NCVER



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ISBN 0 87397 586 3
TD/TNC 61.03

Published by NCVER Ltd
252 Kensington Road, Leabrook, SA 5068
PO Box 115, Kensington Park, SA 5068, Australia
www.ncver.edu.au

Quality System
Quality
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Executive summary

The research questions

The study sought to address a number of issues concerned with the employment outcomes from vocational education, using data collected in the 1997 Graduate Destination Survey (GDS). A series of focus groups and interviews with women Technical and Further Education (TAFE) graduates working in non-traditional occupations were also undertaken to explore some of the issues arising from the data analysis. The primary focus of the research was on male and female TAFE graduates working full-time at the time they were surveyed.

The main research questions addressed were:

- Why is there a gap in full-time earnings between male and female graduates, especially in some industries?
- Why does gaining a TAFE qualification appear not to provide a relative income benefit for female graduates in some industries vis à vis all females in that industry?
- Is occupational gender segmentation the reason for differences in male and female graduates' earnings?
- Are decisions on courses of study made on the basis of well-informed advice on likely income levels upon completion?
- Is the vocational education and training (VET) system reinforcing occupational gender segmentation by actively encouraging females and males into different streams of study?

The study in part focuses on six major industry divisions of employment for TAFE graduates: manufacturing; retailing; accommodation, cafés and restaurants; finance and insurance; health and community services; and personal and other services. A separate analysis on an occupational basis was undertaken in respect of all graduates employed full-time responding to the survey.

The major findings

Across all the six industries examined in detail, female TAFE graduates working full-time earned about 84% of male graduates' earnings. (For all female graduates surveyed across all 17 industry divisions the figure was about 85%.) Reflecting the behaviour of the whole labour force males working full-time worked longer hours than full-time employed female graduates. This difference, however, explained at most only part of the income inequity.

As well as achieving lower incomes, other employment outcomes for female TAFE graduates are also poorer than for males. Female graduates experience higher unemployment rates and a smaller proportion attain full-time employment. Female graduates are more likely not to be in the labour force, are more likely to be working part-time and take longer than males to find a job.

The income disparity could not be explained by differences in qualifications gained by the graduates. While the female graduates in the six industries examined in detail had a different profile of qualifications to their male counterparts, the main differences were that females were *more* likely to hold higher level qualifications, such as diplomas and associate diplomas, while males were much more likely to hold a trade certificate. The earnings of males with trade certificates did not, however, explain the income difference as male tradespersons working full-time earned $474 per week, well below the average weekly earnings of all male graduates in the survey ($587) and below the average for all full-time employed females of $500.

While differences in level of qualification could not account for the income disparities between full-time employed male and female graduates, the analysis did reveal substantial differences in the fields of study undertaken by males and females. Females predominated in the business/administration,

services/hospitality and health/community services fields, while males were the overwhelming majority of students in engineering and in architecture/building. This segregation by field of study appears to anticipate the occupational segregation that occurs in the workplace.

When a more detailed analysis was undertaken of field of study by gender, cross-tabulating this data by level of qualification, the degree of gender segregation by course becomes more apparent. In one table (appendix 5, on disk) that aggregates the six focus industries by field of study by level of qualification by gender, in more than half of the cells with values, females comprise either less than 30% or more than 70%. For those graduates working in health and community services, and finance and insurance, this measure of course segregation is much higher, with 79% and 71% respectively of females in cells that lay outside the 30–70% range.

Even when women with similar levels of qualification as males are employed full-time, they are much less likely to be employed in professional, associate professional or managerial positions. For example, in the finance industry over two-thirds of males with associate diplomas are employed in associate professional, professional or managerial positions; however, only just over one-third of females with this qualification were working at this level. Similar patterns exist in the other industries examined.

Generally, women appear to be less engaged with the labour market during their TAFE studies. They are more likely than males to be studying to get a job, whereas males are more likely to be studying for reasons related to their current job. The predominance of males in apprenticeships appeared to be the main factor behind this difference. Males are more likely to have employer support for their studies, while females are more likely to be receiving support from government, family or spouse.

In many respects the VET system seemed to work more smoothly for males than females. Females were more likely to have difficulty organising access to courses, had difficulties with child care, and often had to travel some distance to reach the college offering their course.

One important and perhaps encouraging finding is that earnings of women TAFE graduates aged under 30 working full-time are closer to their male counterparts, around 90%, than for older female graduates, whose earnings fall as low as 75% of similarly aged males.

The study also reveals sizeable differences in income disparities between the six focus industries. In most cases the disparities between male and female TAFE graduates are less than between all males and females working full-time in each of the six industries.

Many participants in the focus groups seemed to have made course and career choices on the basis of inadequate information. Nevertheless, many women made decisions not to enter traditionally male-dominated courses because they were wary of encountering harassment from fellow students, from teachers and prospective employers. Women who had successfully entered male-dominated occupations seemed to have done so if they had had previous experience in the labour force.

Introduction

This study of the earnings of full-time Technical and Further Education (TAFE) graduates, using data from the 1997 TAFE Graduate Destination Survey (GDS) and a range of Australian Bureau of Statistics (ABS) data sources, was funded by the National Research and Evaluation Committee. The aim of the study is to identify factors that contribute to the marked differences in the earnings of full-time male and female TAFE graduates as revealed in the 1997 GDS.

The second national survey of TAFE graduates, the 1997 TAFE Graduate Destination Survey (GDS) was undertaken in 1997 by Rearck Research on behalf of the National Centre for Vocational Education Research (NCVER) for the National Advisory Committee on Vocational Education and Training Statistics. The survey was funded by the Australian National Training Authority (ANTA). All TAFE graduates who had completed courses of at least 200 hours or one semester's duration in 1996 were included in the survey. In total 110,409 graduates were surveyed of whom 60,746 responded, a response rate of 55%. The NCVER published a National Report on this survey in December 1997 (NCVER 1997).

The origin of this study of the earnings of full-time employed male and female TAFE graduates lay in the observation that, in the 1997 TAFE GDS, female graduates earned on average only around 84% of male graduates. This study aims to determine the relative value of obtaining a TAFE qualification for those in the full-time work force and to examine factors contributing to markedly lower earnings for female graduates.

While it is well known that marked income differences exist between all full-time males and females in the labour market, it would normally be assumed that the gaining of a formal qualification would serve to narrow the income gap between males and females. The initial analysis that led to the proposal for this study suggested that, in some industries, the opposite was the case.

Methodology

This study is concerned primarily with the subset of GDS respondents who were employed full-time at the time of the survey. At several places in the report, comments on characteristics of graduates other than those employed full-time at the time of the 1997 GDS are provided. In every major Australian & New Zealand Standard Industry Classification (ANZSIC) industry division, full-time male TAFE graduates earned on average more than full-time female TAFE graduates, although the income differences varied considerably by industry. This is not surprising, given that the same situation applies across the whole labour force.

This study focuses on TAFE graduate employment as surveyed in the 1997 TAFE GDS in six of the 17 ANZSIC industry divisions; manufacturing, retailing, accommodation, cafés and restaurants, finance and insurance, health and community services, and personal and other services. Together these six industries accounted for almost 23,000 of the 40,030 employed students in the survey, or over 57%.

These six industries were selected for study as they appear to be representative of the two distinct groups among the 17 ANZSIC industries. These two groups were identified at the beginning of this project and were characterised as industries where a TAFE qualification either appeared to narrow the earnings gap between males and females or to widen the gap. They also attracted sufficient numbers of male and female graduates to provide reliable data. This initial comparison used data on earnings of all males and females employed full-time from the ABS Employee Hours and Earnings, May 1996 survey, (Cat. No. 6306.0). During the course of the analysis it was decided to use earnings data from the 1996 Census in preference to this other ABS source as Census data could be disaggregated by age group to provide a more detailed understanding of the issue.

Stage 1 of the study involved the analysis of a series of tables extracted from the GDS and provided to the researchers by the NCVER. Data on earnings from the GDS were compared with ABS data from both the sources mentioned above. A draft report on Stage 1 was completed and the findings from that report were used as the basis for framing questions used in the focus groups conducted in Stage 2.

Stage 2 of this study involved the convening of focus groups of TAFE students and graduates. In addition, a series of detailed structured interviews with female TAFE graduates working in male-dominated occupations were also conducted in Stage 2. Three focus groups of women and one of men were convened, each with ten participants. Participants in these focus groups were recruited by a private research company specialising in the recruitment of focus group participants. TAFE colleges or State training agencies were not involved in the selection of these focus group participants. Focus groups were conducted in Sydney, Newcastle and Canberra.

The purpose of the focus groups and interviews was to pursue in more depth some of the issues raised from Stage 1. Specific questions pursued were in relation to sources of information on the labour market and VET, the provision of information on VET outcomes, reasons for females selecting from a narrow range of field of study options, attitudes to 'traditional' and 'non-traditional' jobs and their perceptions of the reasons for income differentials. Transcripts from the focus groups are not provided in this report for reasons of confidentiality. Extracts from the focus groups and individual interviews are included in the body of the report. The discussion guide used in the focus groups is attached as appendix 6 (on disk).

Differences in hours worked by full-time workers emerged as an important issue in the analysis. Appendix 3 (on disk) provides a description of the methodology used to analyse these differences and relevant data.

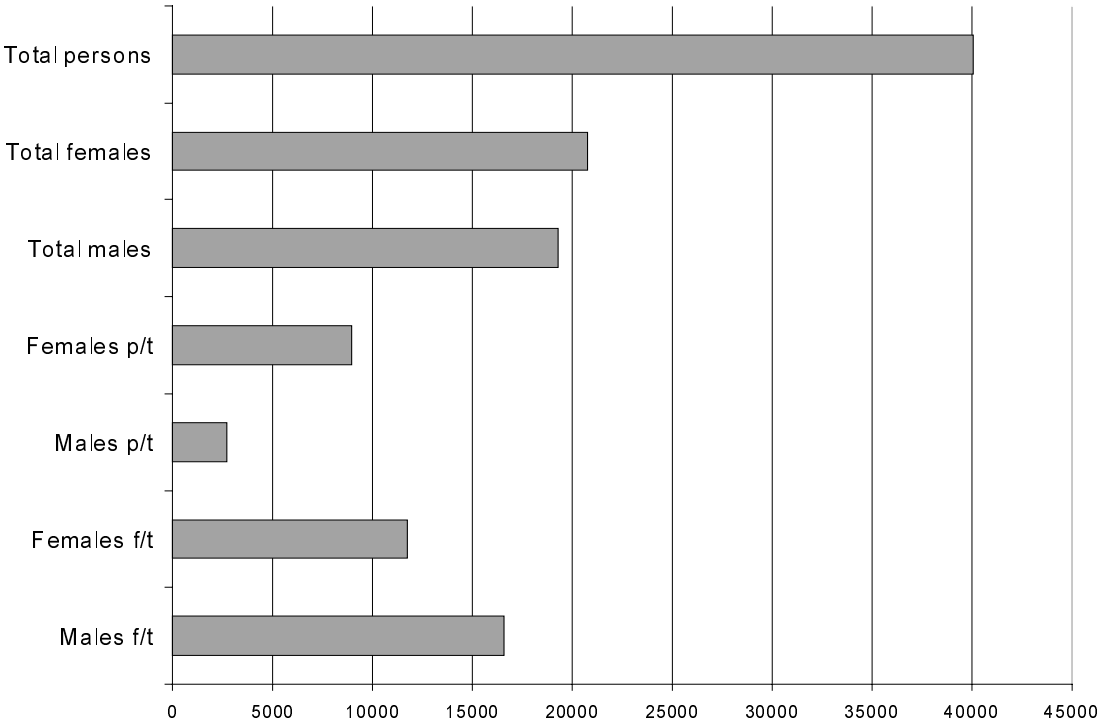
Graduate characteristics

Stage 1 of this research project involved the detailed analysis of earnings data from the 1997 GDS. The study used data from almost 61,000 graduates who responded to the survey. Some data, especially the occupational analysis part of this study (appendix 1), are presented in relation to the labour force status of all these respondents, while other data are provided in relation to those graduates employed full-time in the six focus industries. Detailed analysis of each of the six focus industries is provided later in this report. The occupational analysis appendix (appendix 1) of this report examines the occupational destinations of all the responding graduates who were employed full-time in all industries, more than 28,000 persons.

The observations made in relation to the data are amplified throughout this report by comments obtained from the participants in a series of focus groups and case study interviews conducted by the authors as Stage 2 of this study.

The following figure provides a summary of the labour force status of the graduates surveyed in the 1997 GDS.

Figure 1: Overall labour force status



Source: NCVER1997 TAFE GDS

Six key destination industries of employment were analysed in detail. These industries were chosen initially because they appeared to show diverging tendencies in the relative value of a TAFE qualification for males and females. This analysis involved comparison of the full-time earnings of all males and females in those industries, the earnings of the surveyed full-time employed TAFE

graduates, and the benefit gained for males and females in obtaining a TAFE qualification relative both to each other and respectively to all males and all females in each industry.

The following table summarises the key employment characteristics of the 1997 TAFE graduates employed in these six industries.

Table 1: Employment of 1997 TAFE graduates by gender in focus industries, by full-time/part-time

Industry	Males f/t	Females f/t	Males p/t	Females p/t	Total males	Total females	Total persons
Manufacturing	3813	1143	175	363	3988	1506	5494
Retail	2155	1063	726	1826	2881	2889	5770
Accommodation, cafés and restaurants	620	736	443	1053	1063	1789	2852
Finance and insurance	364	617	37	191	401	808	1209
Health and community services	486	2495	227	2594	713	5089	5802
Personal and other services	582	859	96	299	678	1158	1836
Total six industries	**8020**	**6913**	**1704**	**6326**	**9724**	**13239**	**22963**

Source: NCVER 1997 GDS, unpublished data

From the above table it is clear that there are marked gender differences in industry of employment for TAFE graduates. Almost half of all full-time employed male graduates in these six industries (47.5%) found their jobs in the manufacturing industry. Full-time female employment was less narrow, with the major industry of employment of the six, health and community services, accounting for 36.1% of full-time female graduate employment. For all employed graduates the other industry accounting for major gender differences is construction, with almost 90% of all employed TAFE graduates being males.

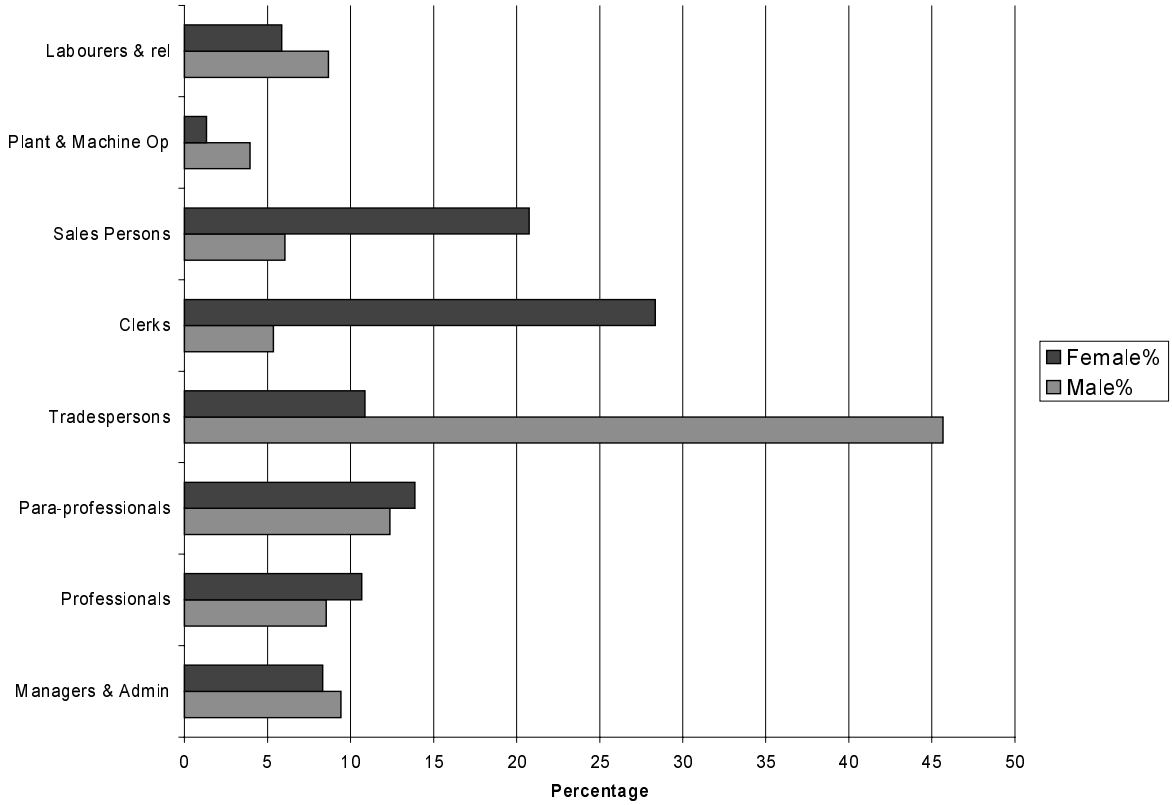
Details of male and female graduate employment in all industries are provided in appendix 5.

One striking feature of the above table is that males account for a majority of full-time workers in only two of the six industries, manufacturing and retailing, despite representing nearly 54% of the total full-time workers. Across all 17 industries males accounted for 58.5% of all full-time working graduates. In part, this reflects lower male response rates to the 1997 GDS.

Occupation

Reflecting the different patterns of male and female employment by industry was the quite different pattern of occupational employment outcomes for male and female graduates working full-time. The following figure summarises the percentage distribution of full-time employed TAFE graduates from the 1997 GDS.

Figure 2: Occupation by gender, full-time employed TAFE graduates



Source: NCVER 1997 GDS

Occupational issues are examined in more detail later in this report in the occupational analysis section in appendix 1. It is clear from the above figure that males are concentrated in trade level jobs, while females are concentrated in clerical and sales/service occupations. Occupational gender segregation appears, in fact, to be a key factor in earnings differences.

On an occupational basis, women's employment outcomes were inferior to men's on a number of indicators, not just in having lower wage and salary outcomes. Women were concentrated in lower skilled occupations. They also were less likely to work full-time, and those that did tended to work shorter hours than males. Male respondents far outnumbered their female peers in working '40 plus hour' weeks.

