



Submission to the House of Representatives Standing Committee on Employment, Education and Workplace Relations Inquiry into the Education of Boys

NCVER is pleased to assist the House of Representatives Standing Committee on Employment, Education and Workplace Relations in its inquiry into:

- ♦ the social, cultural and educational factors affecting the education of boys in Australian schools, particularly in relation to their literacy needs and socialisation skills in the early and middle years of schooling, and
- ♦ the strategies which schools have adopted to help address these factors, those strategies which have been successful and scope for their broader implementation or increased effectiveness.

This submission provides background information for the Inquiry on participation and outcomes in vocational education and training modules undertaken by boys who are still at school. Vocational education and training is offered in the senior secondary years as part of the VET-in-Schools program. Although the focus of the Inquiry is the early and middle years of schooling, this information will inform the Inquiry about opportunities that are available for boys in senior secondary school in the vocational education and training sector and their choices and performance relative to girls. The submission also discusses other recent research undertaken jointly by NCVER and the Australian Council of Educational Research (ACER) on the patterns of course enrolments in year 12 by gender, and the outcomes for students (primarily boys) who enrolled in vocational subjects in the early to mid 1990s before the introduction of the VET-in-schools program.

1. Participation and outcomes of boys at school in vocational education and training

The national collection of vocational education and training (VET) data is a source of information about VET courses conducted by providers in receipt of public funds. The collection includes TAFE and other government providers, community-based providers and private providers. The information in this submission relates to all publicly funded VET courses.

Over 58,000 boys who were still at school enrolled in the vocational education and training sector during 1999, an increase of 70 per cent over the number enrolled the previous year¹. In 1999 there were 112,000 students in total who were still at school and enrolled in the vocational education and training sector, an increase of 64 per cent over the number enrolled the previous year.

The profile of module enrolments by school students in the vocational education and training sector in 1999 is presented in table 1. The number of modules studied by students still at school in the vocational education and training sector increased by almost 30 per cent between 1998 and 1999. The differential increase in module enrolments by field of study is shown in table 1.

Based on the number of module enrolments, the most popular fields of study for boys were TAFE multi-field education², 'engineering and surveying', 'services, hospitality and transportation', science, 'business, administration and economics' and 'architecture, building'. The most popular fields of study for girls were 'services, hospitality and transportation', 'business, administration and economics', TAFE multi-field education and science.

Table 1: Module enrolments in vocational education and training by field of study and gender, 1999

Field of Study	Boys '000s	Girls '000s	Total '000s	Percentage growth in numbers 1998-1999		
				Boys	Girls	Total
				Land & Marine Resources, Animal Husbandry	7.9	3.7
Architecture, Building	10.4	0.6	5.6	15.0	61.1	16.9
Art, Humanities & Social Sciences	3.9	4.6	4.2	49.5	26.0	36.0
Business, Administration, Economics	12.5	26.9	19.6	30.1	21.5	24.2
Education	0.1	0.2	0.1	101.0	123.2	114.0
Engineering, Surveying	17.1	1.4	9.4	13.2	2.4	12.2
Health, Community Services	1.4	7.4	4.3	60.6	30.2	34.2
Law, Legal Studies	0.0	0.1	0.1	36.9	16.8	24.9
Science	13.8	11.0	12.4	34.9	32.5	33.8
Veterinary Science, Animal Care	0.0	0.2	0.1	12.5	18.9	17.6
Services, Hospitality, Transportation	14.8	30.7	22.6	22.3	18.0	19.4
TAFE Multi-Field Education	18.0	13.4	15.7	52.2	30.9	42.5
Total	100.0	100.0	100.0	30.6	25.0	27.8
Total number ('000s)	376.6	365.7	742.4			

¹ These figures differ from the figures reported by MCEETYA on VET-in-Schools. This group of students includes school students who are participating in the VET-in-Schools program and students who are still at school and are also enrolled in a vocational education and training course. Not all VET-in-Schools activity is captured in the national VET data collection.

