and so are sometimes larger than survey data which counts only students who actually have a job. Nevertheless they contrast with countries such as France where the corresponding figure is less than 5 per cent or Germany where the figure is between 5 and 10 per cent.

Recently in the United States it has been estimated that some 43 per cent of 16 to 19 year-old school students also work in the paid labour force and that this phenomenon has grown substantially over the past 20 years (Carr, Wright & Body, 1996). The students who engaged in part-time work were drawn from a wide range of social and educational backgrounds and tended to be white males from intact well-educated middle class families, enrolled in college preparatory tracks and with above average school achievement levels. Part-time work was more prevalent among older than younger school students and was most commonly in service work (40 per cent). Blue-collar work accounted for 32 per cent of part-time work and clerical and sales work for 28 per cent.

In Australia in 1989 nearly one-quarter (24 per cent) of Australian 14-year-old students were engaged in part-time paid employment (Robinson & Long, 1992: 15). Participation in part-time employment was slightly higher for males (28 per cent) than females (21 per cent) at the age of 14 years. More recent analyses, as this cohort has moved through school, show that overall participation in part-time work had risen to 35 per cent of 17 year-olds and the relative position of males and females had reversed (31 per cent of males compared to 41 per cent of females) (Robinson, in preparation). On average students who were engaged in part-time work worked for eight to nine hours per week. These data are broadly consistent with those compiled by the Australian Bureau of Statistics (ABS, 1990). The ABS data also indicated that participation in part-time work increases from 23 per cent at the age of 15 years, through 31 per cent at 16 years to 32 per cent at age 17. The jobs most commonly held by school students in 1989 included sales (34 per cent), delivery people and attendants (15 per cent), factory and trade work (10 per cent) and cleaning (6 per cent) (Robinson & Long, 1992: 19). Analyses also indicated that students with part-time jobs had average (in reading) or slightly above average (mathematics) levels of school achievement. However, the pattern was different for girls than for boys. Whereas girls with part-time jobs had higher than average levels of achievement, boys with part-time jobs tended to have lower levels of achievement. For some boys at least, part-time work may signal their disengagement with schooling.

### **Outcomes and Possibilities**

Studies of the effects of participation in part-time work among students in the United States have suggested mixed, even contradictory, results in terms of short-term outcomes such as school performance and school completion (e.g. Steinberg & Dornbusch, 1991), although D’Amico (1984) suggested that detrimental effects were associated only with students who worked very long hours in their part-time jobs. However, it does appear that there are positive outcomes in terms of early career attainment (income and employment) (Marsh, 1991) and a variety of labour force outcomes (labour force participation, employment status) (Carr, Wright & Brody, 1996).

The positive effects of part-time work on subsequent labour market outcomes might suggest that students do learn something about the world of work through part-time employment. However, it is hard to envisage how schools might build on that learning. It seems that in many cases the experience would be unstructured with relatively little training involved (although some employers of students on a part-time basis have quite extensive training programs) and not linked to what students do in school. In the United States there is evidence that the part-time jobs of school students offer few opportunities for developing skills and often do not provide much interaction with workers from a range of ages. Even so, the evidence of labour market outcomes suggests a need to identify what is learned in those jobs and to take this into account when developing school programs concerned with learning about work. The possibility of better structural relationships between part-time work and schooling was raised by Coventry et al (1984) but there are few practical examples of initiatives in this area. Karmel (1984) argued for a training scheme outside the formal apprenticeship or traineeship system, involving part-time work and part-time formal school study but with links between the two, for students continuing through secondary school but not intending to proceed to university. Possibly schools could consider what students do in regular part-time work when they plan programs of work experience for their students and consider ways in which programs directed to learning about work can incorporate some of those learnings for other students. Others have suggested attending to timetable arrangements and curriculum to better integrate work and schooling and to utilise the experience resource provided by part-time work (Wilson et al, 1987).

## **WORK EXPERIENCE PROGRAMS FOR SECONDARY SCHOOL STUDENTS**

One of the ways in which general secondary schools provide for students to learn about work is through work experience programs. Work experience programs have been defined as “schemes in which people experience work tasks in work environments but without taking the full identity of the worker” (Watts, 1983). Typically these refer to programs in which school students spend a limited time in a workplace with the intention of providing an orientation to the world of work in a general field but without a planned program of skill development. Sometimes they refer to programs for non-school participants or to simulated work initiatives such as mini-companies in schools.