The majority of respondents changed occupations during or after their course, from lower skilled occupations to the higher skilled. However, for women there was a different pattern than for men. Women tended to move into clerical jobs, whilst men moved away from the clerical field. For male graduates, the large movements in absolute terms were from labourers and sales and personal service workers to trades occupations (1134 and 513 respondents respectively, or 7.2% and 3.2% of male respondents). Women's main occupational destinations were clerical and para-professional occupations, from sales and personal service occupations.

On an occupation by occupation basis the qualification profiles of males and females were closer than the pattern of field of study. This suggests that the use of major occupational groups for this analysis masked differences in occupational outcomes that would be apparent if the analysis had been conducted at the minor occupation or unit group level.

Anna is a 26 year old second year automotive apprentice. She works for a Group Training Company and has a job with a motor dealer. She is undertaking Stage 2 of the Light Vehicle Automotive Trade Course.

She left school without her school certificate, and has worked previously in different jobs. Coming from a rural background, she has always played with and worked among the guys. She described herself as a tomboy, always enjoying cars.

'I was always a tomboy when I was little. My oldest brother started his apprenticeship when he was 16, so I was 8, and him and all his mates hanging around in their rev head cars and you see the cars and "Ooh I like that".'

In year 10 she did work experience in a garage, she said it was a bit of a shock when a girl turned up but it went well and the 2 guys in the garage were supportive. Last year she studied full-time in Semester 2 to cover the first year of the trade course because she knew what job she wanted and felt it would help her get that job.

'I didn't do it earlier because being 15 would be a lot harder to cope with the jibes from the guys, all the pressure – if I had've done it at 15 I would have lasted about a week. You have to be pretty strong emotionally and mentally to deal with it and not let it get to you. It takes a lot to cope – I know its "male territory".'

Describing her wages as 'kids wages' she feels that she should probably have done it before – would have been qualified by now – but has no regrets for the decision to take the course to follow her chosen career. Her driving force and 'ten year plan' is to 'Work in a workplace like this for at least 2 years after I qualify – you are not really considered to be qualified until you have between 2 and 5 years experience after you've qualified – don't know whether it will be with [current employer] – after that eventually by the end of 10 years to have my own race team with an all girls crew – really make them sit up and pay attention – no help from the guys – it really drives you – … To get the knowledge – there is so much to learn.'

Qualifications of full-time employed TAFE graduates

Again, looking at all the graduates included in the 1997 GDS who were working full-time, there were marked gender differences in the level of qualification obtained in several categories. The main contrasts are bolded in the next table.

Table 2: Full-time employed TAFE graduates, by qualification

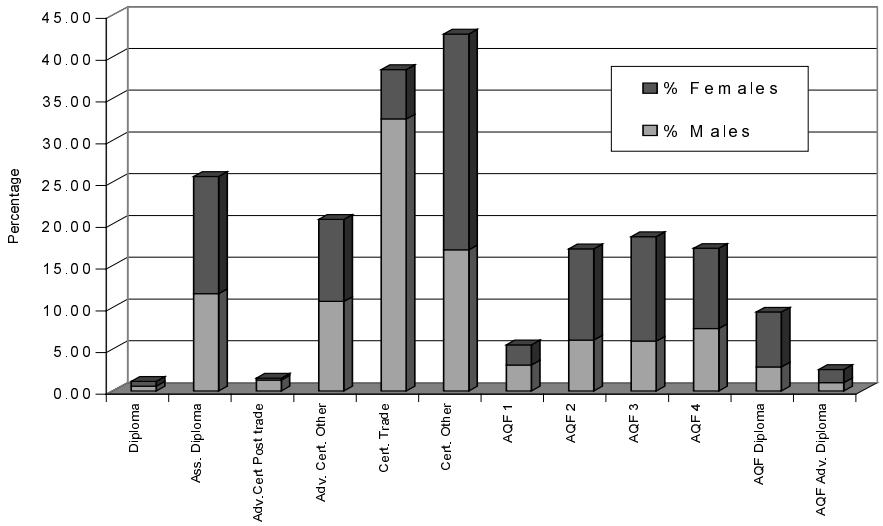
Qualification	Males	%	Females	%
Diploma	95	0.56	67	0.56
Assoc. diploma	1956	11.63	1673	14.04
Adv. cert. – Post-trade	217	1.29	26	0.22
Adv. cert. – Other	1797	10.69	1172	9.84
Cert. – Trade	5471	**32.54**	706	**5.93**
Cert. – Other	2840	**16.89**	3075	**25.81**
AQF – Cert. 1	520	3.09	287	2.41
AQF – Cert. 2	1020	6.07	1301	10.92
AQF – Cert. 3	1001	5.95	1489	12.50
AQF – Cert. 4	1253	7.45	1144	9.60
AQF – Diploma	478	2.84	786	6.60
AQF – Adv. diploma	167	0.99	187	1.57
Total	**16815**	**100.00**	**11913**	**100.00**

Source: NCVER 1997 TAFE GDS

It is apparent that the most marked difference in types of qualification between full-time employed male and female TAFE graduates occurs among the numbers completing trade certificates, with males predominating by a ratio of almost 8:1. Among the other qualifications (apart from the advanced certificate post-trade courses), females predominate in AQF designated courses, especially at the AQF level II.

The occupational analysis section of the report shows that in the high status groups managers, professionals and para-professionals males are more likely to possess a higher level qualification than females. This reinforces the view that a more detailed occupational breakdown would reveal greater occupational segregation than is apparent at the major group level.

Figure 3: Graduates by qualification



Source: NCVER 1997 GDS

The above figure summarises the percentage distribution of male and female TAFE graduates employed full-time in the focus industries by qualification. The predominance of females in the AQF qualifications to some extent reflects female dominance of traineeships.

Field of study

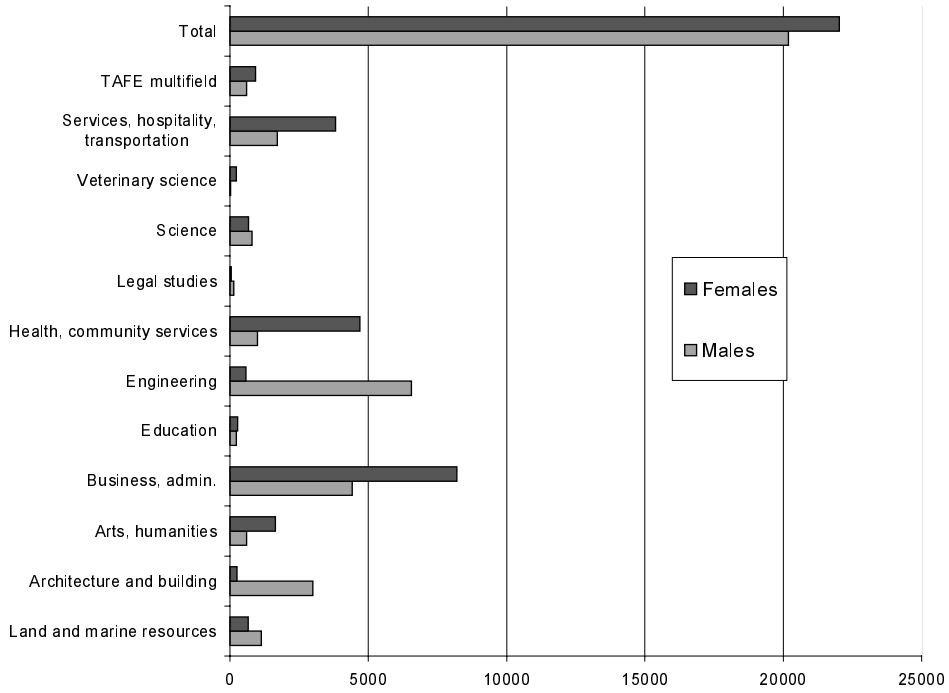
There were more marked differences in the patterns of field of study undertaken by male and female GDS respondents than in the qualifications profile shown in figure 3.

Females predominated in the business/administration, services/hospitality and health/community services fields, while males were the overwhelming majority of students in engineering and in architecture/building. This segregation by field of study appears to anticipate the occupational segregation that occurs in the workplace. Figure 4 shows these markedly different patterns by gender.

Detailed data on field of study by level of qualification by gender for the six focus industries are provided in appendix 5. Those figures reveal that the gender segregation is compounded when level of qualification is considered. The reader is directed to table 2 in appendix 5 which shows for all six focus industries females as a percentage of the total graduates by each field of study. It is apparent from that table that females generally comprise either a large majority or a small minority for each cell of that cross-tabulation. In 55 of the 105 cells (or 52.4%) for which there are values in that table females comprise either less than 30% or more than 70% of the graduates. When the same tables for each of the six industries is examined, two industries in particular stand out as showing even higher levels of course segregation. These are health and community services where 79.3% of the cells fall outside the 30–70% range and finance and insurance, where 71.2% of the cells fall outside that range.

In other words, within many specific fields of study males and females typically undertake different courses, presumably anticipating different occupational destinations. This appears to be a significant factor in gender differences in employment outcomes.

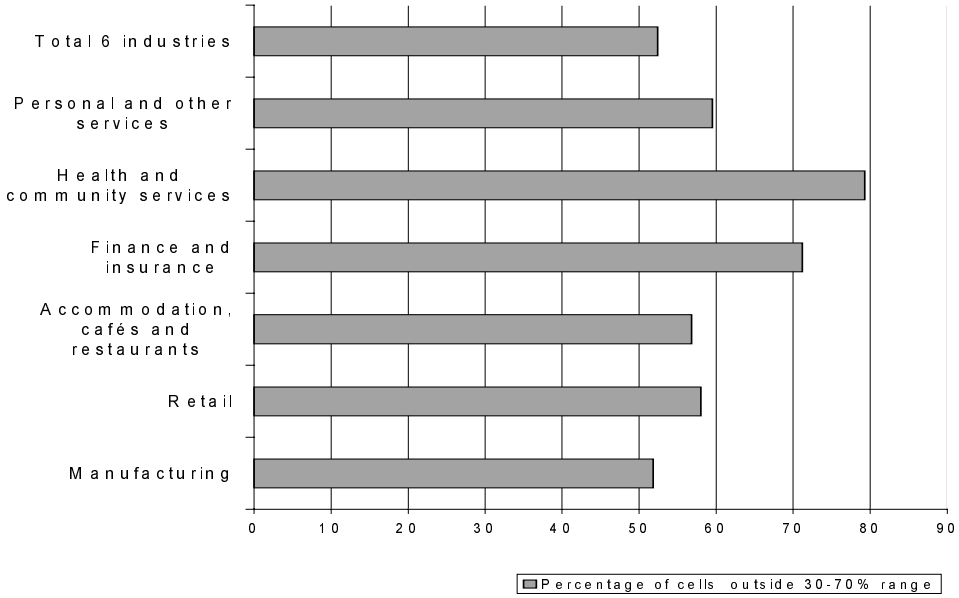
Figure 4: Field of study profile



Source: NCVER 1997 GDS

The following figure summarises some of the detailed disaggregated data from appendix 5 and attempts to provide a measure of the degree of 'course segregation' according to the industry of employment of the graduates in the six focus industries. The figure shows, from tables that cross-tabulate field of study by level of qualification, the percentage of cells with values in which females accounted for either less than 30% or more than 70% of the students.

Figure 5: A measure of course segregation

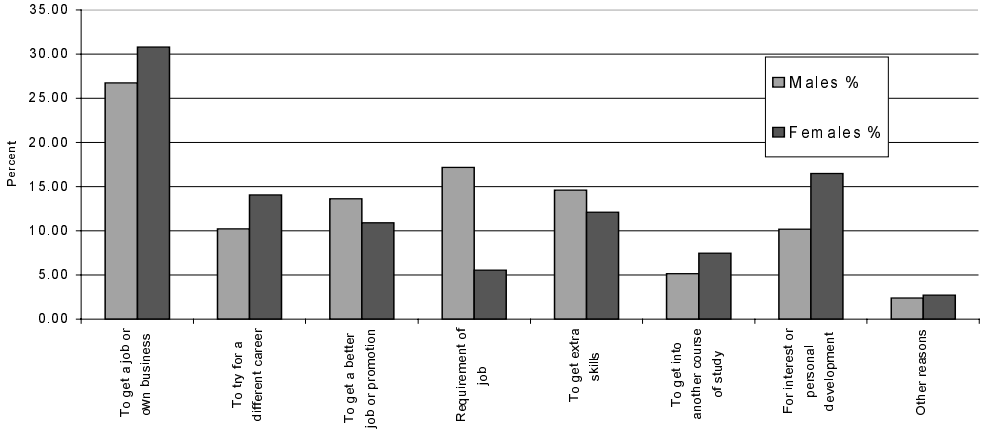


Source: NCVER 1997 GDS

Reasons for undertaking TAFE course

The following figure summarises the main reasons given by all the respondents to the 1997 GDS for undertaking their TAFE course.

Figure 6: Reasons for study



Source: NCVER 1997 GDS

It is clear from the above figure that there are some marked gender differences in motivation that could contribute to some of the observed differences between outcomes for male and female graduates. Most obviously, females are much more likely to have undertaken a TAFE course for personal interest or development, although they are also more likely than males to be aiming to obtain employment or their own business. Of note also are the GDS findings that females are much more likely to be seeking to change their employment through undertaking a TAFE course or are studying in order to gain entry to another course.

Several consistent themes emerged from the focus group discussions. When confronted with the question of why women appear to choose courses leading to female-dominated occupations most of the female participants noted parental and peer pressure not to step outside a traditional female occupation. Some participants, both male and female, were able to quote specific cases of personal harassment directed towards female students studying in male-dominated areas, such as one teacher telling his female students they should be at home. Other females regarded males as boisterous and disruptive in classes.

The nature of the courses and fields of study pursued by women possibly contributed to the greater difficulty they experienced in securing reliable information on the course content and their likely career prospects. Whereas many of the males entered trades, where career paths were well understood by their employers and often by their friends and family, females were often entering areas where the relationship between the course of study and their job was less well established. This was not always the case, however, with one young woman commenting,

My Traineeship was not like that – I had an easy run – it was set up to fit work and TAFE together.

Information on linkages between the course and general job prospects was generally regarded as unreliable, more so by females. One female participant working in kitchen design did a computer-aided design (CAD) course on the advice of an employer. However, the CAD course had an engineering orientation and the course did not relate at all to interior design and had not helped the student in her current position. One male student had completed a course in urban horticulture after obtaining advice from the college that career prospects were good; however, after unsuccessful attempts to find work, had switched to a food and beverage course. Major sources of this advice for the younger participants were school careers advisers and family; however, there was a general recognition that parents were an unreliable source of current information on the labour market.

Information on course and career choice

Many focus group participants commented on the choice of university or TAFE as being made on poor information. There was a general feeling that employers regarded university qualifications more highly, but also that TAFE was poorly understood, often regarded by those who had not experienced it as second rate, but that once they had experienced TAFE they generally found it provided practical skills. Several commented that some school careers advisers were biased in favour of university over TAFE.

There was also a perception that the choice between university and TAFE involved issues of social class and income.

But it also has a lot to do with area – where you live – and where you go to school – I went to Willoughby GHS [a public school in a middle-class part of Sydney's lower north shore] – from that school I got the choice to go to TAFE and that was it – I wasn't looked at for Uni – then from Year 10 to Year 12 I went to a private school – all my friends went to Uni – every single one.

The dissatisfaction with information on jobs and careers that is apparent in an analysis of the GDS (NCVER 1998) was also evident among the focus group participants. Many commented on the haphazard nature of gaining information on future job prospects.

When you start to make decisions about your career – at about age 12 – I had no role models in IT or chemistry – you pick up cues from what you see, that's when women need to see more of these.

When I was 20 and trying to decide what TAFE course to do there's all these pamphlets – women with the hard hat on and a hammer in hand – but in reality you don't see women doing that. You believe what you see.

[convenor] Did they tell you it wasn't all that easy to get a good job in horticulture?

No they said it was easy.

[convenor] That was fairly bad advice then.

Yeah I'd say (to employers) I've got my Urban Horticulture Certificate and they'd say, how much experience have you got? And I'd say not much – and they'd say sorry we need more experience. I had 6 months experience – but they said yeah – we'll give you a job as a weeder.

[From one of the individual interviews]: At an all girls school girls we were encouraged to think about non-traditional careers and trades – no-one considered them very seriously – no-one I knew took one up – my friends did Uni or business and office skills at TAFE.

Despite some criticisms of information provided and course flexibility, most participants had positive attitudes towards their experience at TAFE, seeing it as the right choice for them, offering practical, work-related skills. Several commented that some forms of written publications such as TAFE handbooks were unreliable, although this seemed to be the main source of information for both males and females. The majority seemed to regard TAFE handbooks as reliable.

Some comments from participants were:

Every year we get the TAFE handbook in the family.

You get more out of TAFE courses.

I got in the door through a traineeship.

TAFE is hands-on, practical, that is what it is there for.

TAFE teachers provide a lot of support/encouragement.

Engagement with the labour market

Female TAFE students appear to have weaker linkages with the labour market than do their male counterparts. This is apparent from the much higher proportion of males in figure 6 motivated by their studies being either a requirement of their current job or related to a promotion. Most of these former male students would have been apprentices.

The following section examines a number of characteristics of the entire population of TAFE graduates surveyed in the 1997 GDS as well as the amount of employer support received by those employed full-time in the focus industries.

The main finding from the following section is that male graduates are, both during their studies and after graduation, more engaged with the labour market than female graduates.

Males are more likely to be employed full-time, less likely to be unemployed, more likely to receive support from their employer, much more likely to be apprentices and less likely to receive support during their studies from either government or family. Another related issue that emerged from the focus groups was that *the training system simply seemed to work more smoothly for male students.*

There appeared to be more barriers to women in easily accessing the TAFE course they wanted. Many complained that they had to travel past several colleges to get to the one offering the course they wanted. Some felt that colleges were inflexible in modifying their courses to improve access or in

providing timely information on timetables to allow them to arrange child care and work commitments. Several noted the absence of child care and identified dropping children at child care while on the way to college as an additional burden.