² The TAFE multi-field education field of study classification includes courses in English as a second language, functional literacy and numeracy, general skills development, general secondary education and qualifying education.

Table 2: Percentage of vocational module enrolments for students still at school by module outcome by field of study and gender, 1999

MALES													
Field of Study	Assessed			Range of module outcomes*									
	Pass	Fail	Total	Pass	Fail	Not Completed	Completed	Continuing Studies	Recognised Prior Learning	Credit Transfer	Withdrawn	Not Stated	Total
1.Land & Marine Resources, Animal Husbandry	87.0	13.0	100.0	57.4	8.6	0.1	0.7	16.2	0.4	0.8	3.1	12.6	100.0
2. Architecture, Building	88.0	12.0	100.0	61.7	8.4	0.0	0.7	2.1	0.1	1.1	3.4	22.4	100.0
3. Art, Humanities & Social Sciences	84.8	15.2	100.0	71.6	12.8	0.2	2.0	2.0	0.1	1.3	4.8	5.2	100.0
4.Business, Administration, Economics	90.4	9.6	100.0	65.0	6.9	0.1	1.8	1.7	0.8	1.2	3.4	18.9	100.0
5. Education	99.4	0.6	100.0	79.1	0.5	0.0	5.4	5.6	2.3	0.0	3.6	3.6	100.0
6. Engineering, Surveying	85.3	14.7	100.0	62.0	10.7	0.2	0.7	4.1	0.8	1.9	5.1	14.6	100.0
7. Health, Community Services	85.3	14.7	100.0	69.3	11.9	0.1	6.9	3.9	1.2	0.1	5.2	1.4	100.0
8.Law, Legal Studies	85.5	14.5	100.0	63.5	10.8	0.0	1.8	0.0	1.2	0.0	22.8	0.0	100.0
9. Science	92.3	7.7	100.0	59.1	4.9	0.1	0.3	0.6	0.2	0.9	2.5	31.5	100.0
10. Veterinary Science, Animal Care	75.8	24.2	100.0	27.5	8.8	0.6	0.0	57.9	0.6	0.0	1.8	2.9	100.0
11. Services, Hospitality, Transportation	90.2	9.8	100.0	69.1	7.5	0.0	1.1	3.0	0.6	2.1	2.8	13.9	100.0
12. TAFE Multi-Field Education	90.9	9.1	100.0	62.0	6.2	0.5	3.9	1.3	0.2	0.1	3.8	22.0	100.0
Total	89.0	11.0	100.0	63.1	7.8	0.2	1.6	3.3	0.4	1.2	3.6	18.8	100.0
Total number (000's)	237.7	29.5	267.2	237.7	29.5	0.6	5.9	12.6	1.7	4.3	13.5	70.8	376.6

*The module result classification identifies the type of result or outcome that the student has achieved through an enrolment in a module or unit of competency. The reported module results are classified as follows: passed, failed, hours not complete, class hours completed, continuing studies, recognition of prior learning, credit transfer, withdrew and not known.

Table 2 (cont) : Percentage of vocational module enrolments for students still at school by module outcome by field of study and gender, 1999