Eggleston (1982) notes that these programs take many forms and describes programs in the United Kingdom through which arrangements are made with local industry to provide for students to spend time out of school in a workplace learning about the nature of the work and arrangements for work in that industry. Most schools report favourable outcomes from these projects in terms of links between schools and industries and the opening of previously unknown employment opportunities. There is evidence of favourable reactions from participants with attendance levels being higher than in regular school activities. Eggleston also describes the three stage program of work experience in Switzerland based on short visits to enterprises, extended conversations in the workplace and experiences of three to six days in the workshop (called a *schnupperlehre* or “sniff of learning”). Similar strategies are reported for Austria through one week (“give it a try”) apprenticeships and work in simulated youth towns in Denmark. These programs are primarily concerned with providing an orientation to the world of work and tend to be located in the early or middle years of secondary school.

In Australia work experience programs began in the late 1960s and early 1970s in schools with a more vocational orientation (e.g. secondary technical schools) and the number of programs increased through the 1970s as secondary schools began to use work placements as part of the school curriculum (Cole 1979: 31-42). By the early 1980s, work experience programs were established features of school programs and functioned under guidelines often with the support of advisers or kits of materials. Data gathered as part of the ACER *Youth in Transition* surveys of a national sample of 16-year-olds in 1986 indicated that some 89

per cent of young people had participated (84 per cent), or expected to participate (5 per cent), in work experience programs during secondary school, and that on average, the programs were of eight days' duration.

Evans and Poole (1992) characterise work experience programs as being partly concerned with vocational education (especially in relation to the character of workplaces, knowledge about particular jobs and related skills, and the formulation of vocational goals) and partly concerned with social and life skills in the adult world generally (especially in relating to management and other workers). Evans and Poole found that students who participated in work experience rated those programs highly in terms of value for future employment and enjoyment (but not quite as highly as a corresponding group of students from pre-vocational education programs). Students also reported a sense of satisfaction with work experience in terms of gains in information, experience in and knowledge of specific job-related skills, and perceptions of their own competence in these skills; such findings are consistent with other research. However, the authors conclude that:

*As a vehicle for helping students to develop other life skills or greater awareness of the nature of work, it would appear that there needs to be much more reflective activity in the school or college to make these programs more successful. In terms of the development of cognitive skills, they may be far too short to have a useful contribution.*

(Evans and Poole, 1992: 122)

## **SCHOOL-INDUSTRY PROGRAMS**

School-industry programs provide students in the senior years of secondary schools with the opportunity for structured learning in a workplace which is assessed and accredited as part of their schooling. They differ from work experience programs in that they incorporate a goal of structured learning in the workplace (rather than an orientation) and they usually extend over a longer time frame. Although these programs are seen as new developments in some countries, they incorporate features which have been long established in others.

### **United States**

In the United States, co-operative vocational education has been part of secondary education for many years. It is a program which combines academic study with monitored and credit bearing (often paid) work. The sequencing may either be in the form of alternating terms (of 10 to 13 weeks) in school and work or parallel arrangements, where students attend school in the morning and work in the afternoon (Ascher, 1996; Athanasou, 1996). In 1990 it involved approximately 8 per cent of juniors and seniors in high school [down from 11 per cent in 1981-82] (US General Accounting Office, 1990) and is provided in nearly half of all high schools (Athanasou, 1996). Students in high school co-operative education programs appear to reflect the racial mix of the general population and represent a little more than proportionately low income homes (60 per cent from the lower half) and lower than average test scores (30 per cent are from upper half of test score distributions) (US General Accounting Office 1991). Recent legislation has established a national framework through which to implement these school-industry programs so that workplaces are used as active learning environments and common requirements are implemented (Athanasou, 1996).

Evidence on the outcomes of co-operative education at high school level is mixed but there appear to be gains in some areas of social development (Ascher, 1996) and the programs are favourably regarded by the participants (Athanasou, 1996). A recent report by the United States Department of Labour on achieving

necessary skills for the workforce (*Learning a Living: A Blueprint for High Performance*) claimed that co-operative education more than any other delivery system had the potential for developing these high performance competencies and skills (Taylor, 1995).

### **Sweden and Norway**

Recent initiatives in upper secondary education in Sweden have provided a range of three year vocationally oriented national programs (and which also confer eligibility for entry to higher education), but with the possibility of individual variations to match local industry profiles (Sweet, 1995). Core studies (e.g. Swedish, English, Mathematics, Science, Arts etc.) form approximately one-third of all programs and approximately one half of the time is spent on vocational subjects specific to an industry group, organised around a set of modules. There is a further requirement that 15 per cent of the learning time in these programs must be spent in structured learning in the workplace; where the young people are to be regarded as students rather than employees (Sweet, 1995). Sweet observes that this means that the workplace is to be seen as part of the learning process (workplace learning is to be syllabus guided) and not simply a place where students practice. It requires the school to guarantee access to workplace learning for a majority of its upper secondary students and to define a more formal role for the workplace as a classroom. A similar reform of upper secondary education has been implemented in Norway (Briseid, 1995).