[Female graduate] [I wanted to know the] hours/days per week – whether you could condense it to get days off so you could work – but they wouldn't tell you that until the course started – really annoying.

[Female student] I wanted to know that too – as I had child care concerns.

[Female student] [The course was] 15 hours a week – I didn't want to go in 5 days – and they couldn't tell me until the course had started – had 3 days to get 2 children into care.

A woman in the case studies series, Stephanie (name changed to preserve confidentiality) said:

It is not just a question of time but energy levels. Things are difficult to juggle – a major problem is the timing of classes – 8.00am starts, 3.30 finishes are a problem – 3.15 to 5.15 classes are really hard – so far I have avoided some of the more difficult classes (timetable wise) but I will soon have to face them and pay for baby sitters which will be a real financial burden.

Many women commented that they had difficulty getting to their classes and that they had to travel well beyond their closest college to undertake their chosen course. By contrast the male group saw access to their TAFE course as easy. Most were able to attend the college closest to home and had no complications such as leaving children at child care. For males, course and job choice did not appear to be accompanied by a prolonged decision-making process or access difficulties. The TAFE was simply there, in close proximity, easily accessible and available to meet their training needs.

The male apprentices and tradesmen felt part of a well-understood system. Male apprentices could easily identify with trade teachers and work colleagues or employers as role models as they had experienced much the same system. One male commented, in relation to choosing the most appropriate course for his employment:

It wasn't until I was employed – my employer knew a lot more about it than the [school] counsellor did.

Unemployed graduates looking for same or similar work by sex

Females predominate amongst those seeking work, making up 62% or 5632 of those unemployed among the TAFE graduates surveyed. However, there appear to be no differences between unemployed males and female graduates in the type of work sought. Similar proportions of both males (62%) and females (61%) sought work in areas related to their field of study. A further 23% of males and 24.5% of females showed no preference in the type of work sought.

Time taken to find work

Females appear to take longer to find work than males following graduation. There was a higher proportion of males (53%) than females (47%) employed at the time of graduation. Females predominated by just over two-thirds in each category of time taken to find work upon graduation. This again suggests that females are less engaged with the workforce both during study and following graduation from TAFE courses.

Sources of income by sex

Sources of income while studying at TAFE varied between male and female graduates, whereby the latter tended to rely more on government assistance and or parental/spouse support than males. Of all females 21% received Austudy/Abstudy compared to 16% of males and 19.2% received a government pension/benefit compared to 11.8% of males. Similarly, one in five females used

parental/spouse support compared to only 8.4% of males. One in five males, on the other hand, reported apprenticeships as a source of income compared to only 3% of females.

While the same proportion of males and females (43%) had paid work as a source of income while studying, the findings nevertheless suggest that females have less opportunity to engage with the labour market related to their desired area of employment while at TAFE. It should be noted that as this was a multiresponse question, respondents could report more than one source of income.

Employer support

Respondents who had paid employment in the final semester of their TAFE studies were asked about the types of employer support offered. Generally, females appeared to receive lower levels of support from employers than males. In those industries where the earnings gap (as % of male earnings) between female TAFE graduates and all workers in that industry is relatively low, male workers appear to receive the greater share of employer support. However, in those industries where a wider earnings gap exists for female TAFE graduates, it appears that somewhat higher proportions of females accessed some form of employer support while studying. The exception to this was in health and community services where very few females obtained employer support despite females being a majority in this industry. The reasons for this are not clear but might be related to occupational gender segregation. (As this was a multiresponse question respondents could indicate more than one type of support. Hence the percentages in table 3 sum to greater than 100.)

Manufacturing

In manufacturing, half of all females reported receiving no support compared to 30% of all males. Further, 88% of all males receive either paid fees or paid time off work while only 48% of females in this industry received these forms of support.

Retail trade

Similarly in retail trade, 66% of females reported receiving no support, compared to 41% of males. Again, 65% of males receive either paid fees or paid time off work, while only 18% of females in this industry receive these forms of support.

Accommodation, cafés and restaurants

Over half of all males (56%) and nearly two-thirds of females (61%) in this industry reported receiving no employer support at all. A further 32% of males obtained paid fees or paid time off work, compared to only 23% of females.

Finance and insurance

Almost half of female respondents in the finance and insurance industry reported receiving no employer support compared to 36% of males. However, a substantial 60% of females received paid fees or paid time off work, compared to 82% males.

Health and community services

Just over half of all females (55%) and half of male respondents received no employer support in the health and community services field. Despite this field being dominated by women (86%), only 28% of women received paid fees or paid time off work, compared to 45% of men.

Personal and other services

Equal proportions of men and women report receiving no employer support. A further 54% of women received paid fees or paid time off work, with men showing a similar proportion (56%).

Table 3: Employer support, by industry

Industry x type of support	Males		Females	
	No.	%	No.	%
Manufacturing				
Paid fees	1782	*50*	345	*28*
Paid time off work	1364	*39*	247	*20*
Unpaid time off work	143	*4*	87	*7*
Other support	268	*8*	108	*9*
No support	1071	*30*	632	*52*
Retail				
Paid fees	743	*30*	226	*10*
Paid time off work	872	*35*	180	*8*
Unpaid time off work	146	*6*	305	*13*
Other support	135	*5*	213	*9*
No support	1034	*41*	1551	*66*
Accommodation, cafés and restaurants				
Paid fees	118	*13*	161	*11*
Paid time off work	174	*20*	172	*12*
Unpaid time off work	84	*9*	189	*13*
Other support	86	*10*	160	*11*
No support	502	*56*	900	*61*
Finance and insurance				
Paid fees	178	*48*	225	*32*
Paid time off work	131	*35*	193	*28*
Unpaid time off work	11	*3*	38	*6*
Other support	37	*10*	52	*8*
No support	134	*36*	348	*50*
Health and community services				
Paid fees	126	*21*	541	*14*
Paid time off work	148	*24*	549	*14*
Unpaid time off work	46	*8*	498	*13*
Other support	67	*11*	529	*13*
No support	304	*50*	2166	*55*
Personal and other services				
Paid fees	160	*26*	167	*18*
Paid time off work	188	*30*	351	*37*
Unpaid time off work	31	*5*	50	*5*
Other support	71	*12*	92	*10*
No support	261	*42*	384	*40*

Source: NCVER 1997 GDS

Table 3 provides data on employer support for male and female TAFE graduates from the 1997 GDS. It shows that in all six focus industries a higher proportion of males received support in the form of paid fees or paid time off work than did females. Moreover, in five of the six industries a higher proportion of females received no employer support than males. The exception was in personal and

other services, probably because of the high level of female hairdressing apprentices in this industry division.

Earnings

In the 1997 GDS the average full-time income for all graduates was $558 per week, with male graduates earning $597 and female graduates earning $502. Female graduates working full-time therefore earned about 84% of male full-time employed graduates.

The following table summarises the earnings data from the GDS by industry of employment and shows female graduates' earnings as a percentage of male graduates' earnings.

Table 4: Female earnings as a percentage of male earnings—full-time employed TAFE graduates, by age group

	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 plus
Female as % of male AWE	93.0%	89.4%	86.7%	81.7%	78.4%	76.5%	74.9%	75.7%	83.2%
Agriculture, forestry	73.3%	98.2%	113.7%	83.2%	100.3%	75.7%	106.7%	186.8%	158.0%
Mining	97.0%	59.2%	77.9%	62.9%	55.1%	60.5%	57.6%	85.6%	0.0%
Manufacturing	95.0%	89.3%	91.7%	80.5%	79.4%	78.1%	78.8%	90.8%	66.0%
Electricity, gas and water	112.9%	99.4%	94.3%	97.3%	81.8%	70.0%	82.3%	81.9%	0.0%
Construction	92.0%	89.6%	84.9%	75.0%	67.0%	65.9%	71.3%	67.3%	0.0%
Wholesale trade	84.7%	99.5%	87.9%	98.5%	86.2%	83.8%	70.8%	55.3%	106.9%
Retail trade	95.3%	100.5%	94.2%	90.0%	86.8%	79.6%	86.3%	89.7%	86.0%
Accommodation, cafés and restaurants	106.2%	99.1%	89.7%	92.9%	86.9%	89.8%	93.4%	70.5%	120.1%
Transport and storage	102.2%	83.5%	79.5%	69.3%	84.5%	62.1%	55.5%	69.9%	0.0%
Communication services	122.4%	90.5%	88.4%	79.3%	72.7%	69.1%	95.0%	57.9%	n.a.
Finance and insurance	95.5%	84.4%	95.2%	81.8%	79.1%	91.3%	77.7%	63.4%	92.9%
Property and business	91.4%	87.5%	87.7%	84.8%	75.8%	74.1%	72.4%	72.8%	84.6%
Government administration	119.6%	94.9%	95.7%	93.7%	87.0%	86.0%	80.8%	88.1%	120.2%
Education	86.6%	97.4%	91.9%	91.5%	84.3%	84.8%	88.2%	82.4%	99.1%
Health and community services	101.2%	93.1%	81.6%	86.7%	78.1%	81.0%	80.5%	86.7%	89.7%
Cultural and recreation	108.3%	96.0%	102.4%	87.2%	111.0%	64.3%	81.4%	88.3%	49.6%
Personal and other services	82.5%	79.3%	85.1%	68.0%	77.2%	75.7%	53.6%	71.0%	70.7%

Source: NCVER 1997 GDS

The analysis of the earnings of male and female TAFE graduates working full-time in the six key industries studied showed that the benefit of a TAFE qualification in terms of earnings varied between the industries. The picture is complex but generally indicates that gaining a TAFE qualification assists women and men to increase their earnings vis à vis respectively all women and all men in that industry.

Earnings in the six focus industries

As noted above, on average, across the six focus industries, female respondents to the GDS survey received 84% of the male median wage. This varied from retail trade where they received 98.9% of the male wage to personal and other services with 53.6%. (This figure might intuitively appear to be impossible when read in conjunction with the data in table 4. The apparent discrepancy is explained by quite different age distributions by earnings level for male and female graduates in this industry.) In order to compare these outcomes with total persons employed in those industries data were obtained from the ABS Population Census, which showed a similar pattern of discrepancy between male and female wages.

Table 5: Relative full-time wages, by industry and gender

Industry	Male wage		Female wage		Female as a % of male wage		Relative change from TAFE qual. %
Source:	GDS	ABS Census	GDS	ABS Census	GDS	ABS Census	
Manufacturing	$599.63	$573.00	$534.25	$465.00	89.1%	81.2%	+7.9%
Retail trade	$443.27	$482.00	$438.36	$424.00	98.9%	88.0%	+10.9%
Accommodation, cafés and restaurants	$448.43	$485.00	$428.12	$432.00	95.5%	89.1%	+6.4%
Finance and insurance	$755.62	$822.00	$567.63	$547.00	75.1%	66.5%	+8.6%
Health and community services	$602.58	$696.00	$481.54	$539.00	79.9%	77.4%	+2.5%
Personal and other services	$711.22	$674.00	$381.50	$449.00	53.6%	66.6%	-13.0%

Sources: NCVER 1997 TAFE GDS and ABS 1996 Census of Population and Housing

It is apparent from the table above that the relative position of females improved after VET qualifications were obtained, except in personal and other services. The remarkably low ratio of female to male wages in personal and other services apparent in the GDS was reflected in the ABS Census. However, the GDS result indicated that the relative position of females had worsened in that industry. (The reasons for the change in the relative position of females in this industry are discussed in detail later in this report.)

There was only one industry, health and community services, in which female TAFE graduates did not improve their earnings relative to all females in the industry. This appeared to be related to the existing high proportion of women in that industry with higher level qualifications. In this industry there exists a large earnings gap between all males and females but a smaller gap between male and female TAFE graduates. However, both male and female TAFE graduates earn less when matched with their same age/sex cohort of all workers in the industry, probably because of the already high level of qualifications held by workers in the industry.

A TAFE qualification generally assists women relatively more than men to improve their earnings, at least in the six industries examined in detail. Largely this seems to occur because in most industries men already are more likely to hold formal post-school qualifications than women and there are already large earnings gaps in those industries between men and women.

When earnings are matched by age group, a TAFE qualification was strongly positive for females across almost all age ranges in all industries, again with the exception of health and community services. In the latter case, while outcomes were strongly positive for the 15 to 19 age group, other age groups showed negative results. However, in most industries the results for females with TAFE qualifications were relatively better than for males. The exception to this was mainly in the younger age ranges of manufacturing when males are most likely to complete their trades training.

In one industry, personal and other services, women TAFE graduates did not gain a relative improvement in earnings vis à vis their male counterparts; however, there was a narrower gap between male and female TAFE graduates' earnings than between all males and females in the industry. Female TAFE graduates did gain an earnings advantage relative to all females in this industry as did male TAFE graduates.

In finance and insurance, there are very large earnings gaps overall between males and females but smaller gaps between male and female TAFE graduates. Female TAFE graduates earn more than all comparably aged females in the industry; however, male graduates generally earn less than comparably aged males in the industry. These negative outcomes indicate that recent male graduates over age 20 with VET qualifications in health and community services and over age 30 in finance are in occupations that are paid below the average for these industries. The most obvious explanation for this is the high existing level of professional qualifications held especially by males already employed in those industries.

In manufacturing, there are wide earnings gaps between all males and females but the gap is narrower for male and female TAFE graduates. When matched against the same age/sex cohort male and female TAFE graduates are generally about $100 per week better paid than all workers in the industry.

In both retailing and accommodation, cafés and restaurants there is a moderate earnings gap between all males and females but a smaller gap for TAFE graduates. When matched against the same age/sex cohort TAFE graduates in retailing are generally better paid by around $100 per week; however, the benefit in accommodation, cafés and restaurants is only moderate.

The present study has disaggregated this simple measure of benefit (or reduced benefit) from VET in a number of ways to investigate the underlying reasons for the relative change. The aggregated figure for the relative percentage change, shown in table 3 above, has been disaggregated in the table below to show the increase (or decrease) in female and male wages after VET qualifications were obtained. For example, in the case of health and community services, females achieved better *relative* results despite the fact that the overall outcome for females from VET was negative. This is because there was an even greater negative outcome for males in this industry who completed a TAFE qualification.

Table 6: Change in wages: TAFE graduates compared with all employees

Industry	Male wage		Female wage		Increase in wages VET males over all male employees %	Increase in wages VET females over all female employees %	Relative change %
	GDS	ABS Census	GDS	ABS Census			
Manufacturing	$599.63	$573.00	$534.25	$465.00	+4.6	+14.9	+7.9
Retail trade	$443.27	$482.00	$438.36	$424.00	(-)8.0	+3.4	+10.9
Accommodation, cafés and restaurants	$448.43	$485.00	$428.12	$432.00	(-)7.5	(-)0.9	+6.4
Finance and insurance	$755.62	$822.00	$567.63	$547.00	(-)8.1	+3.8	+8.6
Health and community services	$602.58	$696.00	$481.54	$539.00	(-)13.4	(-)10.7	+2.5
Personal and other services	$711.22	$674.00	$381.50	$449.00	+5.5	(-)15.0	(-)13.0

Sources: NCVER 1997 TAFE GDS and ABS 1996 Census of Population and Housing

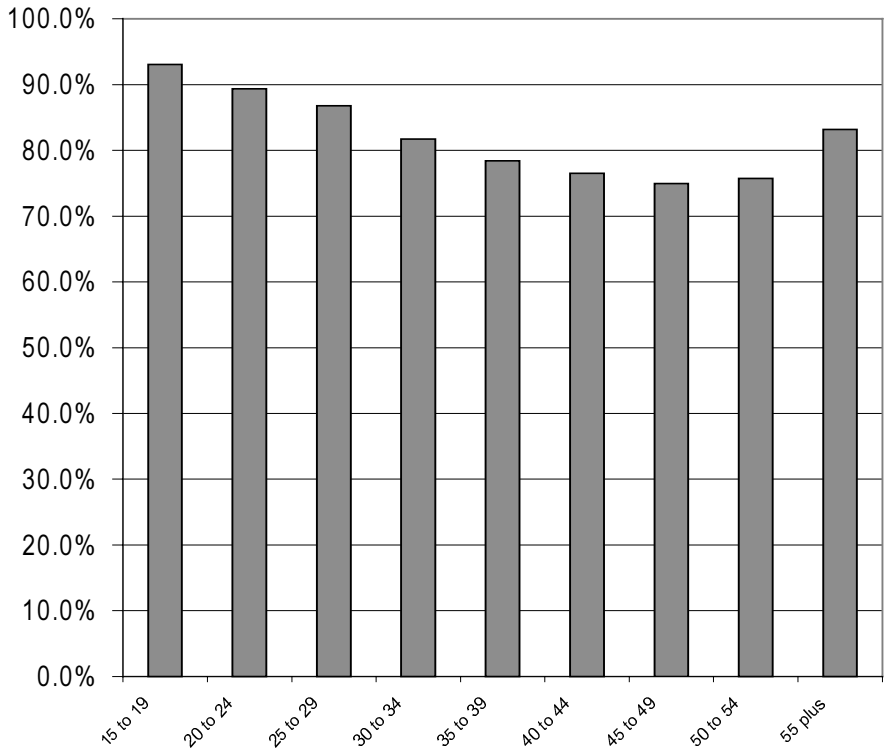
The table above indicates that VET resulted in positive earnings outcomes in manufacturing, retail and finance and was neutral in accommodation, cafés and restaurants but that the outcomes were strongly negative in health and community services and in personal and other services. It can be noted from the table that in two industries positive relative improvements for females are actually as a result of greater negative results for males and that in four of the six industries studied strongly negative results were apparent for males.

A further disaggregation of the final outcome figure for each industry by occupation was carried out for this study (see detailed discussion by industry later in this report). This shows that both positive and negative final outcomes can mask important trends within each industry. It also shows how each final industry figure has been weighted by the population of each of the occupations which comprise them (see figures at end of each separate industry analysis later in this report for a comparison of ABS and GDS wage and income data).

Age and earnings

One important discovery was that the earnings gap is narrower for younger female TAFE graduates. In all industries female TAFE graduates aged under 30 working full-time earned 85–95% of full-time male TAFE graduates. Female TAFE graduates aged 40–54, however, earned only around 75% of similarly aged male TAFE graduates.