FEMALES													
Field of Study	Assessed			Range of modules*									
	Pass	Fail	Total	Pass	Fail	Not Completed	Completed	Continuing Studies	Recognised Prior Learning	Credit Transfer	Withdrawn	Not Stated	Total
1 Land & Marine Resources, Animal Husbandry	90.4	9.6	100.0	64.4	6.8	0.1	1.0	9.1	0.3	0.9	4.1	13.2	100.0
2 Architecture, Building	90.9	9.1	100.0	62.8	6.3	0.0	1.0	1.0	0.4	2.3	5.8	20.4	100.0
3 Art, Humanities & Social Sciences	87.7	12.3	100.0	77.4	10.9	0.1	1.6	1.6	0.2	1.5	4.3	2.5	100.0
4 Business, Administration, Economics	94.7	5.3	100.0	70.0	3.9	0.1	1.1	1.6	0.9	2.0	4.1	16.4	100.0
5 Education	92.0	8.0	100.0	71.3	6.2	0.6	3.7	10.1	2.1	0.5	3.9	1.6	100.0
6 Engineering, Surveying	86.6	13.4	100.0	62.1	9.6	0.1	0.8	9.6	0.4	2.2	6.3	8.8	100.0
7 Health, Community Services	90.8	9.2	100.0	75.0	7.6	0.1	0.8	4.0	1.2	3.5	7.0	0.8	100.0
8 Law, Legal Studies	98.0	2.0	100.0	68.9	1.4	0.0	0.0	0.5	1.4	0.0	27.8	0.0	100.0
9 Science	94.9	5.1	100.0	62.7	3.4	0.0	0.3	0.1	0.4	0.8	2.7	29.6	100.0
10 Veterinary Science, Animal Care	84.2	15.8	100.0	48.6	9.1	0.0	0.0	37.3	2.6	0.0	2.1	0.3	100.0
11 Services, Hospitality, Transportation	94.1	5.9	100.0	76.7	4.8	0.0	0.9	2.8	0.4	1.3	2.8	10.2	100.0
12 TAFE Multi-Field Education	90.4	9.6	100.0	61.5	6.5	0.8	5.6	1.6	0.3	0.2	5.8	17.8	100.0
Total	93.0	7.0	100.0	70.4	5.3	0.2	1.5	2.4	0.6	1.4	4.0	14.1	100.0
Total number (000's)	257.6	19.3	276.9	257.6	19.3	0.6	5.6	8.9	2.1	5.2	14.7	51.5	365.7

*The module result classification identifies the type of result or outcome that the student has achieved through an enrolment in a module or unit of competency. The reported module results are classified as follows: passed, failed, hours not complete, class hours completed, continuing studies, recognition of prior learning, credit transfer, withdrew and not known.

Table 2 (cont) : Percentage of vocational module enrolments for students still at school by module outcome by field of study and gender, 1999

Field of Study	Assessed			PERSONS Range of modules*									
	Pass	Fail	Total	Pass	Fail	Not Completed	Completed	Continuing Studies	Recognised Prior Learning	Credit Transfer	Withdrawn	Not Stated	Total
1 Land & Marine Resources, Animal Husbandry	88.2	11.8	100.0	59.6	8.0	0.1	0.8	14.0	0.4	0.8	3.4	12.8	100.0
2 Architecture, Building	88.3	11.7	100.0	61.7	8.2	0.0	0.8	2.1	0.2	1.2	3.6	22.3	100.0
3 Art, Humanities & Social Sciences	86.4	13.6	100.0	74.7	11.8	0.1	1.8	1.7	0.2	1.4	4.5	3.8	100.0
4 Business, Administration, Economics	93.3	6.7	100.0	68.4	4.9	0.1	1.3	1.6	0.9	1.7	3.9	17.2	100.0
5 Education	94.9	5.1	100.0	74.3	4.0	0.4	4.4	8.3	2.2	0.3	3.8	2.4	100.0
6 Engineering, Surveying	85.4	14.6	100.0	62.0	10.6	0.2	0.7	4.5	0.8	1.9	5.2	14.2	100.0
7 Health, Community Services	89.9	10.1	100.0	74.1	8.3	0.1	1.8	3.9	1.2	3.0	6.7	0.9	100.0
8 Law, Legal Studies	92.2	7.8	100.0	66.5	5.6	0.0	0.8	0.3	1.3	0.0	25.5	0.0	100.0
9 Science	93.5	6.5	100.0	60.7	4.2	0.0	0.3	0.3	0.2	0.8	2.6	30.7	100.0
10 Veterinary Science, Animal Care	83.1	16.9	100.0	44.6	9.1	0.1	0.0	41.2	2.2	0.0	2.0	0.8	100.0
11 Services, Hospitality, Transportation	92.9	7.1	100.0	74.2	5.7	0.0	1.0	2.9	0.5	1.5	2.8	11.4	100.0
12 TAFE Multi-Field Education	90.6	9.4	100.0	61.8	6.4	0.6	4.6	1.4	0.2	0.1	4.6	20.3	100.0
Total	91.0	9.0	100.0	66.7	6.6	0.2	1.6	2.9	0.5	1.3	3.8	16.5	100.0
Total number (000's)	495.3	48.8	544.1	495.3	48.8	1.2	11.6	21.6	3.8	9.6	28.3	122.3	742.4