### **Australia**

In Australia, school-industry programs have been recently expanded and supported as part of upper secondary education. They form part of a wider range of school-industry links (Price, 1991). A report by the Curriculum Corporation observed in 1993 that there was a large number of programs in schools which incorporated *work-based learning* (Curriculum Corporation, 1994). For example, in New South Wales such links were embodied in the Training for Retail and Commerce (TRAC) course, some school-initiated courses and Industry Studies offered as state-wide course. Lepani and Currie (1993) identified a number of benefits to students, teachers and industry from these programs and pointed to solutions to some of the organisational obstacles to the wider implementation of such programs. Consultations conducted by the Australian Student Traineeship Foundation indicated “a rich variety of actual and potential joint school-industry programs throughout Australia” (ASTF, 1995). The consultation was also able to identify different types of school-industry programs and to provide some information about perceived benefits and potential barriers. It also documented considerable differences between programs in their structure, characteristics and operations. More recent information about these programs on a national basis was obtained from a survey of all Australian secondary schools in 1995 (Ainley & Fleming, 1995).

#### *Provision and Participation*

The national survey indicated that 46 per cent of secondary schools provided, and 9 per cent of senior secondary students participated in, some form of program that incorporated time in the workplace (Ainley & Fleming, 1995). Twenty per cent of schools provided programs which involved at least 20 days per year in the workplace, and 3 per cent of senior secondary students participated in those extended programs. There were differences associated with school sector: provision and participation were highest in government schools and lowest in independent schools. School-industry programs tended to be provided a little more frequently in larger schools, in schools serving areas of lower socioeconomic status and, to a small extent, in non-urban areas. Most of the school-industry programs operating in 1995 were of recent origin: 52 per cent had commenced in 1995, and only 10 per cent had been in operation prior to 1993.

### *Industries*

School-industry programs involved a range of industries. Hospitality was strongly represented with 19 per cent of programs referring to that industry. Retail, commerce and clerical made up 32 per cent of programs. Manufacturing, construction or trades made up 20 per cent of nominations (manufacturing itself constituted 10 per cent of programs). Approximately 12 per cent of the programs involved referred to service industries (the most frequent being health and community services). The remaining 17 per cent of programs involved either agriculture (3 per cent), utilities (4 per cent) or were cross-industry (10 per cent). School-industry programs in 1995 aimed to develop a number of characteristics but developing *vocational skills specific to particular industries* was important to most. It might therefore be concluded that these programs were seen as having a strong vocational emphasis. They were not seen only as an aspect of general education, although those goals were important. The most widely used source for program content were the endorsed national competency standards proclaimed by the National Training Board (cited for nearly half of the programs). Content developed by school authorities and locally developed content were cited in the case of one-third of the programs. Sources such as other industry developed and accredited content, and the technical and further education curriculum were also sources for a significant number of programs.

### *Workplace Learning*

Programs across Australia varied in the organisation of, and time provided for, workplace learning but workplace learning did feature generally as an important component. This was evident through information about the required attendance at work sites, the percentage of program time that the work placements represented, the total time spent in the workplace during the course, and how the time in the workplace was used. In 84 per cent of programs students attended their work placements for the full working day which applied in the work site. Although programs varied in the percentage of program time which was based in the workplace, half had 20 per cent or more of program time allocated to workplace learning. Most programs were of at least one year's duration and on average involved 16 days in the workplace.

The intention of school-industry programs is that they should incorporate structured learning in the workplace. In practice, two-thirds of programs used the time for structured learning (the remaining third used the time for observation and experience only). Approximately four-fifths had mentors at work sites (half of whom had been trained for that role). Formal assessment of workplace learning occurred in 85 per cent of programs; and in 70 per cent of programs that assessment was based on comparisons with agreed learning outcomes contained in the curriculum. The remaining 30 per cent were based on a generalised oral or written report of a student's performance. Classroom time or off-the-job training was additional to workplace learning. This was used to provide a basis of "theoretical knowledge on which to build the experience" (mostly), to provide an "understanding of what was learned in the workplace" and to "fill in gaps in students' knowledge and understanding not covered in the workplace". The differences among these objectives may be subtle but these distinctions are worthy of further exploration.