Figure 7: Female full-time earnings relative to male full-time earnings, by age group



Source: NCVER 1997 TAFE GDS

The above figure shows this age related earnings phenomenon for the graduates surveyed in the 1997 GDS. It is not clear whether this phenomenon relates to changing occupational aspirations among younger women graduates, to different patterns of course choice, to 'glass ceiling' effects or other causes. This issue should be pursued in further research to determine whether patterns of enrolment are changing. The focus groups conducted for this project did not provide any insights into this issue. If anything, they revealed continuing reluctance on the part of most young women to enrol in male-dominated courses and fields of study.

Earnings matched by age by industry

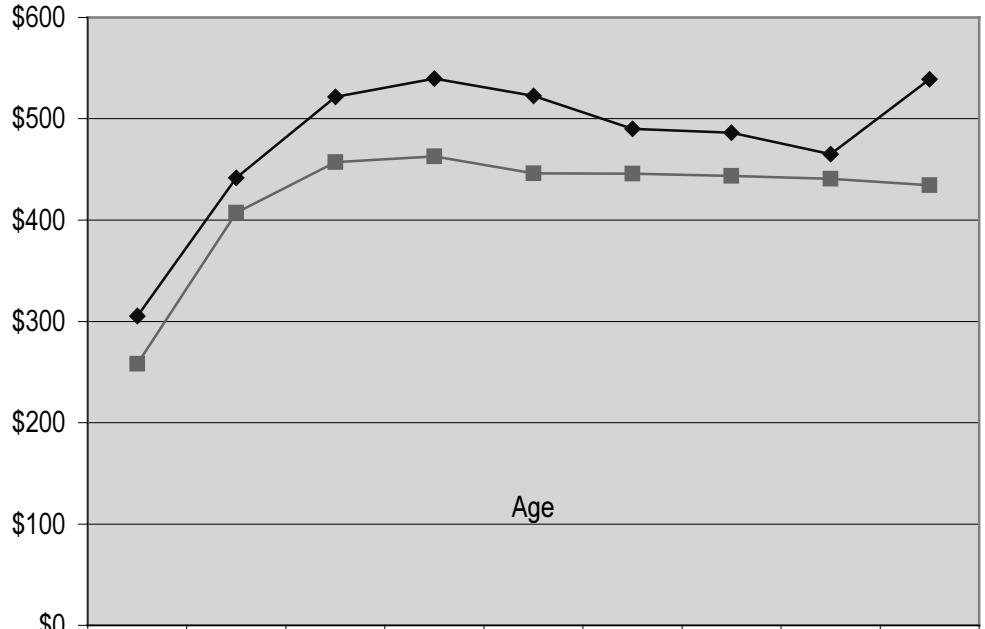
Additionally, the final percentage figure in table 5 masks the age distribution of the populations that make up the two sources (the ABS Census and the GDS). These measures can be further disaggregated to provide a more detailed picture of how the final industry wage is sensitive to the pattern of age distribution. This reveals that although a strongly negative outcome (as measured in the table above) may appear to occur for either male or female TAFE graduates in particular industries, this may be due to the skewing of the age distribution of the GDS population to the younger ages. This may cause the average wage to be pushed down so much that it obscures the positive outcomes that may be occurring *within each age group*.

In some cases all individual age groups may show positive outcomes from VET but the mean average may be below the average for the general population in that industry. The example of males in retail trade is shown in table 8 of appendix 3 to demonstrate this phenomenon.

In the detailed discussion later in this report on each of the six focus industries on the income benefits from TAFE qualifications, the skewing effect has been virtually eliminated by comparing wages for each age cohort. This reveals more clearly the relationship between income and qualifications relative to the income levels for the general population within each industry. It also effectively eliminates any similar skewing, due to age distribution, in the male–female comparison.

Figure 8 provides an example of the relative earnings benefits that are apparent for TAFE graduates in most of the six focus industries when a comparison by age group is conducted. Similar figures for all

Figure 8: Median income female TAFE graduates versus all females



	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50-54	55 plus
VET Graduates	305.4065	441.5519	521.537	539.6944	522.6349	490.1389	486.2308	465.15	539
All Females	$258	$407	$457	$463	$446	$446	$444	$441	$434

Source: NCVER 1997 GDS

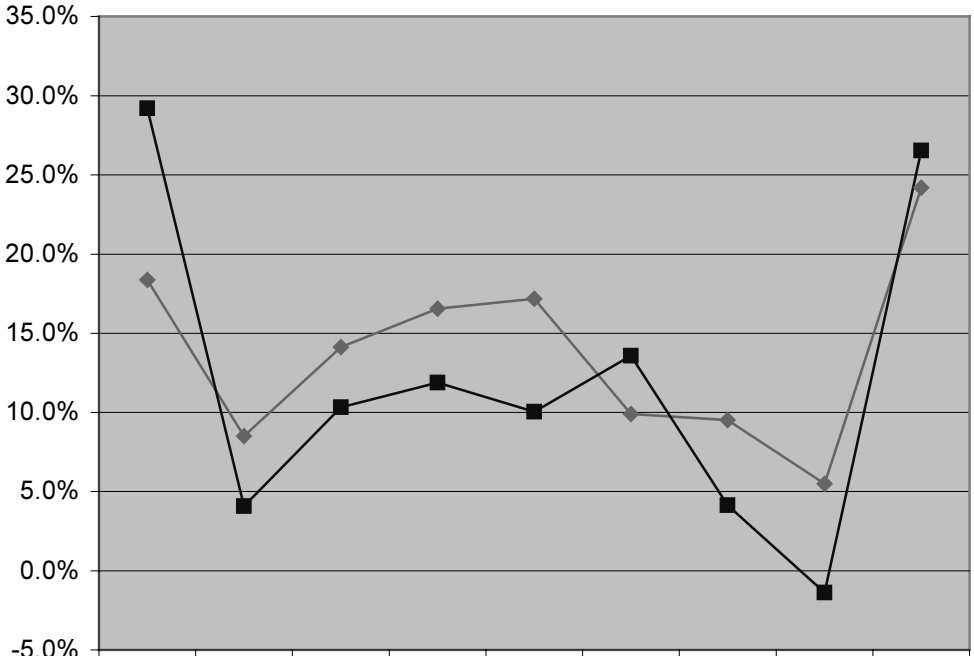
six focus industries and for males and females are provided under each of the six industries later in this report.

It is apparent that in retailing female TAFE graduates working full-time earn more than all females working full-time in that industry when matched by age group. Figure 8 is generally representative of the type of earnings patterns found for females in the other five industries examined in detail.

The results of the study indicate that there are important movements below the surface of the final change figures and that these reflect particular features of the clients served by the TAFE system.

The figures provided in the industry analysis section of the report also show graphically the relative gain or loss for TAFE graduates in earnings terms vis à vis all employees in each of the six industries. Figure 9 again is an example of these figures provided later in the report.

Figure 9: Relative gain from VET—retail industry



	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 plus
Females	18.4%	8.5%	14.1%	16.6%	17.2%	9.9%	9.5%	5.5%	24.2%
Males	29.2%	4.1%	10.3%	11.9%	10.0%	13.6%	4.1%	-1.4%	26.5%

Source: NCVER 1997 GDS

Differences in hours worked

Considering the data for all respondents to the 1997 GDS, 85.9% of employed male respondents worked full-time. A staggering four out of ten employed male respondents worked in full-time trades jobs. In the management and administrative, para-professional and trades occupations, over 90% of male graduates reported full-time status.

Women respondents in comparison are less likely to work full-time, with a relatively low 56.6% of working respondents working full-time. Over half of employed female respondents worked in the

clerical and sales occupations (54.5%). Less than 40% of sales and personal service workers and labourers work full-time. In fact, nearly two in ten of all employed female respondents worked in part-time sales occupations.

Looking now in more detail at the six focus industries, in the 1997 GDS data a much higher proportion of males (28%) than females (14%) who worked full-time worked 45 hours or more. This finding reflects the behaviour of the labour force as a whole. This substantial difference in actual hours worked *for full-time workers* appears to be a factor contributing to earnings differences in some industries. Available data do not show whether or not these hours are paid; however, it appears that *this difference could explain some of the overall income differences between male and female TAFE graduates working full-time.*

The result invariably showed that males worked more hours than females, even though all were classified as 'full-time' workers. The results, as they stand, represent a rough (but not unreasonable) guess of the effects of different hours worked by full-time male and female workers. In summary these were:

Table 7: Effect of full-time hours worked on earnings

Industry	Average hours worked		Percentage difference in potential earnings
	Males	Females	
Manufacturing	45.0	42.7	5.4%
Retail trade	43.9	42.8	2.7%
Accommodation, cafés and restaurants	45.6	43.3	5.3%
Finance and insurance	46.0	42.7	7.6%
Health and community services	42.7	41.9	2.0%
Personal and other services	45.3	42.2	7.3%

Source: NCVER 1997 GDS

The data show that in each industry examined, without exception, males work 45 hours and over at a higher proportionate level than females. The difference was most pronounced in finance and insurance, personal and other services, and manufacturing. There were lesser differentials in retail, and health and community services. (Appendix 3 explains the methodology used in this analysis of hours worked.)

The occupation managers and administrators saw the greatest incidence of long hours. In this occupational group some 61.5% of males and 37.1% of females reported working in excess of 45 hours a week. A high proportion of males also work these long hours in sales and personal service and para-professional occupations (34.9% and 32.3% respectively).

At the other end of the scale, a majority of female full-time workers worked between 35 and 39 hours per week in clerical, para-professional and plant and machine operating occupations (54.1%, 50.9% and 50.6% respectively). This finding is consistent with the finding of the NSW Pay Equity Inquiry in relation to a convergence in earnings when hourly rates are considered.

The finding also raises a more general concern that the inability of some women, not only TAFE graduates, to work longer than normal hours could be a subtle reason for employment discrimination and occupationally based gender segregation. Justice Glynn in the NSW Pay Equity Inquiry concluded also on the issue of gender based occupational segregation:

I do not agree with the submissions which were put that the effect of occupational segregation … is overstated or does not require attention … Further I do not consider that only intra-occupational wage differences contribute to the differential, or that the wage differential will be washed out over time, a suggestion by some parties based on the finding of Professor Wooden of a virtually non existent differential for the under 30 female age group.

Conclusions

Labour market outcomes

Gender differences in overall labour market outcomes for TAFE graduates are stark. The fact that these differences are not well known is a disservice to females undertaking TAFE courses and should be a cause for concern in the VET community in general in that there appears to be a continuing failure to achieve equitable employment outcomes on a gender basis.

Females were less likely than males to be employed on graduation and female graduates are about twice as likely as males to be not in the labour force. Females were more likely than males to be reliant on income support during their studies from such sources as Austudy/Abstudy, government pensions or parental/spouse support. Female graduates were more likely to have undertaken their course either to get a job or start their own business, for personal interest/development or to gain entry to another course. By contrast, male graduates were more likely to have undertaken their course because it was a requirement of their job, to get a promotion or to get extra skills for their current job.

Female graduates were more likely to be unemployed than males (17.3% of females unemployed versus 13.7% of males), took longer to find a job than males, and in most industries females were less likely to have received support from an employer in the final semester of their course of study.

- Female graduates are about 2.5 times more likely to be employed part-time than males.
- Contrary to popular belief, female graduates (that is, those included in the GDS), attained an overall higher qualifications profile than males, with almost 23% of female graduates holding a diploma, associate diploma or advanced diploma compared with about 16% of male graduates.
- Almost a third of male graduates obtained a trade certificate, compared with less than 6% of female graduates. Nevertheless, this well-recognised gender imbalance in traditional apprenticeships does not appear to explain earnings differences among those recent graduates included in the GDS. (It might partly explain earnings differences among male and female TAFE graduates who have been in the work force for a longer period, however. For this issue, see Long, McKenzie & Sturman 1996.)

If those with a trade certificate are excluded from the comparison of qualifications profiles, then male and female graduates' profiles are very similar, despite the female graduates being slightly more concentrated in the higher level qualifications. The most important difference in terms of study undertaken appear to be not in the level of qualification but in the narrower fields of study in which most females choose their courses.

Given the importance of the use of TAFE handbooks in the selection of courses there might be a case for including in TAFE handbooks more factual information on broad course outcomes, including the gender differences in employment and earnings revealed in the GDS. While the dialogue with students and graduates in the focus groups indicates that better information might not necessarily influence all female students to change their selection of courses, outcomes are unlikely to become more equitable between the sexes until female students diversify their choices.

The women interviewed in the case studies series worked towards their non-traditional occupations over time, building on easier options taken after leaving school. It is worth noting that the women interviewed in the case studies had all undertaken their non-traditional course well after leaving school. This approach of taking a longer term view of career objectives highlights the importance of the role of lifelong learning in working towards equity objectives. Policy makers aiming to increase female entry into male-dominated occupations might find more value in targeting older women seeking to change careers rather than younger, school age females.

Female TAFE students generally undertake courses in a narrower range of fields of study than males and are consequently streamed into a narrower range of more lowly paid, 'traditional' female jobs.

Many are intimidated from breaking out of this cycle by fear of harassment from fellow students, teachers and by peer and parental pressure to select a traditional female career path.

In the focus groups a theme that emerged was that women seemed to have more difficulty in getting to classes than male students, often having to travel past one TAFE college to get to the college offering their course. This observation in relation to travelling distances is surprising, given that women are generally selecting their courses from a narrower range of options, and hence one would expect it would be more likely that their favoured courses would be generally available at all colleges.

A woman in the case studies series, Stephanie, said:

It is not just a question of time but energy levels. Things are difficult to juggle – a major problem is the timing of classes – 8.00am starts, 3.30 finishes are a problem – 3.15 to 5.15 classes are really hard – so far I have avoided some of the more difficult classes (timetable wise) but I will soon have to face them and pay for baby sitters which will be a real financial burden.

While it might simply be an artefact of the relatively small number involved in the focus groups, it would be worthwhile analysing Australian Vocational Education and Training Management Information Statistical Standard (AVETMISS) data by gender, comparing residential postcode by location of college to determine whether any gender differences exist in the wider VET population in terms of distance travelled to college.

Several women commented that they would have liked to have undertaken a trade course in building but that the prospect of harassment from teachers, students and later employment discrimination made this an unattractive option.

[female] I wanted to do carpentry but my parents told me you can't do it – I loved woodwork. I wanted to design furniture.

Many of the females who participated in the focus groups regarded discrimination by male employers as unavoidable. This discrimination extended to a Group Training Company with which one woman in the case studies series sought employment:

The gentleman who works for that [group training] company wasn't exactly the most helpful. He ended up trying to push me into a receptionist job and I said … was annoyed … I gave him a piece of my mind, kinda, without being too rude. I said 'I did the course because I wanted an apprenticeship. I don't want to do a receptionist course. I've been in the workforce for 10 years – I've already done a 2.5 year stint as a receptionist.' It's like you've been patronised to be fobbed off to this.

One male in the focus groups described the behaviour of one of his teachers towards the minority females in his information technology course:

[convenor] Do the girls in that course get the same treatment as the guys?

[male student] One of the teachers, he treats them the same, he just thinks they should be at home looking after the babies and washing up.

[convenor] He doesn't say that to the girls?

[male student] He did.

The section of the analysis that examines the qualifications profiles of all male and female graduates responding to the survey on the basis of their major occupation of employment raises various research questions, including the desirability of undertaking more detailed occupational analysis at the minor group or unit group level. There is one important observation that can be made in relation to qualifications and level of occupation across the industries examined in detail. Males with a higher level VET qualification such as an associate diploma, are much more likely than females holding the

same qualification to be employed in professional, managerial or associate professional level occupations.

In the finance industry, over two-thirds of males with associate diplomas are employed in associate professional, professional or managerial positions; however, only just over one-third of females with this qualification were working at this level. Similar patterns exist in the other industries examined.

Full-time earnings

Earnings outcomes for female graduates varied markedly between the six industries studied in detail, although across the board female graduates' earnings were lower than males'. This was still the case when male and female graduates were matched by age group. Nevertheless, in most of these six industries attaining a TAFE qualification improved the income of women relative to all women in that industry more so than a TAFE qualification improved male graduates' earnings relative to all males in that industry. The main exception to this occurred in the health and community services industry, an industry in which there is a high level of women with professional qualifications.

Younger female TAFE graduates, especially those aged under 30, earned 85–95% of male graduates' earnings; however, females aged 40–54 earned only around 75% of similarly aged male graduates. The reasons for this difference are not clear, and further analysis of gender differences by age group by field of study might be valuable. In overall terms, female full-time employed TAFE graduates earned 84% of full-time employed male graduates.

The NSW Pay Equity Inquiry conducted in 1997–98, the most comprehensive investigation ever carried out in Australia into pay equity issues, found that:

29 years after the first equal pay cases, full-time adult women workers still earn only 80 per cent of men's earnings, a figure that has not improved in over a decade.

Among its most significant findings was that:

The pay ratio favours men at the present time when earnings are calculated on per annum, per week or per hour basis, although the pay ratio rises as the time unit becomes shorter ... The pay ratio increased considerably in the 7 years after 1969 and Australian Equal Pay Case decisions 1969 and 1970.

Again this finding is consistent with the finding from this research study that female TAFE graduates working full-time were much less likely to be working extended full-time hours than male graduates.

Appendix 2 shows TAFE graduates' earnings by gender by industry by occupation, revealing a largely consistent pattern of males' earnings at this level exceeding those of females. In some occupational groups, it appears that this variation in earnings might be related to females' attaining lower level qualifications; however, the *overall* profile of qualifications does not show females attaining at a lower level than males. In the business/administration field of study women do obtain noticeably lower level qualifications than males. This suggests that certificate-qualified females are recruited into lower level positions, while males with diplomas are recruited into more senior positions. This seems to be a classic example of occupational gender segregation.

The NSW Pay Equity Inquiry found clear evidence of pay differentiation on a gender basis in NSW. One key finding, based on a series of occupational case studies on the undervaluation of women's skills and occupational segregation, stated:

There are approximately 18,000 childcare workers in NSW, of whom more than 95% are women. Under the minimum rates adjustment process, which used the metal trades classification as the benchmark rate for comparisons to other awards, the holder of an Associate Diploma in childcare was evaluated at 110% of the trade rate, while the holder of an Associate Diploma in the metal industry was evaluated at 145% of the trade rate.