*The module result classification identifies the type of result or outcome that the student has achieved through an enrolment in a module or unit of competency. The reported module results are classified as follows: passed, failed, hours not complete, class hours completed, continuing studies, recognition of prior learning, credit transfer, withdrew and not known.

The module outcomes for students at school who undertook modules in the vocational education and training sector during 1999 are presented in table 2. Information is presented in table 2 about:

- ♦ the percentage of students who passed or failed a module out of all students who were assessed, and
- ♦ the range of all module outcomes that a student can achieve through an enrolment in a module or unit of competency. The reported module results are classified as passed, failed, hours not complete, class hours completed, continuing studies, recognition of prior learning, credit transfer, withdrew and not known.

Almost nine out of every ten boys still at school (89 per cent), who studied and were assessed in the vocational education and training sector, were awarded a pass grade. The results varied across field of study with a lower percentage of boys assessed a pass grade in the 'veterinary science, animal care' field of study classification compared with field of study classifications.

On average, boys still at school did not perform as well as girls still at school in the vocational education and training sector. Only 7 per cent of girls, who were assessed in the vocational education and training sector during 1999 were awarded a fail, compared to 11 per cent of boys. Girls consistently outperformed boys in all field of study groupings, except the education field of study classification. However, only a minority (less than 0.1 per cent) of all students still at school were enrolled in the education field of study (see table 1).

2. Patterns of participation in the senior secondary curriculum by gender

The NCVER and ACER jointly undertook research into the education and labour market outcomes for students according to their choice of subjects in senior secondary school. The results of the research are presented in the report titled *Curriculum and careers: The education and labour market consequences of year 12 subject choice: LSAY research report no 12*, by Stephen Lamb and Katrina Ball, published by ACER in September 1999. The analysis uses longitudinal data from the Australian Youth Survey (AYS).

One section of the report (pgs 7-10) discusses gender differences in participation in subjects offered in senior secondary school. This section of the report is reproduced below:

"The long-term ascendancy of girls over boys in rates of school completion (about 10 per cent more girls than boys remain to Year 12) does not mean that girls outnumber boys in all parts of the curriculum. On the contrary, there are a range of courses in which boys enrol in much greater numbers. This is apparent from the comparison of percentages of course enrolments for males and females presented in Table 2.1. It shows that the course enrolments of males and females vary.

The group of subjects which stands out in terms of male enrolments is maths and the physical sciences (mathematics, advanced maths, physics, chemistry). Almost one in five boys took this combination of subjects in Year 12. Female enrolments in this group of subjects were not small relative to other subject combinations (eight per cent of all girls), but well below the rate for boys.

If maths and the physical sciences attract many boys, the combination of humanities, biological sciences and maths attract many girls. Nearly one-quarter of females enrolled in courses involving biological science, maths and humanities subjects. For example, 10.5 per cent of all females enrolled in a course

combining biology, history, geography, art and maths. About five per cent of male candidates took this group of subjects. A further 12.8 per cent of girls took a similar combination of subjects but with a less academically demanding level of maths study, general maths, and the inclusion of health education. Seven per cent of male Year 12 students enrolled in this course.

Girls are also more likely to enrol in arts and humanities courses. About 14 per cent of girls participated in courses combining mainly arts and humanities subjects. About 4 per cent of girls took the humanities course of French, music, literature, history and geography. This was about double the rate for boys.