### *Effects on Students*

There are few evaluation studies available. There has been a study of the effects of the Training in Retail and Commerce (TRAC) program in one state, Tasmania (Scharaschkin, 1994). In that program, students enrolled in an industry-accredited vocational course spent one day a week in the workplace in addition to the four days in a classroom. The study was able to identify differences in teaching and learning in the TRAC program compared to traditional classrooms in terms of: engagement, adult work ethos, authentic

consequences, immediacy of feedback, tangible rewards and multiple learning sites. Sharaschkin identified enhanced student outcomes in terms of such things as: motivation and confidence, satisfaction, personal and practical skills, and time management skills. A separate study using a national sample of 500 participants in the same program showed that TRAC graduates had an unemployment rate approximately half that of non-university bound school leavers as a whole and were 50 per cent more likely to be involved in further education and training through apprenticeships, traineeships or other forms of study (Dusseldorp Skills Forum, 1995). The authors attribute these differences to the effect of incorporating applied contextualised learning within a general education.

## **DEFINING WORK RELATED COMPETENCIES**

One way of linking the work of general secondary schools with the world of work is to define work-related competencies and to use those to inform the programs provided in schools. There are examples of attempts to define work-related competencies but it is not clear as to what extent the results of these have informed the programs of general secondary schools.

The report entitled *Learning a Living: A Blueprint for High Performance* (the SCANS Report) was commissioned by the United States Secretary for Labour to define the skills that young people needed to succeed in the world of work (United States Department of Labour, 1992). It proclaimed that schools should look to the roles students would play when they became workers, parents and citizens and that teachers should look beyond their discipline and classrooms to students' lives outside school (United States Department of Labour, 1992: xiii). It also urged employers to look to the organisation of work and the development of human resources. The report identified five workplace competencies and three foundation skills as being needed for good job performance. In terms of workplace competencies the report indicated that effective workers could productively use:

- *Resources (They know how to allocate time, money, materials, space and staff);*
- *Interpersonal skills (They can work on teams, teach others, serve customers, lead, negotiate and work well with people from culturally diverse backgrounds);*
- *Information (They can acquire and evaluate data, organise and maintain files, interpret and communicate and use computers to process information);*
- *Systems (They understand social, organisational and technological systems; they can monitor and correct performance; and they can design or improve systems); and*
- *Technology (They can select equipment and tools, apply technology to specific tasks, and maintain and troubleshoot equipment).*

In terms of foundation skills it proposed that competent workers in the high performance workplace need:

- *Basic skills (reading, writing, arithmetic and mathematics, speaking and listening);*
- *Thinking skills (the ability to learn, to reason, to think creatively, to make decisions and to solve problems); and*
- *Personal Qualities (individual responsibility, self-esteem and self-management, sociability and integrity).*

(United States Department of Labour, 1992)

In Australia, a major review of post-compulsory education and training argued that there should be a convergence between vocational and general education so as to foster a more creative and adaptable workforce (Finn, 1991). Its report proposed that employment-related competencies should be part of all

forms of post-compulsory education. It argued that by the time young people leave school, they should be competent in six key areas: language and communication; mathematics; scientific and technological understanding; cultural understanding; problem solving; and personal and interpersonal areas. The nature of employment-related competencies was pursued further through the work of a subsequent committee of inquiry (Mayer, 1992). Its report identified seven generic work-related competencies conceptualised as transcending subject areas and providing links between school, vocational education and employment (Collins, 1995). These competencies, which were seen as generic to all kinds of work and to effective participation in many other social settings, were:

- *collecting, analysing and organising information;*
- *communicating ideas and information;*
- *planning and organising activities;*
- *working with others and in teams;*
- *using mathematical ideas and techniques;*
- *solving problems; and*
- *using technology.*

Subsequently an eighth competency (*cultural understanding*) was added.

At least part of the impetus for these ideas derived from a perception that substantial changes were occurring in the structure of the economy, in the organisation of industry and in economic relations with other nations which sharpened concern about the competitiveness of Australian industry (Wilson & Engelhardt, 1994). At the same time there was concern that traditional educational programs were not developing appropriate employment-related skills among a sufficiently wide cross section of Australian youth. The emergence of employment-related competencies has implications for curricula in traditional fields of study in the senior secondary years (Lokan et al., 1995) as well as for the arrangements made for new programs designed to provide more explicitly vocationally oriented studies.

Hall (1994) has compared the Australian key competencies with the “core skills” identified in England and discerned a high degree of similarity. The “core skills” in England were listed in abbreviated form as communication, information technology, problem solving, numeracy, personal skills and modern language competence (for the last of which there was no parallel in the Australian list of competencies). Hall noted that there are three important themes to be used in order to develop the core skills: aesthetic and creative, scientific and technological and social and economic. Core skills are to be included in every kind of educational program for 14 to 19 year-olds so that school students will not be forced to choose between a vocational or academic track at an early age. Hall (1994) concludes that the intention behind key competencies in both countries is to strengthen aspects of general education at the secondary level, an intention that has support on a wider international basis. However, even though there is much common ground in the three statements of competencies reviewed in this paper, there remain issues surrounding their adoption as a basis for the review and renewal of programs in general secondary schools. For example, Grubb (1996) argues that attention needs to be given to pedagogy and to the content of school programs if the competencies identified in the SCANS report are to be realised.