Women comprise 76% of the 1100 hairdressers in NSW. Hairdresser earn approximately 74.9% of the income earned by workers in the male dominated trade occupations, and $106.40 less per week than motor mechanics, which is a 99% male dominated industry.

In simple terms one of the clearest messages from the analysis is that a substantial proportion of females undertake courses within a very narrow range of fields of study, such as business/administration/clerical, hairdressing or child care, and consequently move into a narrow range of occupations. 'Before and after' analysis of male and female occupations shows, for example, that females move towards clerical occupations after gaining a TAFE qualification whereas males tend to move out of clerical occupations after completing their TAFE course. (See the occupational analysis section for more details of this.)

It is also apparent that the capacity to work 'over-full' time contributes to higher earnings. Reflecting the behaviour of the whole employed labour force male TAFE graduates working full-time were twice as likely as female graduates to be working 45 hours or more per week. While these extended hours are not necessarily 'paid', it is likely that the capacity to work extended hours is a greater requirement in more senior positions that are better paid jobs. Do females deliberately avoid such positions because they involve too much conflict with other aspects of their lives, while males are still expected to be the primary income-earner? Or do employers assume that most females will not accept such demands on their time and simply exclude many females from consideration for such jobs? Is the demand to work longer hours therefore emerging as a de facto form of employment discrimination?

The return on a personal investment in education and training in dollar terms might not be the most important goal of many TAFE students, nor should maximising earnings be seen as the major objective of the VET system. It is clear, however, that a vocational outcome is the major motivation for enrolment (NCVER 1998) and that earnings are a tangible and public measure of the value placed on education and training. Systematic differences in earnings on the basis of gender, as demonstrated in this report, indicate a substantial shortcoming in equitable outcomes from the VET system. The findings from this research project suggest that there is a number of related research questions worthy of further exploration.

Despite the continuing shortcomings in labour market outcomes for females, it should not be forgotten that the detailed analyses of each of the six focus industries show that for most TAFE graduates, male and female, a TAFE qualification provides an earnings boost vis à vis all workers, when matched by age group and gender. Moreover, in most areas this boost is greater for females than males, although this is probably because of the overall lower level of qualified female workers already in the labour force.

Kim has completed a Diploma of Applied Science in Building and is working as a building consultant with an engineering consultancy group. Her initial post school study was in advertising. She is currently undertaking further study at university. While she described herself as a tomboy as a child she says neither her parents nor family had any influence in her interest in building.

Asked the reason for choosing her particular course of study she said:

I've always been interested in building, especially residential building to be honest … building nice homes and dwellings and blocks of units. I've always been interested in that, probably in the artistic side originally but I'm a very practical person so I thought – say if I did architecture, people were going to say to me 'no that's not going to work, you can't practically do that'. I always like to have some sort of control so I thought 'what was the most practical one I could do?' and it was a straight out building course – so that's the one I am doing.

She wanted information on job prospects, work and pay, although she had done her own research:

Teachers did talk about it quite a bit in the first year. Gave you a fair bit of guidance which I thought was quite good in the first few months because it gave you an understanding about what options were available and they talked about wages. Gave you a fair bit of guidance … gave you a bit of direction right at the outset.

Kim thinks she earns less than her male colleagues, in the male-dominated industry, where experience is a major factor in wage levels. She said:

Regardless of experience that you hold or qualifications you hold, regardless of how many times that you prove yourself, regardless of your age you will always be considered in the minority and the minority group are never as powerful as the majority and power equates to dollars in today's society and that's really the backbone of it.

Kim plans to continue her studies and evolve with the industry in terms of environmental needs and technological changes.

Going into the evolving roles in the industry … but ultimately I would love to work for myself and use a lot of the skills that I currently have in investigating buildings and determining buildings' problems and moving into a bit of development as well.

Other related research

Several Australian researchers have analysed the relationship between educational attainment and earnings in recent years. Gregory (1993) found that over the period from the 1970s to the 1990s there appeared to be no increased reward in earnings for obtaining higher educational qualifications, contrasting with the outcome in the USA over the same period where increased educational attainment widened the earnings gap with those less well qualified. Perhaps more significantly for the VET sector Gregory found that full-time occupational growth had occurred in the top and bottom thirds of income levels, whereas the middle third had declined. Studying much the same period for Australia Karmel (1998), however, found average levels of growth in middle level occupations. Burke (1998) suggests that the differences between Gregory and Karmel might be explained by changes in the distribution of earnings within occupations.

Long, McKenzie and Sturman (1996) conducted an important analysis of longer term outcomes in terms of earnings of TAFE graduates from two age cohorts of those born in 1961 and 1965 when aged 25 years. The subjects of this study generally undertook their education during the mid-1980s. While they found female TAFE graduates' earnings to be noticeably lower than equivalent males' earnings, a finding consistent with the findings of this project, they also found that a TAFE qualification for females provided a relatively lower benefit in earnings than it did for males.

This project adopted a different methodology to their study and focused on recent graduates only. Nevertheless, this study demonstrates that, at least in some industries and for recent graduates, for females a TAFE qualification can be of relatively greater value than for males when matched by age. The studies are, however, generally consistent in finding that equitable outcomes in the labour market for female TAFE graduates are still not being attained and that, in the words of Long, McKenzie and Sturman:

Policies designed to encourage greater equity of participation in a system that, at least by comparison with higher education, is already very accessible to a broad range of Australians, only makes sense if that participation delivers increased earnings and better prospects of employment.

This study of TAFE graduates' earnings is more limited in its scope than the work of Gregory, Karmel and Long, McKenzie and Sturman, although it shows that a TAFE qualification does provide an earnings benefit to the individual in most of the industry sectors examined in detail. It considers the earnings of the cohort of TAFE graduates surveyed in May 1997 following their completion of a TAFE course of at least 200 hours' duration. In using such a group there are several important limitations imposed on drawing conclusions in relation to all TAFE students' earnings including:

- The data are not longitudinal, and, therefore, any longer term benefits in earnings gained through a TAFE credential are not apparent.
- The majority of students attending TAFE do not complete the longer duration courses that are a prerequisite for inclusion in the Graduate Destination Survey. (A forthcoming study by Foyster, Fai & Shah shows that completion of modules rather than courses might be the aim of a large number of TAFE students. These students would generally not be included in the GDS.)

Analysis of individual industries

Manufacturing

Main findings

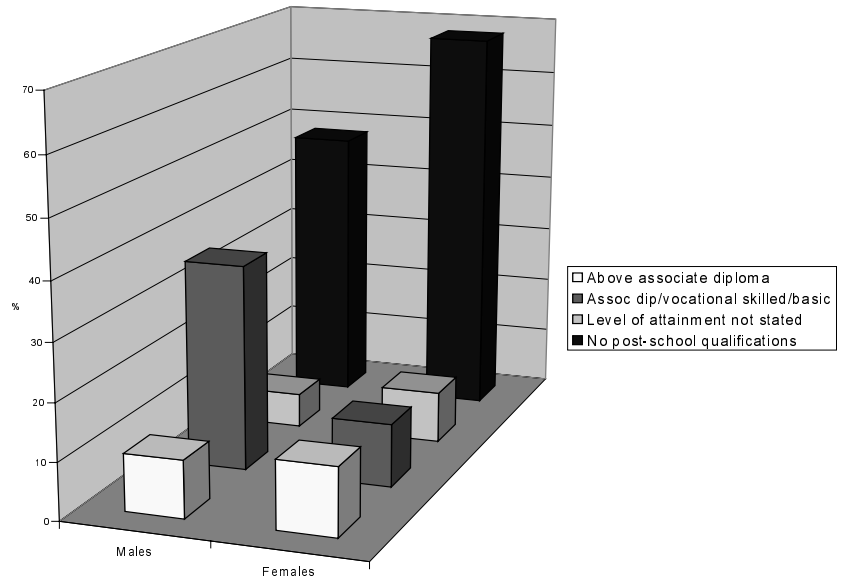
- Female TAFE graduates employed in manufacturing full-time have a higher qualifications profile than males but earn overall less than 90% of male TAFE graduates. Across all full-time employees in the industry, however, females earn less than 80% of males' income.
- Female graduates in this industry are most likely to have studied in the business/administration field of study but at a lower level of qualification than males who studied in this area.
- About two-thirds of all women working in manufacturing lack post-school qualifications compared to less than 50% of males.

Overview of ABS Census data

The picture for the female labour force in this industry as a whole shows that while substantially fewer have post-school qualifications compared to males, paradoxically, slightly more females than males have upper level qualifications. Despite the range of qualifications held by females, there is a trend towards underemployment for females but not for males. The ABS Census data show males predominate in manufacturing comprising 77% of all workers. As the figure below shows, males in this industry are three times more likely than females to hold a vocational qualification.

Of all workers in the manufacturing industry, 48% had some form of post-school qualification with 31% holding vocational qualifications (skilled/basic vocational or associate diploma), while 10% were qualified above the associate diploma level. Gender breakdowns show that 52% of all males had a post-school qualification, 36% with a vocational qualification, while 10% were qualified above associate diploma level. While a lower proportion of females (32%) had a post-school qualification and only 11% had vocational qualifications, there were proportionately slightly more females (12%) than males (10%) with qualifications above associate diploma level.

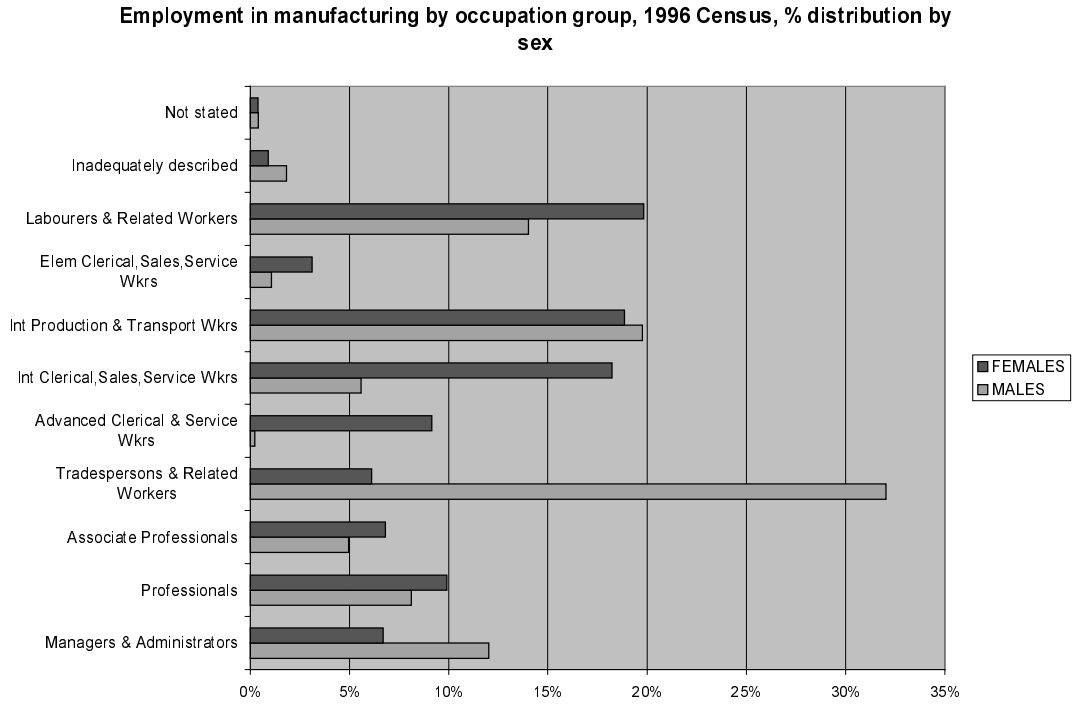
Figure 10: Skills profile of manufacturing labour force



Source: ABS Census of Population and Housing

The overall occupational data in the following figure show that males are concentrated in the trades (32%), production/transport (20%), in management/administration/professionals (18%) and labourers/related work (14%). By comparison, female occupations are spread across labourers/related work (20%) production/transport (19%), clerical/sales/service (18%) and management/professionals (17%).

Figure 11: Employment in manufacturing, by occupation



Source: ABS 1996 Census of Population and Housing

The intersection of level of attainment and occupation data show that for males vocational qualifications typically lead to employment in trade occupations (53%), while females with vocational qualifications tend to be employed across the full range of occupations in the manufacturing industry, with clerical/sales service workers making up the highest proportion (20%) of female workers.

For males, an associate diploma more often leads to a professional or management job comprising 43% of all males with associate diplomas. By contrast, only 30% of females with associate diplomas work in professional or management jobs, while one in five are employed on clerical, sales service work. Interestingly, a substantial proportion of males with only basic vocational training (38%) was concentrated in associate professional/professional/managerial occupations. This pattern is repeated to a lesser extent for women where 28% of those with basic training are found in the upper occupation levels. As would be expected, however, most women with basic vocational qualifications are in clerical occupations.

While not directly within the scope of this study, it is noteworthy that a high 69% of males qualified above associate diploma level are employed in management/professional jobs, compared to only 55% of females with high level qualifications.

Analysis of 1997 GDS data

Using GDS data, males form the majority (72%) of TAFE graduates surveyed in the manufacturing industry. Overall there were 4148 males and 1598 females employed in manufacturing in the 1997 TAFE GDS.

In this industry, females therefore held only 28% of qualifications held by all respondents and only 7% of the very large engineering group. They were concentrated disproportionately in 'business, administration, economic' (49% of females with VET qualifications) and held just over half of all qualifications in this field. However, in this field they constitute less than 40% in each of the levels AQF Certificate 4 and AQF diploma and advanced certificate – other. Females are dominant in

services, hospitality and transportation (56% of qualifications held) arts humanities and social sciences (59% of qualifications held) and were well represented in health and community services (44%), but these fields together constituted less than a quarter of the overall number of VET-qualified females in the industry.

Level of qualification data show that males are concentrated in trade certificates, making up 36.5% of males surveyed. A further one in five held the certificate – n.e.c. (not elsewhere classified) while 10% held associate diplomas. By comparison, almost one-third of females held the certificate – n.e.c., followed by a spread of qualifications across AQF III (13%), AQF II (12%), associate diploma (11%), and AQF IV (9%).

When data for those employed in manufacturing are examined by cross-tabulating field of study by level of qualification, major differences between male and female graduates are apparent. These tables for all six focus industries are provided in the appendix as table 5. The following table summarises the qualification profile of the graduates surveyed in the 1997 GDS who were working full-time in the manufacturing industry.

The level of qualification by field of study by sex data show that business/administration/economics is most commonly studied by women through the certificate – n.e.c., whereas for men this field is most commonly studied at the AQF certificate IV level. Engineering/surveying is most commonly studied by males through trade certificates, whereas for women it is most commonly studied either through the certificate – n.e.c. or a trade certificate. The other large cells in this cross tabulation for males were trades certificates in architecture/building and the associate diploma in engineering/surveying. For females, other large cell counts occurred in certificate n.e.c. in the services/hospitality/transportation field of study. Females overall were twice as likely as males to have undertaken a TAFE Multifield course, generally at the AQF level 1, while males undertaking a course in this field were more likely to have studied at the certificate n.e.c. level.

Mirroring the tendency of females in this industry to acquire higher qualifications than males almost 17% of the females surveyed were qualified at the associate diploma level or higher, (including equivalent AQF qualifications). In comparison only 13% of males surveyed in the GDS were qualified at the associate diploma level or above.

For males, associate diplomas were most commonly studied in the field of engineering/surveying whereas for females associate diplomas were most commonly studied in business, administration/economics.

Table 8: Employment in manufacturing, by qualification

Qualification	Males	% Males	% Total	Females	% Females	% Total	Total
Diploma	24	1%	0%	10	1%	0%	34
Assoc. diploma	422	10%	7%	179	11%	3%	601
Adv. cert. – Post-trade	120	3%	2%	11	1%	0%	131
Adv. cert. – Other	350	8%	6%	102	6%	2%	452
Cert. – Trade	1512	36%	26%	74	5%	1%	1586
Cert. – n.e.c.	807	19%	14%	510	32%	9%	1317
AQF – Cert. I	149	4%	3%	80	5%	1%	229
AQF – Cert. II	178	4%	3%	197	12%	3%	375
AQF – Cert. III	245	6%	4%	210	13%	4%	455
AQF – Cert. IV	247	6%	4%	145	9%	3%	392
AQF – Diploma	71	2%	1%	44	3%	1%	115
AQF – Adv. diploma	23	1%	0%	36	2%	1%	59
Total	**4148**	**100%**	**72%**	**1598**	**100%**	**28%**	**5746**

Source: NCVER 1997 TAFE GDS

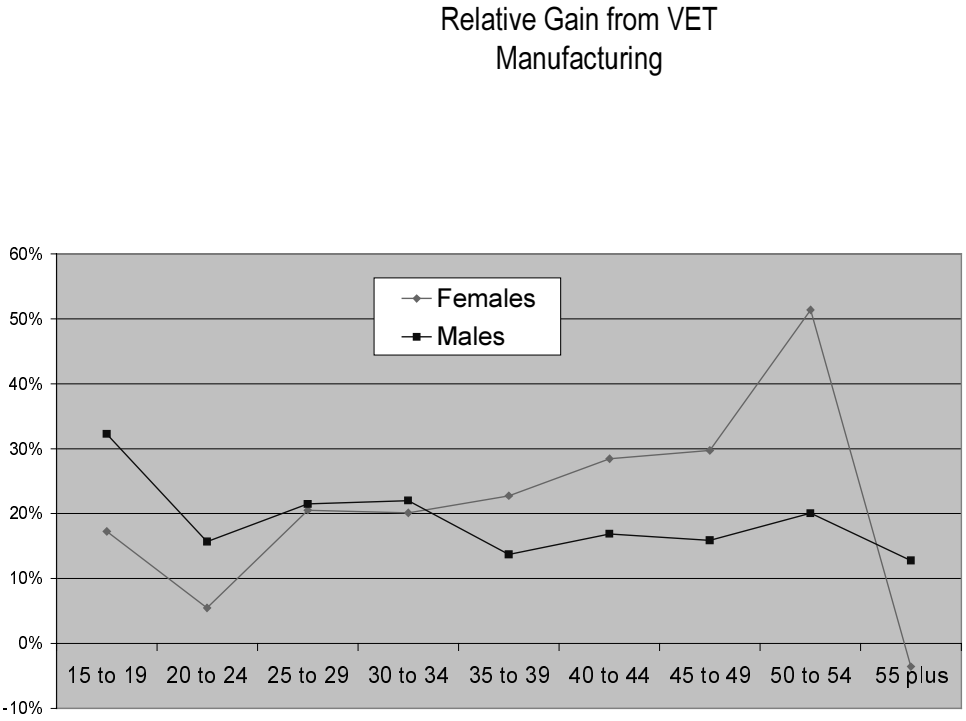
Earnings

Full-time average weekly earnings data show that while female TAFE graduates earned less than male graduates in this industry, having a TAFE credential appears to narrow the earnings gap compared to all female workers in manufacturing. Female TAFE graduates earned 89% of male average weekly earnings, while the ABS Employee Hours and Earnings survey shows that females earned 79% of male earnings.