Table 2.1 shows that there are differences in the courses that males and females undertake in Year 12. To highlight the parts of the curriculum where there are the strongest gender imbalances, it is useful to look at the differences in the ratios of enrolment rates. These are displayed in Figure 2.1. It is important to note that the figure does not present rates of participation. Therefore, it is not possible to identify where most girls are enrolled or most boys (this information is provided in Table 2.1). Figure 2.1 shows the groups of subjects with the largest gender gaps, those where the rate of participation is more than 1.5 times greater for either males or females. The left panel presents the subject groups where females are over-represented and the right panel, the courses where males are over-represented. The bars represent the ratios of the percentages of enrolments of males to females (right panel) and females to males (left panel). The top bar on the right hand panel, for example, was derived by dividing the male rate of enrolment (5.8 per cent) by the female rate of enrolment (0.5 per cent) to give a ratio of enrolment rates (11.6 to 1).

Clearly, males dominate the technology-based vocational education courses. The rate of enrolment for boys in the group of subjects comprising technical drawing, technology, general maths and computing is almost twelve times that for girls. The gaps are also large in the group comprising agriculture, craft, technology and general maths where females are nine times less likely to enrol than are boys. Boys are over-represented in the industrial technology course and in the maths and physical sciences.

Girls are most heavily over-represented in the secretarial studies course (typing, secretarial studies, general maths, home economics, catering) where their rate of enrolment is greater than that for boys by a ratio of more than five to one. Courses involving arts, humanities and biological science are also largely feminised in terms of the ratio of participation for females compared to males.

These figures suggest that the curriculum in the senior years of school remains strongly gender segmented.”

Pgs 7-10, *Curriculum and careers: The education and labour market consequences of year 12 subject choice: LSAY research report no 12*

Table 2.1 Participation in the Year 12 curriculum, by gender (%)*

Subject group	Males	Females	Total	N
ARTS AND HUMANITIES				
French,german,music,literature,history,geography	2.3	4.1	3.3	104
Art,art other,graphics,music,media studies	4.0	5.2	4.6	147
History,geography,gen. maths,humanities other,art	2.9	4.7	3.9	123
Total	9.2	14.0	11.8	374
BUSINESS STUDIES				
Maths,economics,accounting,computing	6.6	4.8	5.6	178
Economics,accounting,legal studies,gen.	3.4	3.5	3.5	110
Total	10.0	8.3	9.1	288
BUSINESS STUDIES AND HUMANITIES				
Maths,economics,geography,history,art	3.1	3.3	3.2	102
Bus. Studies,legal studies,textiles,gen. maths,biology	3.8	5.9	4.9	156
Total	6.9	9.2	8.1	258
BUSINESS STUDIES AND SCIENCES				
Maths,economics,chemistry,biology,computing	4.8	4.7	4.7	151
SCIENCES AND MATHS				
Maths, advanced maths,physics,chemistry	19.0	8.0	13.0	414
Maths,chemistry,biology,other science,computing	4.9	7.1	6.1	196
Total	23.9	15.1	19.1	610
SCIENCES AND HUMANITIES				
Maths,chemistry,literature,music,french,history,art	2.5	4.1	3.4	110
Gen. Maths,biology,history,geography,health,art	7.0	12.8	10.2	323
Maths,biology,history,geography,art,LOTE	5.4	10.5	8.1	259
Total	14.9	27.4	21.7	692
HEALTH SCIENCES AND PHYSICAL EDUCATION				
Phys. Ed.,home ec.,health,biology,gen. science,gen. maths	3.1	3.8	3.5	111
Maths,biology,phys. ed.,health,home ec.,legal studies	4.5	6.0	5.3	168
Health,gen. maths,general science,biology,home ec.	4.4	4.3	4.4	139
Total	12.0	14.1	13.2	418
VOCATIONAL EDUCATION AND TECHNOLOGY				
Technical drawing,technology,gen. maths,computing	5.8	0.5	2.9	92
Agriculture,craft,technology,gen. maths,health,gen. science	5.6	0.6	2.9	91
Typing,secretarial studies,gen. maths, home ec., app. comp.	1.0	5.3	3.4	107
Maths,industrial arts,industrial technology,tech. drawing	5.9	0.8	3.1	100
Total	18.3	7.2	12.3	390
TOTAL (N=)	100 (1455)	100 (1726)	100	3181

* English was excluded from the analysis because it was studied by the majority of students, irrespective of subject grouping.