The linking of the purposes of school education to vocational skills and economic development is not a new phenomenon, even though it is sometimes contentious (Crittenden, 1995). It was a powerful strand in arguments advanced for developing public education systems in many countries. Recent arguments have supported reducing the dichotomy between the liberal and vocational traditions in education so as to provide greater breadth in liberal education and a deeper understanding of principles behind the vocational skills required in a modern economy (Young, 1993a). Such arguments are supported by analyses of labour markets of the future and the educational challenges presented by those labour markets (Bengtsson, 1993)

as well as by analyses of educational programs and of student learning. Young (1993b) suggests that the reforms of the upper secondary school in Sweden and Finland hold the potential to reduce the academic-vocational divisions for the 16 to 19 year-old age group and to allow new models through which generic skills and knowledge are built into vocational education.

## **VOCATIONAL PROGRAMS IN GENERAL SECONDARY SCHOOLS**

One influence of general secondary schools on the transition to work is through the inclusion of vocationally oriented elements in its program. In Australia increases in school participation rates and continuing high levels of youth unemployment have caused attention to be given to issues of the relevance of senior secondary school studies for those who do not proceed to university (McKenzie & Alford, 1991) and to the provision of programs within secondary schools which might be seen to be vocationally-orientated and to be integrating vocational learning with accredited school courses (Kennedy *et al.*, 1993; Russell, 1993; Curriculum Corporation, 1994; Golding, 1995). There has been evidence of students choosing more vocationally oriented subjects in larger numbers than previously (Ainley et al, 1994).

Vocational education in secondary schools has often been criticised as a form of tracking which has undesirable outcomes such as the curtailment of opportunities (Oakes, 1985). However, an important review of research on the transition from school to work concluded that the tracking implications of vocational programs in school were complex and not necessarily negative (Rosenbaum, 1996). Rosenbaum cites a number of studies of tracking which point to a wide variety of practices having different effects on students. He concluded that the social critique of tracking did not necessarily apply to vocational programs because much depended on the detail of how the programs were organised (Rosenbaum, 1996: 110). It observed that general evidence about tracking did not always apply to vocational programs and that these programs did not completely separate participants from students in other courses, generally offered informed choices, allowed students to proceed to university, could enhance academic achievement and was not simply a place for socially disadvantaged students (in fact was often less available to such students). Rosenbaum concluded that vocational education should be retained in general secondary schools, that “high quality programs should be made more available to disadvantaged groups” and that vocational education as part of a tracking system could be structured to increase opportunity, achievement and employment (Rosenbaum, 1996: 116-117).

With the growth of what has been called the “new vocationalism” there has been increased attention to the ways in which vocational elements are included in secondary school programs (Grubb, 1996). Grubb argues that the provision of vocational elements in school programs should be seen as involving dimensions of both content and pedagogy. In terms of content, it is possible to envisage programs as involving both academic and vocational elements as well as each separately, and its pedagogy could be seen as incorporating a mix of teaching skills or teaching meaning in each. It is argued as mistaken to see a direct association between a particular form of pedagogy and a specific element on the content dimension.

One approach to characterising the ways in which vocational programs are included in general secondary schools has been based on three models: the dual model, the unitary model and the integrated model (Schools Council, 1994). Under the dual model, students choose between an academic program leading to university study or an explicitly vocational program with non-university destinations and approaches to curriculum and pedagogy usually differ between the tracks. It assumes that better learning outcomes result from appropriate placement but in most systems that approximate the dual model the majority of students choose an academic track. The dual model may be implemented within general secondary schools (e.g.

the Advanced Levels and the General National Vocational Qualifications of England and Wales represent elements of a dual model as would the tracks in a United States high school) or between general secondary schools and other institutions (e.g. Germany or New South Wales in Australia). The dual model may also be modified when elements carry dual recognition for each form of certificate. The unitary model provides one pathway and one form of credential that incorporates academic and vocational studies (e.g. Scotland or Victoria in Australia). In this model the boundaries between academic and vocational studies in terms of organisation, curriculum and pedagogy are less marked than in the dual model but it becomes rather complex. The integrated model (proposed by Young, 1993a) extends the emphasis of the unitary model on the convergence of general and vocational studies. It retains a single certificate underpinned by a small group of core studies shared by all students in combination with “a system of theoretical and applied modules which integrate vocational with general learning”. Vocational studies are organised into flexible but coherent combinations which have meaning in the labour market and further education. These combinations then constitute pathways between school and the world of work or further education. This model has been seen as being manifest in the upper secondary school reforms in Sweden and Finland (Young, 1993b).