In manufacturing, then, while it is not clear whether the credential or field of study contributes to this outcome for women, it appears that business, administration/economics studies may assist female workers to approach the earning capacity of males with trades backgrounds in engineering/surveying. Nevertheless, it appears that the predominance of males in more technically oriented engineering and surveying courses outweighs the overall slightly higher qualifications of females in driving earnings capacity. It is also apparent that males and females are undertaking quite different patterns of study by level and field of study. This, in turn, appears to reflect the marked differences that persist in the occupational patterns of employment across the industry.

The following figure shows the relative gain from undertaking a VET course for full-time employed graduates surveyed in the 1997 GDS working in manufacturing. It is clear that TAFE graduates, both male and female, gain a benefit in terms of earnings relative to all workers in manufacturing. Females in most age groups gain a relatively larger benefit in comparison to all females than do males in comparison to all males.

Figure 12: Relative income gain from VET in manufacturing



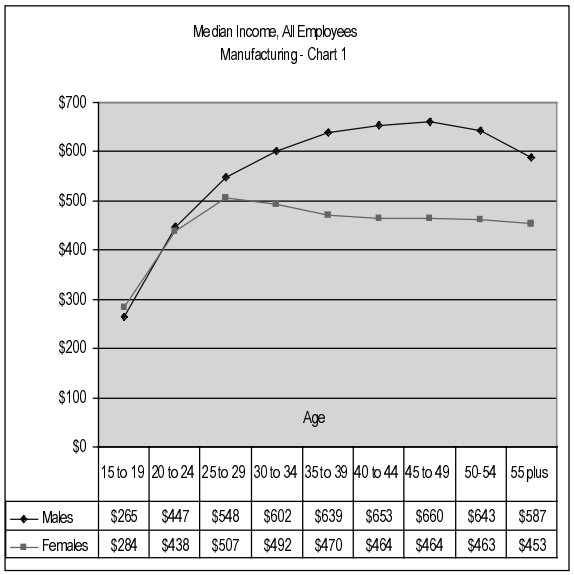
Source: NCVER 1997 GDS and ABS 1996 Census of Population and Housing

It is important to keep in mind that this comparison understates the net benefit of obtaining a TAFE qualification as roughly half of those workers included in the total work force against whom the comparison is being made would also hold some form of post-school qualification.

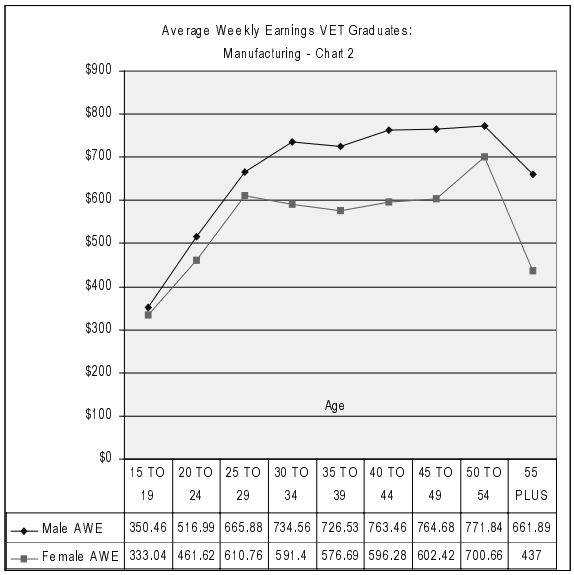
Figure 13 shows that median weekly earnings for both male and female TAFE graduates start to diverge from all employees' earnings from around the age of 25 and then converge again for workers aged 55 and over. It is also clear that the greatest divergences in male and female earnings, both for TAFE graduates and all employees, diverge most in the age range from 30 to 50 years.

Female VET graduates across most age groups appear to have a net earnings advantage of around $100–$150 per week, while male TAFE graduates have a similar range of advantage over all males in the industry. Females represented 22.7% of the 3339 respondent graduates who were working in manufacturing. On average they received 89.1% of the male wage of just under $600 per week. Female tradespersons and labourers achieved the nearest to parity at around 87% of the male wage. The greatest disparity was for females working as clerks (75.6% of the male wage). Significantly, almost 31% of all female respondents in this industry worked as clerks. Noteworthy also is the high concentration of males in the trades.

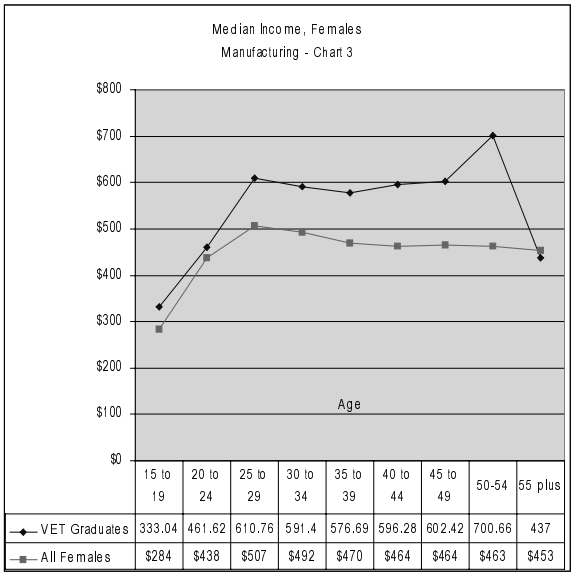
Figure 13: Manufacturing earnings comparisons



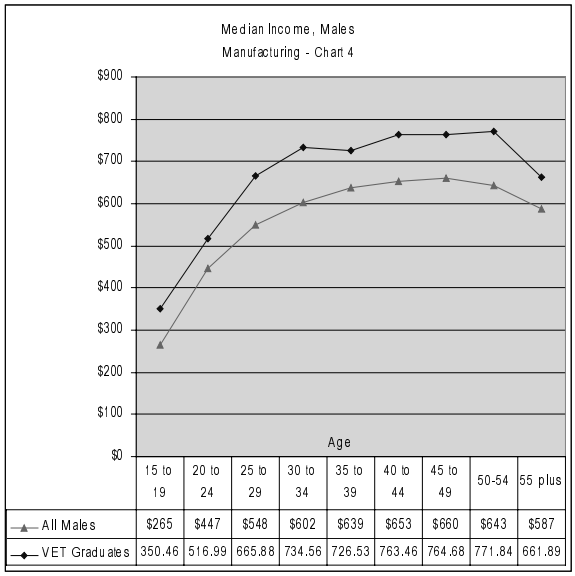
	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50-54	55 plus
Males	$265	$447	$548	$602	$639	$653	$660	$643	$587
Females	$284	$438	$507	$492	$470	$464	$464	$463	$453



	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 TO 44	45 TO 49	50 TO 54	55 PLUS
Male AWE	350.46	516.99	665.88	734.56	726.53	763.46	764.68	771.84	661.89
Female AWE	333.04	461.62	610.76	591.4	576.69	596.28	602.42	700.66	437



	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50-54	55 plus
VET Graduates	333.04	461.62	610.76	591.4	576.69	596.28	602.42	700.66	437
All Females	$284	$438	$507	$492	$470	$464	$464	$463	$453



	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50-54	55 plus
All Males	$265	$447	$548	$602	$639	$653	$660	$643	$587
VET Graduates	350.46	516.99	665.88	734.56	726.53	763.46	764.68	771.84	661.89

Note: These charts compare various data on male and female earnings from the NCVER 1997 GDS and the ABS 1996 Census of Population and Housing.

The charts in figure 13 also show, however, that across the middle age groups (40–54) all males enjoy an earnings advantage over all females of around $200 per week.

Retail

Main findings

- A TAFE qualification provides an earnings boost to both males and females in comparison to all workers in the industry.
- About 70% of all females in the industry lack post-school qualifications compared with about 50% of males.

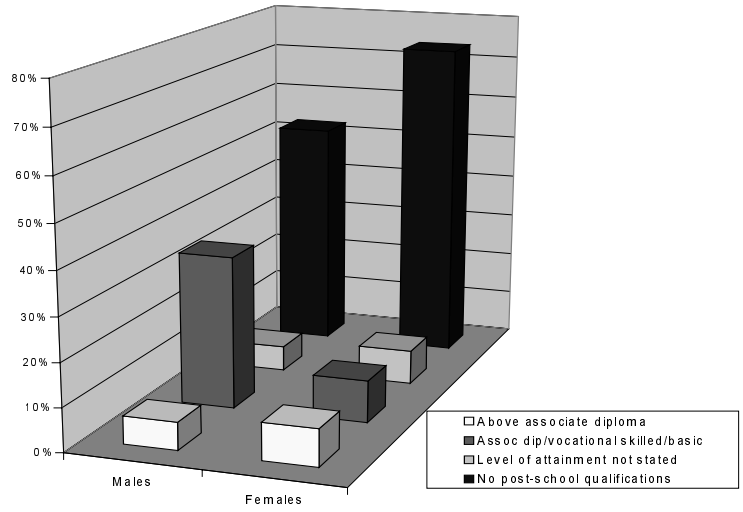
Overview of ABS Census data

Substantially fewer females in the retail industry have post-school qualifications than males, although slightly more females than males have upper level qualifications. It appears that females are underemployed at the upper end of qualifications (associate diploma and above) while those with basic/skilled vocational training are spread across the range of retail occupations.

Males account for nearly 63% of all full-time workers in retailing; however, they account for less than half of all workers in the industry, with females making up over 70% of the part-time workers in this industry. Of all workers, 39% had post-school qualifications, while 26% had vocational qualifications and 7% were qualified above diploma level.

Gender breakdowns show that 47% of all males had any post-school qualification, with 35% having vocational qualifications. However, only 26% of females had any post-school qualifications and only 10% with a vocational qualification. Interestingly, a higher proportion of females had higher qualifications, with 9% qualified above associate diploma level compared to 6% of men.

Figure 14: Skills profile of retail labour force

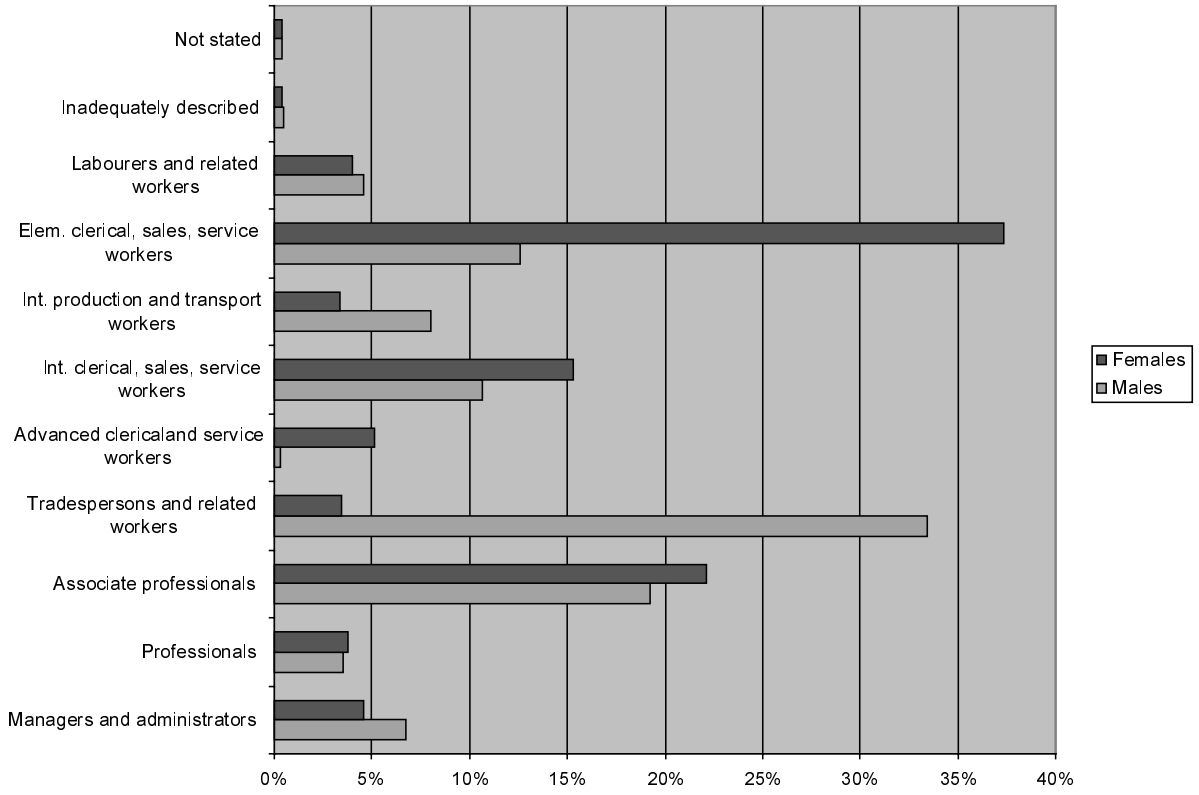


Source: ABS 1996 Census of Population and Housing

The overall occupational data for the full-time employed show that one in three males worked in the trades, while a further one in five worked in associate professional jobs. On the other hand, 37% of

females in this industry are concentrated in elementary clerical/sales/service positions, 15% in intermediate level clerical/sales/service work, and a further 22% work as associate professionals.

Figure 15: Employment in retailing, by occupation



Source: ABS 1996 Census of Population and Housing

The intersection of level of attainment and occupation data show that 60% of males with a vocational qualification typically work in trades occupations. Of those males with associate diplomas, over half (53%) worked in either associate professional or manger/professional occupations.

For females with vocational qualifications, occupational areas are more diffuse with 47% spread across elementary or intermediate clerical/sales work and a similar proportion as men (22%) are associate professionals. Of those females with associate diploma qualifications, a lower 39% worked in associate professional/manager/professional occupations.

Interestingly, a substantial proportion of males with basic vocational training (39%) is concentrated in associate professional, professional or managerial occupations. This pattern is repeated to a lesser extent for women where 31% of those with basic training are found in the upper occupation levels. It could be that at least some of this phenomenon is explained by owner/operators of small retail establishments, many of whom could lack formal higher level post-school qualifications, being classified as managers. As would be expected, the bulk of women in this group are in clerical occupations.

While not directly within the scope of this study, it is also interesting to note that 43% of males qualified above associate diploma level were employed in management or professional jobs, compared to only 33% of females with high level qualifications. Despite their qualifications, a substantial one in five females in this group remain in elementary clerical/sales work.

Analysis of 1997 GDS data

By contrast with the industry as a whole, where males make up 63% of full-time workers, male and female TAFE graduates surveyed were in equal proportions.

Level of qualification data show that 42% of males surveyed had trade certificates and a further 15% held certificate – n.e.c., while 9% held associate diplomas. By comparison, over one-third of females (35%) surveyed had certificate – n.e.c., followed by a spread of qualifications across associate diploma (11%), AQF 11 (15%), and AQF 111 (11%). The following table summarises the qualification profile of the TAFE graduates surveyed in the 1997 GDS.

Table 9: Graduates employed in retailing, by qualification

Level of qualification	Males	% Males	% Total	Females	% Females	% Total	Total
Diploma	10	0%	0%	30	1%	0%	40
Assoc. diploma	275	9%	5%	340	11%	6%	615
Adv. cert. – Post-trade	20	1%	0%	7	0%	0%	27
Adv. cert. – Other	160	5%	3%	234	8%	4%	394
Cert. – Trade	1283	42%	21%	54	2%	1%	1337
Cert. – n.e.c.	465	15%	8%	1061	35%	17%	1526
AQF – Cert. I	159	5%	3%	137	4%	2%	296
AQF – Cert. II	201	7%	3%	464	15%	8%	665
AQF – Cert. III	175	6%	3%	348	11%	6%	523
AQF – Cert. IV	158	5%	3%	195	6%	3%	353
AQF – Diploma	83	3%	1%	156	5%	3%	239
AQF – Adv. diploma	34	1%	1%	36	1%	1%	70
Total	**3023**	**100%**	**50%**	**3062**	**100%**	**50%**	**6085**

Source: NCVER TAFE 1997 GDS

Females hold half of all qualifications held by respondents in retail. The dominant qualifications held by all respondents in the industry were in the fields of business, administration and economics, engineering and surveying, and services hospitality and transportation. Females represented 68% of the numbers in all levels of business and 65% of all levels of services, hospitality etc., with the notable exception of the trades level (7.8%) in the latter field. They had very low levels of participation in the engineering trades level (1.5%) and, as a result, held only 5% overall of the large engineering field of study.

The intersection of level of qualification and field of study by sex shows that business, administration and economics is most commonly studied by women through the certificate – n.e.c. or at the AQF level 2, whereas for men this field is most commonly studied at associate diploma level. About 37% of men who completed a course in the business/economics field did so at the associate diploma level or higher, whereas only 21% of women studied this field at the higher levels.

Overall, male TAFE graduates working full-time in retailing were heavily concentrated in just one field of study by qualification cell – a trade certificate in the engineering/surveying field, with over one-third of all males in the industry found in this category. (Although the data do not provide more detailed occupational breakdowns, it is likely that most of these graduates would be motor mechanics.) Females, on the other hand, were more evenly spread across a number of cells in this cross-tabulation but were heavily concentrated in business/administration/economics, with over 40% of them in this field of study.