NOTE ON MATHS: "General maths" represents the least academically-demanding level of maths (including subjects such as Maths in Society). "Maths" represents a university-qualifying level of maths study. "Advanced maths" represents the subjects such as extension or specialist maths which are often required for entry to courses such as engineering.

SOURCE: Tabulations from *Australian Youth Survey* based on the 1990-1994 16 year-old samples and follow-up surveys (unweighted N=6,052; weighted N=1,189,846).

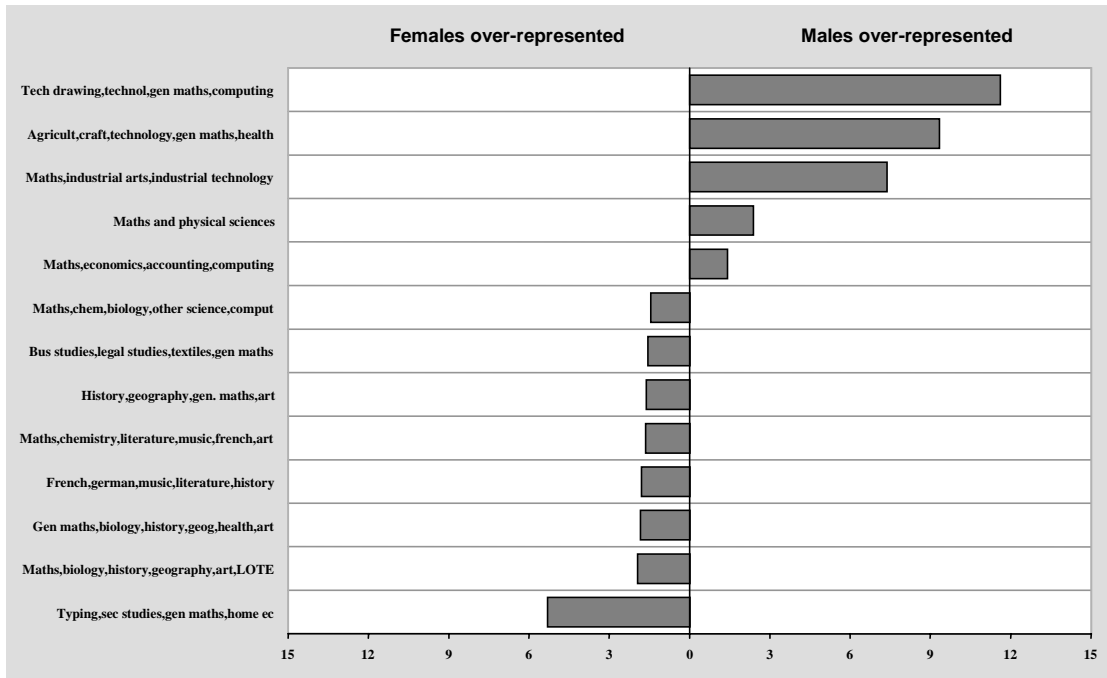


Figure 2.1 Gender gaps in course enrolments expressed as ratios of percentages of male and female enrolments

3. Participation and outcomes from vocational education and technology courses that were offered in senior secondary schools in the early 1990s

Participation in school-based vocational courses and the outcomes for these students were examined as part of the joint NCVET / ACER research project examining education and labour market outcomes for students according to their choice of subjects in senior secondary school. The analysis uses longitudinal data from the *Australian Youth Survey* (AYS). Respondents to the AYS provide detailed information about their gender, family socio-economic and demographic background, education and training and labour market experiences. For this study, the sixteen year-olds who joined the survey from 1990 to 1994 inclusive, were tracked annually to 1997 to explore the links between subjects taken in Year 12 and further education and labour market outcomes. The results of this research by Katrina Ball and Stephen Lamb titled "Student destinations from vocational education in schools" was published in *VOCAL, The Australian Journal of Vocational Education and Training in Schools, Volume 2, 1999-2000*. The article is reproduced below.