Of course these models do not precisely match actual systems in operation, although they may provide a basis for mapping some aspects of those systems. They also draw attention to issues to be resolved through empirical investigation such as the relative status of different qualifications in a dual model (the relative status may differ according to the pathway being considered), the extent of differences in approaches to teaching and learning between tracks or courses in a dual model, what is the effect of dual recognition in providing a form that combines features of the dual and the unitary models, the extent to which a unitary approach broadens access to post-school options, which forms of study in a unitary system have the strongest influence over matters of curriculum and assessment, and what are the practical implications of implementing an integrated model in a modern school system.

## **FACILITATING JOB PLACEMENT FOR STUDENTS**

Part of the contribution of general secondary schools to the transition from school to work becomes manifest when students leaving school are seeking work. The role of the school can range from being a passive provider of information about jobs and careers, through the provision of active advice to individual students about possibilities and prospects, to actively using links between schools and employers to help place students. Rosenbaum’s (1996) review of policy uses of research on transition from high school to the world of work concluded that the transition could be improved if schools were to make academic instruction more vocationally relevant (students would exert effort if school performance was seen as relevant to a future career), if school-employer linkages were created and appropriately designed (to enhance incentives for the flow of information with teachers providing dependable evaluations) and if employers were to base hiring decisions more soundly on applicants’ achievements in school.

Rosenbaum suggests that in Germany and Japan, the direct interaction between schools and employers facilitates the transition from school to work. He reports on the centralised collation of school information on student performance forms part of selection for apprenticeship in Germany. This is seen by Rosenbaum as providing employers with valuable information about students, students who are not university bound with incentives to achieve high standards, and teachers with an influence of students’ post-school training and jobs. In Japan changes introduced in the 1920s created direct linkages between schools and employers that impelled employers to be responsive to students’ achievements at school (Rosenbaum & Kariya, 1989). In the Japanese system, schools provide institutional assistance to students seeking jobs, to the extent that 75 per cent of Japanese high schools, compared with only 8 per cent of

American high schools, provide help to work-bound students (Rosenbaum, 1996). This arises through long-standing relationships between high schools and employers who seek employees from those high schools on the basis of recommendations from teachers at the school (Rosenbaum & Kariya, 1989; 1991).

## **CONCLUSION**

This paper has identified a number of ways in which learning about work occurs in general secondary schools. The following dimensions could provide a basis for mapping the provision of this form of learning in different countries:

- differences in context: school participation, employment prospects, changes in the labour market;
- the way vocational elements or programs are incorporated in the educational program: dual provision, unitary provision, integrated;
- the articulation of what is learned about work in schools with further education, training and work (and especially in terms of credit towards a vocational qualification);
- the extent to which programs involve workplace learning or other contact with industry;
- the extent to which students have other experience of work and whether this is recognised in the planning process; and
- the provision of assistance to students in entering the workforce and securing a job.

Mapping the extent of different forms of provision is one thing. The more important question is the extent to which such programs have an impact on students. In a number of areas the contribution of general secondary schools to learning about work is only poorly understood. One concerns the articulation of what is learned about work in school with the process of obtaining a formal vocational certificate. Some forms of learning about work are simply a general orientation, whereas others result in advanced standing or credit towards a vocational qualification, and yet others actually provide such a qualification. Learning about work in general secondary schools can have many forms and purposes.

A second area concerns those programs that involve learning in the workplace and focuses on the characteristics that ensure that high quality learning occurs. Criticisms of these provisions often refer to the variability of what is done in the workplace (Grubb, 1996). The issue is to understand how that learning can be best supported. Studies of the characteristics of enterprises that invest strongly in training have been undertaken, and these may provide an indication of the conditions needed for high quality workplace learning. More specifically, there needs to be more attention to the assessment of workplace learning and to developing understanding of some of the processes of workplace learning and whether learning in the workplace facilitates learning in other school programs. A third issue involves the need for systematic monitoring of labour market outcomes for various forms of learning about work in general secondary schools. Such monitoring probably needs to be based on longitudinal data so that outcomes can be interpreted in relation to entry characteristics.