Full-time average weekly earnings data (examined in more detail in the next section), show female TAFE graduates earnings were almost equal to male graduate earnings in the retail industry. Also, having a TAFE credential appears to narrow the earnings gap when compared to all female workers in retail. That is, female TAFE graduates earned 99.1% of male graduate average weekly earnings, while the ABS Employee Hours and Earnings survey shows that females earned only 83.2% of male earnings.

In retail, then, while it is not clear whether the credential or field of study contributes to this outcome for women, the data suggest that a TAFE credential assists females to almost eliminate the earnings gap in an industry where over two-thirds of females have no post-school qualifications. Of the six industries examined in this study, it appears that a TAFE credential gains women a greater relative earnings advantage in retailing than in any of the other five industries.

Earnings

Just below one-third of the 2789 retail respondents in this survey were female. On average, female's earnings were on a par with males at 99%, and female para-professionals and plant and machinery operators received wages virtually on a par with males. Female clerks earned significantly less than males (79.8% of male wages). A very high 68.4% of male respondents worked in the trades compared with fewer than 11% of females. Almost 40% of female respondents worked as salespersons.

The following figure shows the relative gain in earnings for male and female TAFE graduates over all workers in the retailing sector. For graduates in the middle age ranges, the gain is in the region of 10–15% compared with similarly aged workers across the whole industry, some of whom would of course also hold post-school qualifications.

Figure 16: Relative income gain from VET in retailing



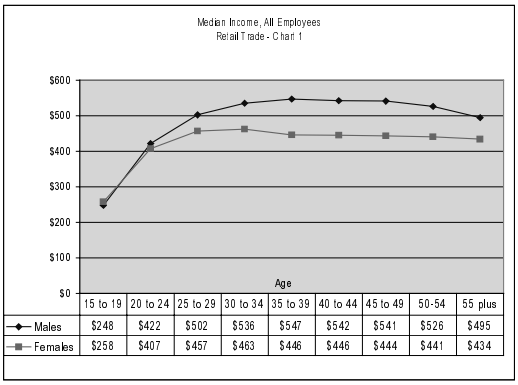
Source: NCVER 1997 GDS

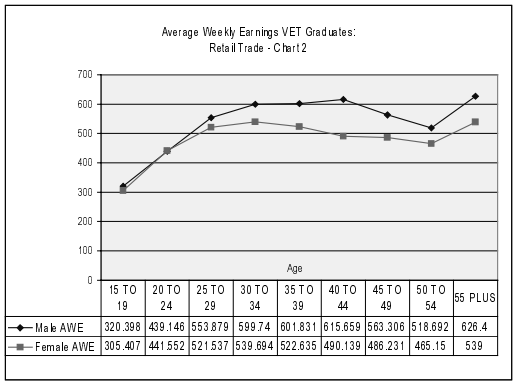
Figures supporting the above figure are provided at the end of this section. They show details of earnings by age of all workers and TAFE graduates surveyed in the 1997 GDS. Those figures reveal male and female earnings diverging in middle age groups and converging in the 55+ age group. For female TAFE graduates the greatest benefit appears to accrue to those in the 25–39 age groups when

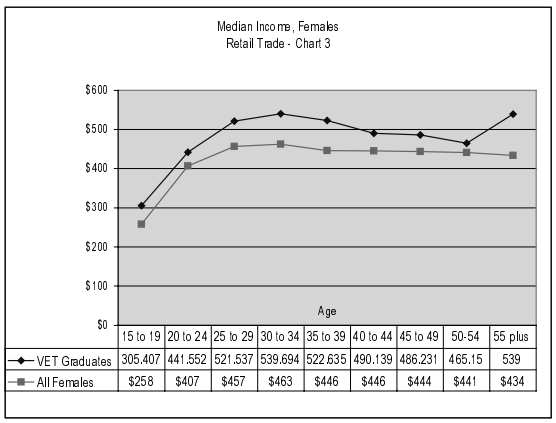
compared to all females in the industry. In comparison with male graduates the widest earnings gap occurs in the 35–49 age groups.

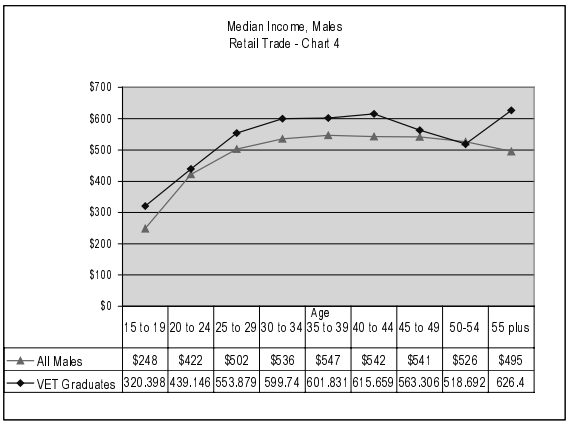
For female graduates, the relative benefit from their qualification appears to diminish for those aged over 40, while for males this phenomenon occurs for those aged over 45. The relative benefit then rises sharply for those in the 55+ age group.

Figure 17: Retail earnings comparisons









Note: These charts compare various data on male and female earnings from the NCVER 1997 GDS and the ABS 1996 Census of Population and Housing.

Accommodation, cafés and restaurants

Main findings

- Earnings for male and female TAFE graduates were quite close in this industry, although women TAFE graduates working in associate professional and clerical jobs earned noticeably less than males in these occupations.
- Males with associate diplomas were nearly twice as likely as females with these qualifications to work in professional, associate professional or managerial jobs.
- Female TAFE graduates were much more likely than males to work in this industry.
- A TAFE qualification provided only a small earnings benefit relative to all workers in this industry.

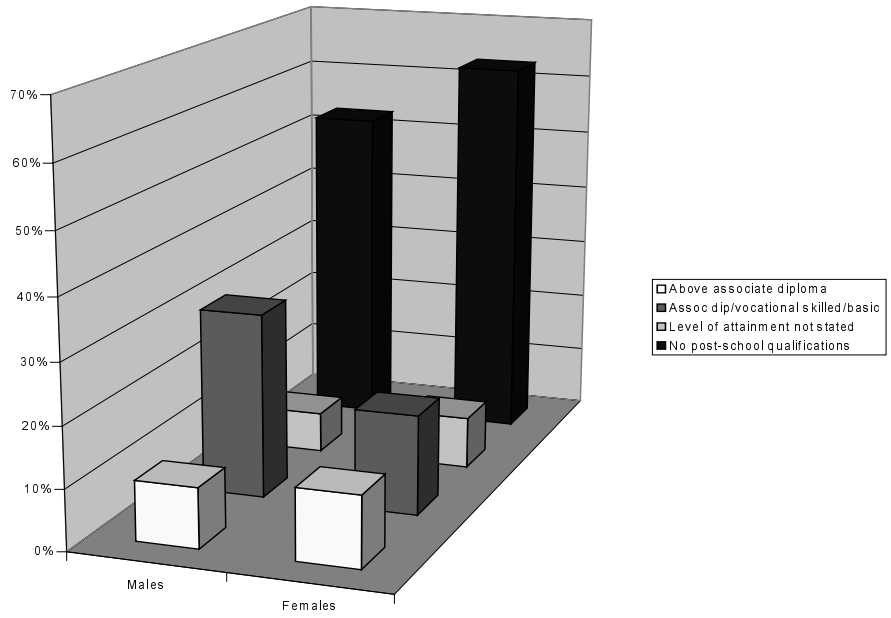
Overview of ABS Census data

While fewer females in this industry have post-school qualifications compared to males, slightly more females than males have upper level qualifications. It appears that for males, vocational training typically leads to associate professional/management positions while female occupational areas are more diffuse. Again, as in manufacturing and retail, females tend to be underemployed at the upper end of qualifications (associate diploma and above).

Males make up 58% of full-time workers in this industry. Of all workers 43% had post-school qualifications, while 25% had vocational qualifications and 11% are qualified above associate diploma level.

Gender breakdowns show that 47% of all males had a post-school qualification, with 31% having vocational qualifications. However, only 37% of females had any post-school qualification and only 16% had a vocational qualification. Interestingly, a slightly higher proportion of females had higher qualifications with 12% qualified above associate diploma level, compared to 10% of men.

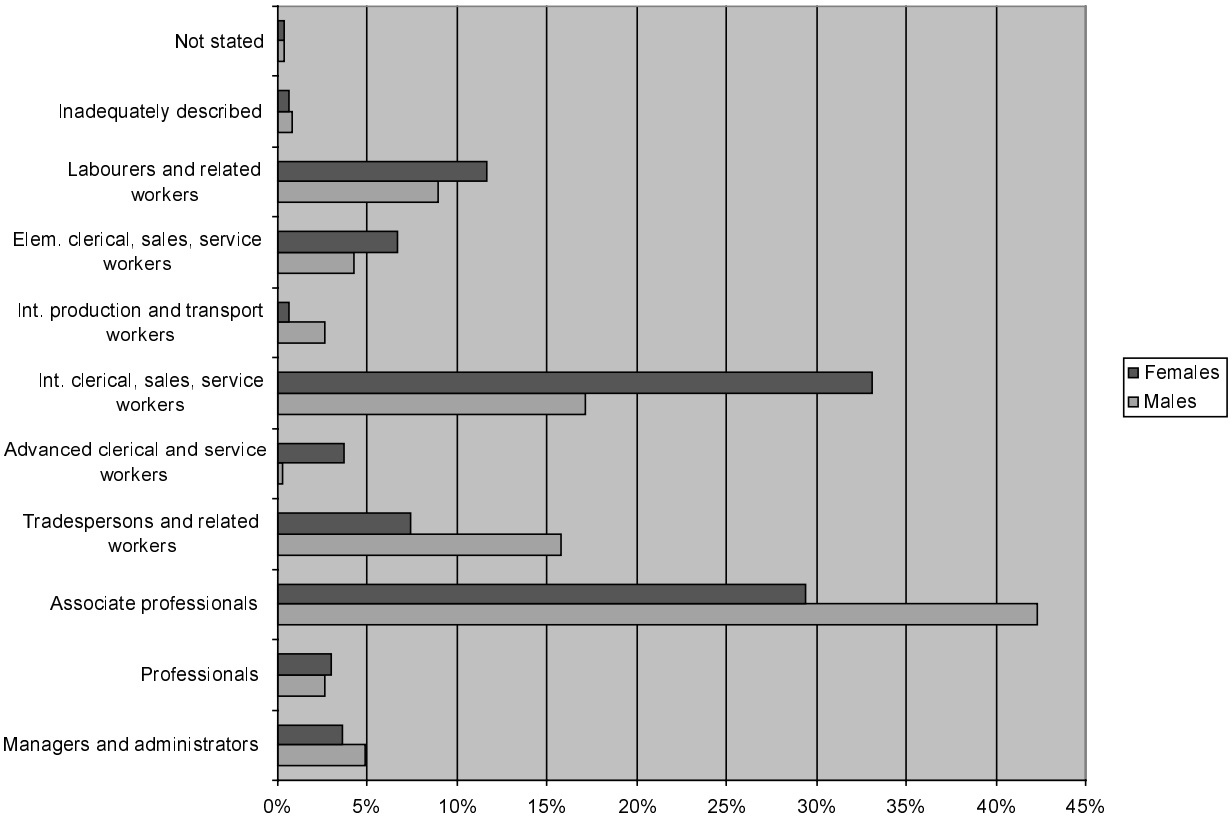
Figure 18: Skills profile of accommodation, cafés and restaurants labour force



Source: ABS 1996 Census of Population and Housing

The overall occupational data show that 42% of males are in the associate professions, followed by 16% in trades occupations. On the other hand, one in three females in this industry are concentrated in the intermediate level clerical/sales and service work, and a further 29% work as associate professionals.

Figure 19: Employment in accommodation, cafés and restaurants, by occupation



Source: NCVER 1997 GDS

The intersection of level of attainment and occupation data show just over half of males with vocational qualifications typically work in associate professional occupations. Again, of those males with associate diploma qualifications over half (61%) worked in either associate professional/ professional/managerial occupations. For females with vocational qualifications, occupational areas are in the main divided between associate professionals and intermediate level clerical/sales/service work comprising 38% and 32% respectively. Of those females with associate diploma qualifications, a lower 35% worked in associate professional/professional/managerial occupations, while a high 45% were found in intermediate level clerical/sales and service work.

Interestingly, almost half of males with basic vocational training (47%) were concentrated in associate professional, professional or managerial occupations. This pattern is repeated to a lesser extent for women where one-third of those with basic training are found in the upper occupation levels. As would be expected, the bulk of women with basic vocational qualifications are in intermediate clerical/sales/service occupations.

While not directly within the scope of this study, it is noteworthy that 27% of males qualified above associate diploma were found in management/professional jobs, compared to only 22% of females with high level qualifications. Despite their qualifications, nearly two-thirds of females in this group remain in intermediate clerical/sales work.

Analysis of 1997 GDS data

Females form the majority of 63% of graduates surveyed in the 1997 GDS working full-time in the industry, compared to a lower 42% in the industry as a whole.

Level of qualification data show that males are spread across certificate – n.e.c. (23%), AQF Cert. II (19%) and trades certificate (17%). A further 11% of males had associate diplomas. Similarly,

qualifications for females were spread across certificate – n.e.c. (27%), AQF II (18%) and associate diploma (10%). The following table shows the qualification profile of the surveyed TAFE graduates working full-time in accommodation, cafés and restaurants.

Field of study data show that both men and women in this industry concentrated their studies in services/hospitality/transport, comprising 64% of males and 57% of females. The next most common area of study was business, administration/economics, making up 12% of males and 19% of females. About 9% of women had studied in the health and community services field of study.

Table 10: Graduates in accommodation, cafés and restaurants, by qualification

Level of qualification	Males	% Males	% Total	Females	% Females	% Total	Total
Diploma	15	1%	0%	23	1%	1%	38
Assoc. diploma	121	11%	4%	189	10%	6%	310
Adv. cert. – Post-trade	16	1%	1%	35	2%	1%	51
Adv. Cert. – Other	54	5%	2%	124	6%	4%	178
Cert. – Trade	188	17%	6%	137	7%	4%	325
Cert. – n.e.c.	262	23%	9%	528	27%	17%	790
AQF – Cert. I	35	3%	1%	46	2%	2%	81
AQF – Cert. II	208	19%	7%	346	18%	11%	554
AQF – Cert. III	51	5%	2%	160	8%	5%	211
AQF – Cert. IV	98	9%	3%	174	9%	6%	272
AQF – Diploma	61	5%	2%	138	7%	5%	199
AQF – Adv. diploma	13	1%	0%	27	1%	1%	40
Total	**1122**	**100%**	**37%**	**1927**	**100%**	**63%**	**3049**

Source: NCVER 1997 GDS

The intersection of level of qualification and field of study by sex shows that services/hospitality/transport is most commonly studied by women through the certificate – n.e.c. and the AQF level II, with the third largest area for women in this field being at the trades certificate level. For men, this field is most commonly studied through either the certificate – n.e.c., a trades certificate or an AQF level II course. For both males and females, associate diplomas were most commonly studied in the field of services/hospitality/transport.

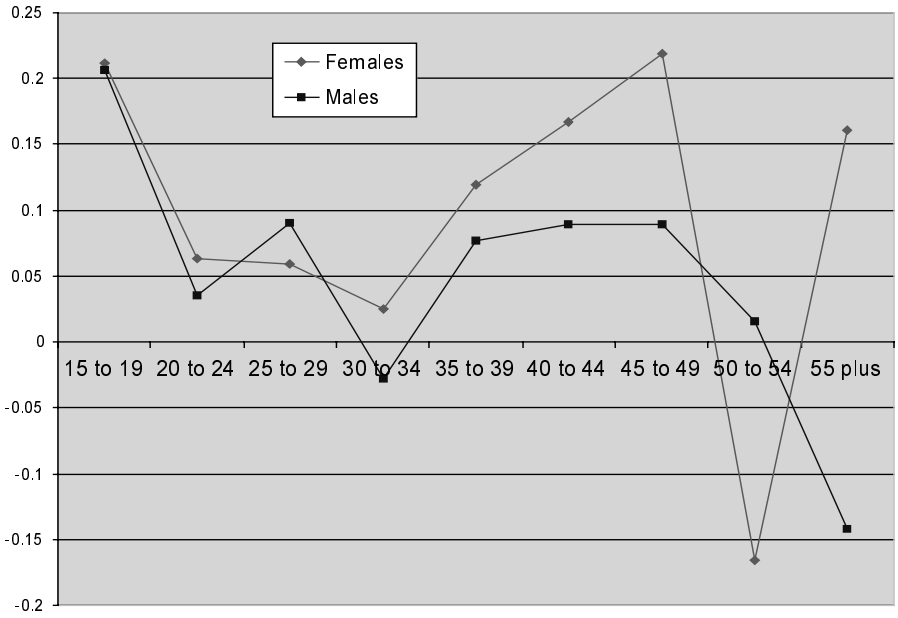
Earnings

Full-time average weekly earnings data show female TAFE graduates earnings were almost equal to male graduate earnings in the accommodation, cafés and restaurants industry. Also, having a TAFE credential appears to narrow the earnings gap when compared to all female workers in this industry. That is, female TAFE graduates earned 95.3% of male graduate average weekly earnings, while the ABS Employee Hours and Earnings survey shows that all females working full-time in the industry earned 88.1% of male earnings.

Thus while it is not clear whether the credential or field of study contributes to this outcome for women, the data suggest that a TAFE credential assists females to almost eliminate the earnings gap in an industry where two-thirds of females have no post-school qualifications. The data also suggest that for women aged between 30 and 49, a TAFE credential in this industry gives them a relatively greater advantage than males with a TAFE credential of the same age.

Relative gains in earnings in this industry were more pronounced for females than for males (that is, relative to all females and all males employed in the industry). There was also much greater variation between the age groups in the relative benefit of a TAFE credential for those working in this industry.