"The aim of school-based vocational courses is to assist students make the transition from school to work or to further education and training. To gauge the effectiveness of these courses it is important to monitor who is taking the programs and to assess the opportunities the programs are providing students in terms of further education and work. To date, there has been little evaluation of the effectiveness of vocational programs nationally, although Polesel, *et al* (1999) found that the Victorian VET-in-schools program was fulfilling an important role in catering for the diverse groups of students undertaking VCE studies and that outcomes for VET-in-schools students were improving over time. Misko (1999) reports that more destination studies of school-industry programs are needed before we can determine if this pathway is helping students make the transition from school to further training and work more easily.

While there are many data sources available to provide information on the types of students participating in vocational programs, longitudinal data is required to identify and measure the outcomes from vocational programs for students from a range of social and economic backgrounds. Recently completed research using the Australian Youth Survey provides information on the post-school outcomes of students who undertook a vocationally based curriculum in the early 1990s. This research provides a baseline against which the outcomes from the recent enhancements to vocational courses through the expansion of VET in schools can be measured. This will allow an assessment to be made in the future of the impact of changes to the delivery of vocational education on both the types of students participating in these courses and their post-school outcomes.

Classifying vocational courses

About 12 per cent of the national sample of over 3000 Year 12 students from the Australian Youth Survey participated in the vocational education and technology curriculum. Four different vocational subject combinations or courses of study were identified for the five-year period, 1990 to 1994. They comprised:

1. technical drawing, technology, general maths and computing;
2. agriculture, craft, technology, general maths, health, and general science;
3. typing, secretarial studies, general maths, home economics and applied computing; and
4. maths, industrial arts, industrial technology and technical drawing.

Students were identified as having taken one of the above courses if they had chosen a minimum of three subjects from one of the four groups. Most studied four.

Participation in vocational courses

In the early to mid-1990s there were gender differences in participation in school-based vocational courses. Almost 1 in 5 boys enrolled in a vocational course compared to about 1 in 14 girls. Most of the boys were enrolled in a technology-based course whereas most of the girls enrolled in the secretarial studies course. About five per cent of girls participated in the secretarial studies program, but only two per cent of girls were represented in the technology courses. For every girl there were twelve boys studying the group of subjects comprising technical drawing, technology, general maths and computing and girls were outnumbered one to nine in the agriculture, craft, technology, general maths, health, and general science course.

Students from low socio-economic status (SES) families were over-represented in the vocational education and technology curriculum. Roughly 16 per cent of students from low SES backgrounds (from the lowest of four SES groups) participated in a vocational course in Year 12. By comparison, eight per cent of students from the highest SES group participated in a VET-based course. Within the vocational courses, low SES students were over-represented in the technical drawing, technology, general maths and computing course where the rate of enrolment of low SES students was over five times greater than the rate of enrolment of high SES students.

Students undertaking one of the four vocational courses in Year 12 were predominantly from government schools. Roughly 14 per cent of students from government schools studied one of these courses compared with eight per cent of Catholic school students and only four per cent of students from non-Catholic private schools. For those in private non-Catholic schools, enrolments were above 1 per cent for only one course — the secretarial studies course.

Compared to students in city areas, rural students were more likely to undertake a vocationally-based course. About 16 per cent of rural students enrolled in the courses compared with 11 per cent of urban students. The agriculture-based subjects and the combination comprising technical drawing, technology, general maths and computing were especially popular with the rural students.