## REFERENCES

- Ainley, J. & Fleming, M. (1995). *School-Industry Programs: 1995 National Survey*. Sydney: ASTF.
- Ainley, J., Robinson, L., Harvey-Beavis, A., Elsworth, G. & Fleming, M. (1994). *Subject Choice in Years 11 and 12*. Canberra: AGPS.
- Ainley, J & Sheret, M. (1992). *Progress Through High School*. Melbourne: ACER
- Ascher, C. (1996). *Co-operative education as a strategy for school to work transition*. Paper presented to the conference of the International Comparative Education Society, Sydney, June.
- Athanasou, J. (1996). *Co-operative education: Evidence from the United States and Australia*. Paper presented at the structured work placements, research and policy seminar of the Australian Student Traineeship Foundation and the Dusseldorp Skills Forum, March.
- Australian Bureau of Statistics (ABS) (1990). *Transition from Education to Work: Australia*. Canberra: Government Printer (Cat. No. 6227.0) (see also subsequent years).
- Australian Council of Trade Unions (ACTU) (1975). *Survey of Young Workers. Report for the Australian Government Commission on Poverty*. Canberra: AGPS.
- Australian Student Traineeship Foundation (ASTF) (1995). *An Ear to the Ground*. Sydney: Author.
- Bengtsson, J. (1993). Labour markets of the future: the challenge to education policy makers. *European Journal of Education*, 28 (2), 135-158.
- Briseid, O. (1995). Comprehensive reform in upper secondary education in Norway: a retrospective view. *European Journal of Education*, 30 (3), 245-254.
- Carr, R. V., Wright, J. D. & Brody, C. J. (1996). Effects of high school work experience a decade later: evidence from the national longitudinal study. *Sociology of Education*, 69 (1), 66-81.
- Cole, P. (1979). *Work Experience: An Australian Perspective*. Melbourne: Education Department of Victoria.
- Coleman, J. (Chair) (1974). *Youth: Transition to Adulthood*. Report of the Panel on Youth of the President's Science Advisory Committee. Chicago: University of Chicago Press.
- Collins, C. (1995). Curriculum stocktake: a context. In C. Collins (ed.) *Curriculum Stocktake: Evaluating School Curriculum Change*. Canberra: Australian College of Education.
- Coventry, G., Cornish, G., Stricker, P., Cooke, R. & O'Brien, A. (1984). *Part-time Work and Youth in Transition*. Melbourne: Victorian Institute of Secondary Education.
- Crittenden, B. (1995). Liberal and vocational education: convergence or confusion. In C. Collins (ed.) *Curriculum Stocktake: Evaluating School Curriculum Change*. Canberra: Australian College of Education.
- Curriculum Corporation (1994). *Vocational Education in Australian Schools: Report on Stage 1 of the Vocational Education in Schools Project*. Carlton, Vic: Author.
- D'Amico, R. (1984). Does employment during high school impair academic progress. *Sociology of Education*, 57: 152-64.
- Dusseldorp Skills Forum (1995). *A Follow Up of 1994 TRAC Students*. Sydney: author.
- Eggelston, J. (1982). *Work Experience in Secondary Schools*. London: Routledge & Kegan Paul.

- Erikson, E. (1968). *Identity: Youth and Crisis*. London: Faber.
- Evans, G. & Poole, M. (1992). Experiencing work: bridges to adulthood. In M. Poole (ed.) *Education and Work*. Melbourne: ACER.
- Finn, T. B. (Chair) (1991). *Young People's Participation in Education and Training*. Australian Education Council Review Committee, Canberra: AGPS.
- Golding, F. (1995). *Compendium of Good Practice: the Role of Schools in the Vocational Preparation of Australia's Senior Secondary Students*. (Schools Council, NBEET). Canberra: AGPS.
- Greenberger, E. & Steinberg, L. (1986). *When Teenagers Work: The Psychological and Social Costs of Adolescent Employment*. New York: Basic Books.
- Grubb, W. N. (1996). The new vocationalism: what it is, what it could be. *Phi Delta Kappan*, 77 (2), 535-546.
- Hall, W. (1994). *English 15-19 year-olds Vocational Education: Some Lessons for Australia*. NCVER: Adelaide.
- Karmel, P. (1984). Education and training for work and living. *Australian Journal of Education*, 28, 190-201.
- Kennedy, K., Cumming, J. & Catts, R. (1993). *Vocational Education in Secondary Schools: A Review of the Literature*. Toowoomba, Queensland: University of Southern Queensland (mimeo).
- Lepani, B. & Currie, J. (1993). *Workplace Learning in NSW Senior Secondary Courses*. Sydney: Dusseldorp Skills Forum.
- Lokan, J., Withers, G., Mellor, S., Batten, M. McQueen, J. & Carthy, I. (1995). *Literacy and the Competencies: Potential Impact of Competency-based Approaches on Literacy Curricula and Assessment in Schools*. Final report submitted to Targeted Programs Branch of Department of Employment, Education and Training: Canberra.
- Marsh, H. (1991). Employment during high school: character building or a subversion of academic goals. *Sociology of Education*, 64 (3), 172-189.
- Mayer, E. (Chair) (1992). *Putting General Education to Work: The Key Competencies Report*. Carlton, Vic: Australian Education Council.
- McKenzie, P. & Alford, K. (1991). *The Labour Market Relevance of Secondary Schooling: Perspectives from Year 12 School Leavers who do not Enrol in Higher Education*. (Summary Report) Canberra: AGPS.
- Oakes, J. (1985). *Keeping Track: How Schools Structure Inequality*. New Haven, CT: Yale University Press.
- Organisation for Economic Co-operation and Development (OECD) (1990). *Employment Outlook*. Paris: OECD.
- Poole, M. (1992). Changing policy perspectives. In Poole, M. (ed.) *Education and Work*. Melbourne: ACER.
- Price, B. (1991). *School Industry Links: The Consequences of Minding Other People's Business*. Hawthorn, Vic: ACER.
- Resnick, L. (1987). Learning in school and out. *Educational Researcher*, 16 (9), 13-20.