Ethnicity was also important in terms of who participated in vocational courses in Year 12. Students with parents born in a non-English speaking country were under-represented in all vocational courses, though principally in the agricultural studies course and the secretarial-studies course.

In general, students who were high achievers at school (in the top quartile of achievement in reading comprehension and numeracy at age 14) were not attracted to vocational and technical courses with only eight per cent of this group enrolled in this curriculum. However, almost one in five students from the lower two quartiles of achievement were enrolled.

Further education and training

Students in the sample were tracked to 21 years of age to establish the early post school outcomes of students according to their senior secondary subject choices.

In the year after completing Year 12, two-thirds of students who studied the technical drawing, technology, general maths and computing combination of subjects did not pursue any further education and training. By 21 years of age, half of the students who had studied these subjects still had not participated in any formal programs of study or training. This was lower than for students undertaking studies from most other parts of the Year 12 curriculum.

Post-school vocational education and training

Many students doing a vocational education and technology course in school obtained an apprenticeship by age 21. The proportion of teenagers gaining an apprenticeship straight from school after studying a vocational education and technology course (except for secretarial studies) was double that of teenagers doing non-vocational courses in Year 12. Almost a third of Year 12 students who studied a combination of technical drawing, technology, general maths and computing, and a quarter of those who studied maths, industrial arts, industrial technology and technical drawing had commenced an apprenticeship by age 21.

Traineeships were also part of the post-school education and training for Year 12 vocational education and technology students. Roughly eight per cent of those who had studied a technology-based course in Year 12 had taken up a traineeship by age 21. TAFE courses were also very important to these groups, with a further one in five students doing a technology-based course in their final school year entering a TAFE diploma or certificate course (other than an apprenticeship or traineeship).

Students who chose the agriculture-based subjects in Year 12 were less likely to have taken up an apprenticeship (one in five) or another TAFE course (14 per cent) by age 21. However, 12 per cent of this group had taken up a traineeship by this age.

For those students who took secretarial studies, six per cent entered an apprenticeship, nine per cent commenced a traineeship, and 15 per cent enrolled in some other TAFE course straight from school.

Employment experiences

Students who undertook a vocational education and technology-based course rather than courses involving subjects from other parts of the Year 12 curriculum were much more likely to attempt to make a direct entry to the labour force after leaving school rather than pursue further study and training.

There experiences were varied. More than one in five teenagers who entered the labour force straight from school after studying the combination of subjects comprising technical drawing, technology, general maths and computing, or the combination of maths, industrial arts, industrial technology and technical drawing were unemployed one year after leaving school. This was high compared to those studying other subject combinations.

At 21 years of age, students from the Year 12 technology courses displayed a relatively high rate of unemployment with one in ten unemployed. This unemployment rate was similar to the rate for early school leavers.

Relatively positive employment outcomes were achieved by people who studied the agriculture-based subjects with less than one in ten students unemployed a year after leaving school and less than 3 per cent unemployed at age 21. Unlike many others, members of this group were likely to secure full-time employment while still a teenager.

Along with early school leavers, young people who studied secretarial-based subjects had a greater likelihood of having experienced a number of spells of unemployment by 19 years of age compared with those who studied other subjects. They also tended to spend longer periods of time unemployed. This was also the situation for teenagers who had taken technology-based subjects.

Conclusions

With the exception of students who took agriculture-based subjects, students who studied a vocational education and technology curriculum in the early 1990s often struggled to make a successful transition to full-time employment during their teenage years. For those who did not obtain an apprenticeship the outlook was particularly bleak with employment outcomes similar to those achieved by early school leavers. Comparatively few students who took this curriculum continued with formal education after senior secondary school.

References

Misko, J. (1999) Transition pathways: What happens to young people when they leave school, National Centre for Vocational Education Research Ltd: Adelaide

Polesel, J., Teese, R., O'Brien, K and Unger, S. (1999) VET in schools: A study of post-schooling destinations, Department of Education, Victoria: Melbourne

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