- Robinson, L. & Long, M. (1992). Student workers: New data on gender and education differences. *Youth Studies*, 11 (3), pp 14-24.
- Rosenbaum, J. E. (1996). Policy uses of research on the high school to work transition. *Sociology of Education*, Extra Issue, 102-122.
- Rosenbaum, J. E. & Kariya, T (1989). From high school to work: Market and institutional mechanisms in Japan. *American Journal of Sociology*, 64, 78-95.
- Rosenbaum, J. E. & Kariya, T (1991). Do school achievements affect the early jobs of high school graduates in the United States and Japan? *Sociology of Education*, 16, 263-299.
- Russell, V.J. (1993). *Post-compulsory Education and Training Arrangements in the Australian States and Territories*. Canberra: AGPS for the Schools Council, NBEET.
- Scharashkin, R. (1994). *Learning from TRAC*. Hobart: Department of Education and the Arts.
- Schools Council (1994). *The Role of Schools in the Vocational Preparation of Australia's Senior Secondary Students: Discussion Paper*. AGPS: Canberra.
- Steinberg, L & Dornbusch, S. (1991). Negative correlates of part-time employment during adolescence: replication and elaboration. *Developmental Psychology*, 27: 304-313.
- Sweet, R. (1988). What do developments in the labour market imply for postcompulsory education Australia? *Australian Journal of Education*, 32 (3), 331-356.
- Sweet, R. (1993). *How Schools and Firms can help Each Other*. Paper presented to the Victorian Industry Education Partnership Forum, Melbourne, December.
- Sweet, R. (1994). *Forging New Connections to the Workplace*. Sydney: Dusseldorp Skills Forum (mimeo).
- Sweet, R. (1995). *Linking Schools and Workplaces: Lessons from Australia and Overseas*. Sydney: Australian Student Traineeship Foundation.
- Taylor, V. (1995). Co-operative education as a delivery system for the SCANS workplace competencies and foundation skills. *Journal of Co-Operative Education*, 20, 20-27.
- United States Department of Labor: The Secretary's Commission on Achieving Necessary Skills (1992). *Learning a Living: A Blueprint for High Performance*. Washington: US Government Printing Office.
- United States General Accounting Office (1990). *Training Strategies*. Washington, DC: Government Printing Office.
- United States General Accounting Office (1991). *Transition from School to Work*. Washington, DC: Government Printing Office.
- Watts, A. G. (1983). *Work Experience and Schools*. London: Hienemann.
- Williams, T., Clancy, J., Batten, M. & Girling-Butcher, S. (1980). *School, Work and Career*. Melbourne: ACER.
- Wilson, B. & Englehardt, M. (1994). Changes to trade training. *Australian Journal of Career Development*, 3 (1), pp 22-28.
- Wilson, B., Wyn, J., Reeders, R. & Wook, R. (1987). *Education, Work and Youth Policy*. Canberra: Curriculum Development Centre.

- Withers, G. & Batten, M. (1995). *Programs for At-Risk Youth: A Review of American, Canadian and British Literature Since 1984*. Melbourne: ACER
- Young, M. (1993a). A curriculum for the 21st century? Towards a new basis for overcoming academic/vocational divisions. *British Journal of Educational Studies*, 41 (3), 203-222.
- Young, M. (1993b). Bridging the academic/vocational divide: two Nordic case studies. *European Journal of Education*, 28 (2), 209-214.