Figure 20: Relative income gain from VET in accommodation, cafés and restaurants



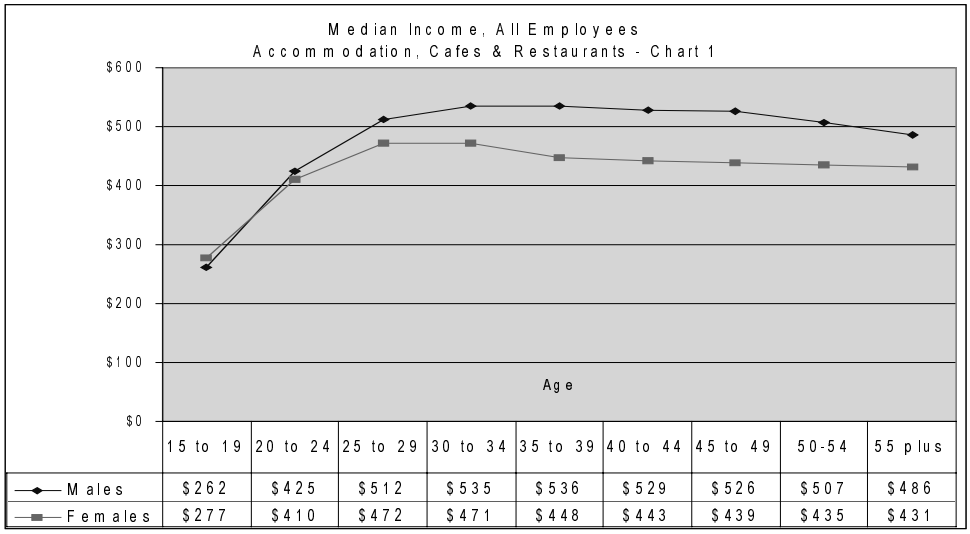
Source: NCVER 1997 GDS and ABS 1996 Census of Population & Housing

While the gap between male and female earnings for all workers and TAFE graduates in this industry was relatively small, the pattern followed that of other industries. The greatest earnings gaps occurred in the middle age groups from 35 to 50, with narrower differentials at either end of the age scale.

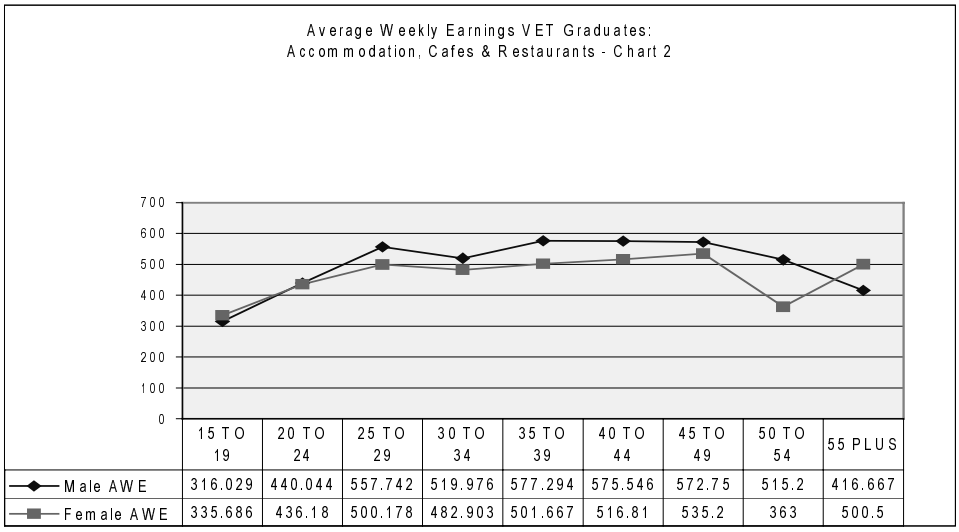
Females made up 54% of the respondents in this industry. Female wages were close to parity with males at 95.5% of the male wage. Significant occupations for females were trades (34.3% of all females) and sales staff (29%) in which they achieved 93% and 89% respectively of male wages. Females working as para-professionals and as clerks were well below parity with males at 81.7% of the male rate for those occupations.

For both males and females it is clear that the benefit of a TAFE qualification, while positive, was less pronounced in this industry than in manufacturing and retailing, possibly because of the greater degree of casualisation in this industry and the possibly more transitory nature of its employment. Figures on the following page show graphically the narrower benefit gap for TAFE graduates over all workers in the industry.

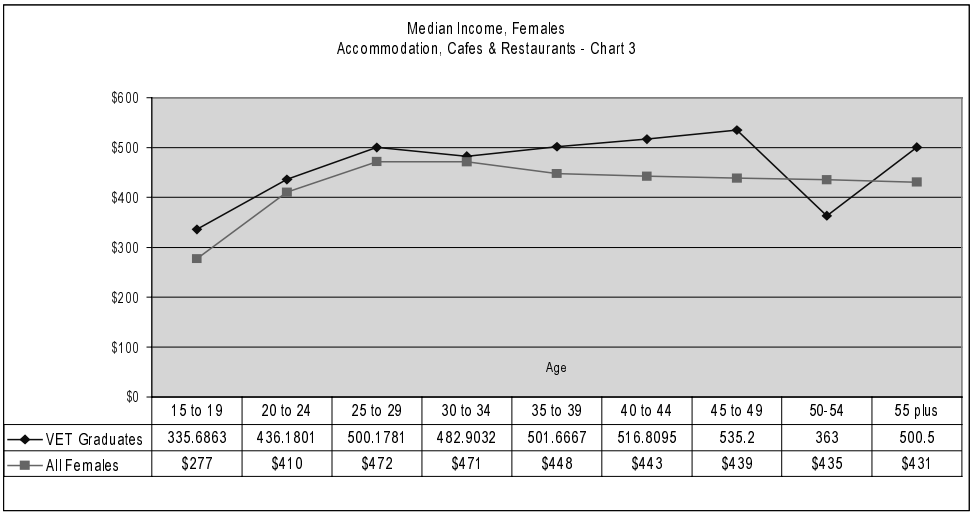
Figure 21: Accommodation, cafés and restaurants earnings comparisons



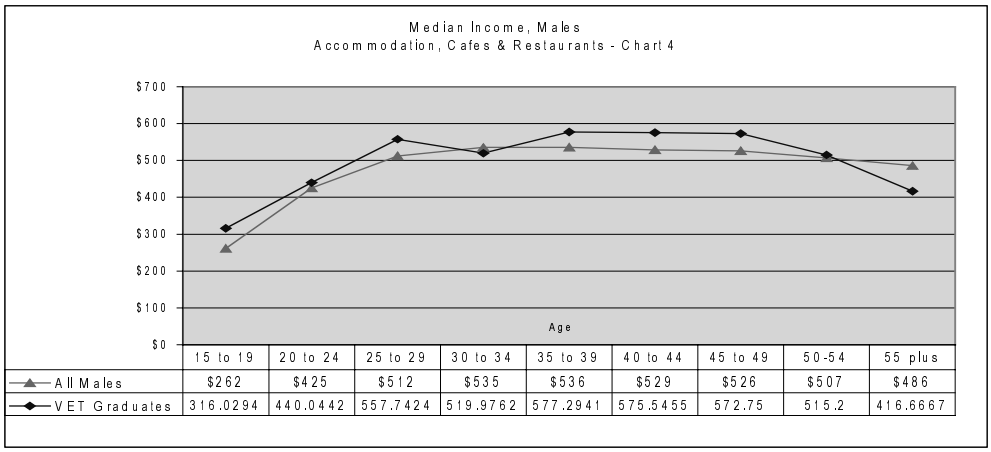
	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50-54	55 plus
Males	$262	$425	$512	$535	$536	$529	$526	$507	$486
Females	$277	$410	$472	$471	$448	$443	$439	$435	$431



	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 TO 44	45 TO 49	50 TO 54	55 PLUS
Male AWE	316.029	440.044	557.742	519.976	577.294	575.546	572.75	515.2	416.667
Female AWE	335.686	436.18	500.178	482.903	501.667	516.81	535.2	363	500.5



	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50-54	55 plus
VET Graduates	335.6863	436.1801	500.1781	482.9032	501.6667	516.8095	535.2	363	500.5
All Females	$277	$410	$472	$471	$448	$443	$439	$435	$431



	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50-54	55 plus
All Males	$262	$425	$512	$535	$536	$529	$526	$507	$486
VET Graduates	316.0294	440.0442	557.7424	519.9762	577.2941	575.5455	572.75	515.2	416.6667

Note: These charts compare various data on male and female earnings from the NCVER 1997 GDS and the ABS 1996 Census of Population and Housing.

Finance and insurance

Main findings

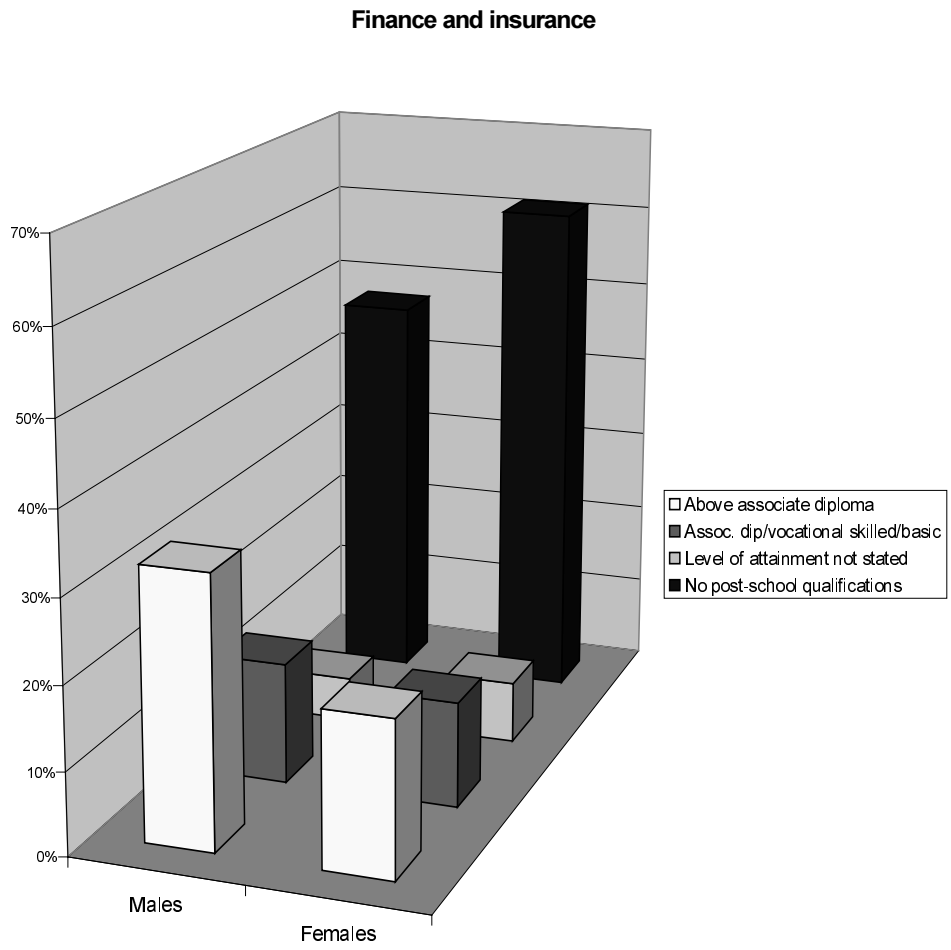
- As with some other industries, males with associate diplomas were about twice as likely as females with similar qualifications to be employed in professional, associate professional or managerial jobs.
- Occupational gender segregation is most apparent in this industry (see figure 23), with females clustered in clerical occupations and males in professional, associate professional and managerial jobs.
- Female TAFE graduates earn only 75% of their male counterparts in this industry; however, this seems to be because the females recruited to the industry had a lower qualifications profile.
- Female TAFE graduates gain an income advantage over all females in the industry; however, male TAFE graduates earn less than all males, probably because of a relatively small number of highly paid senior males in the industry.

Overview of ABS Census data

While the finance and insurance industry is made up of equal proportions of males and females, strong elements of occupational gender segregation are apparent. Of all workers, almost half (46%) had post-school qualifications, while 14% had vocational qualification and 26% are qualified above associate diploma level.

Gender breakdowns show that 52% of all males had a post-school qualification, with 15% having vocational qualifications and 33% higher qualifications. Only 39% of females had any post-school qualification, while 13% had vocational qualifications and 19% were qualified above associate diploma level.

Figure 22: Skills profile of the finance and insurance industry



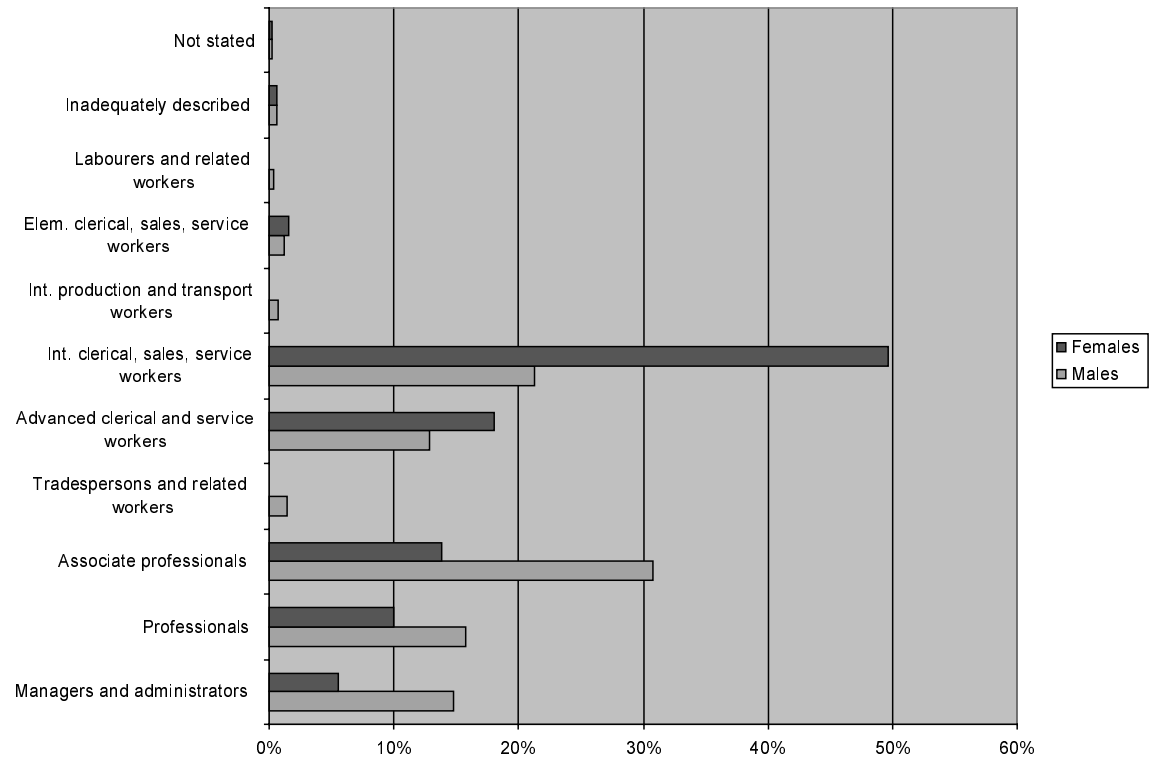
Source: ABS 1996 Census of Population and Housing

The overall occupational data show that males are spread across a range of occupational areas including the associate professions, professional, managerial and clerical/sales/service jobs. On the other hand, 70% of females in this industry are concentrated in clerical/sales/service work.

The intersection of level of attainment and occupation data show over half (57%) of males with a vocational qualification typically work in associate professional occupations or above, while one-third are in clerical/sales/service occupations. By comparison, over two-thirds of all females with vocational qualification worked in advanced or intermediate clerical/sales/service positions.

Of those males with associate diploma qualifications, over two-thirds worked in either associate professional or managerial/professional occupations. Of those females with associate diploma qualifications, a lower 35% worked in associate professional/professional/managerial occupations, while a high 62% were found in advanced/intermediate level clerical work /sales and service work. Unexpectedly, males with basic vocational training are almost as likely to be employed in the upper occupational levels as those with associate diploma qualifications, whereby 63% of males with basic training worked in either associate professional, professional or managerial work. This finding was not repeated for females, where only 25% with basic training occupied associate professional/professional/managerial positions.

Figure 23: Employment in finance and insurance, by occupation



Source: ABS 1996 Census of Population and Housing

While not directly within the scope of this study, it is also interesting to see that 51% of males qualified above associate diploma were in management/professional jobs, compared to only 43% of females with high level qualifications. Despite their qualifications, nearly 39% of females in this cohort remain in clerical/sales/service work.

Analysis of 1997 GDS data

Females comprise the majority of graduates (67%) surveyed in the 1997 TAFE GDS employed in this industry. The qualification profile of the surveyed graduates working full-time in this industry is shown in table 11.

Level of qualification data from the 1997 GDS show that 30% of males in this industry had completed associate diplomas followed by 13% with advanced certificate (other) and 12% with certificate – n.e.c. Females on the other hand were concentrated in certificate – n.e.c. (25%), with only 15% taking associate diplomas.

Field of study data show that the majority of both men (74%) and women (77%) studied in the area of business/administration/economics.

The intersection of level of qualification and field of study by sex shows that business/ administration/economics is most commonly studied by women through the certificate – n.e.c., whereas for males this field is most commonly studied through associate diplomas.

Table 11: Graduates in finance and insurance, by qualification

Qualification	Males	% Males	% Total	Females	% Females	% Total	Total
Diploma				2	0%	0%	2
Assoc. diploma	124	30%	10%	125	15%	10%	249
Adv. cert. – Post-trade	1	0%	0%	1	0%	0%	2
Adv. cert. – Other	55	13%	4%	86	10%	7%	141
Cert. – Trade	4	1%	0%	1	0%	0%	5
Cert. – n.e.c.	51	12%	4%	216	25%	17%	267
AQF – Cert. I	4	1%	0%	14	2%	1%	18
AQF – Cert. II	30	7%	2%	120	14%	9%	150
AQF – Cert. III	40	10%	3%	98	11%	8%	138
AQF – Cert. IV	50	12%	4%	107	13%	8%	157
AQF – Diploma	46	11%	4%	55	6%	4%	101
AQF – Adv. diploma	14	3%	1%	30	4%	2%	44
Total	**419**	**100%**	**33%**	**855**	**100%**	**67%**	**1274**

Source: NCVER 1997 TAFE GDS

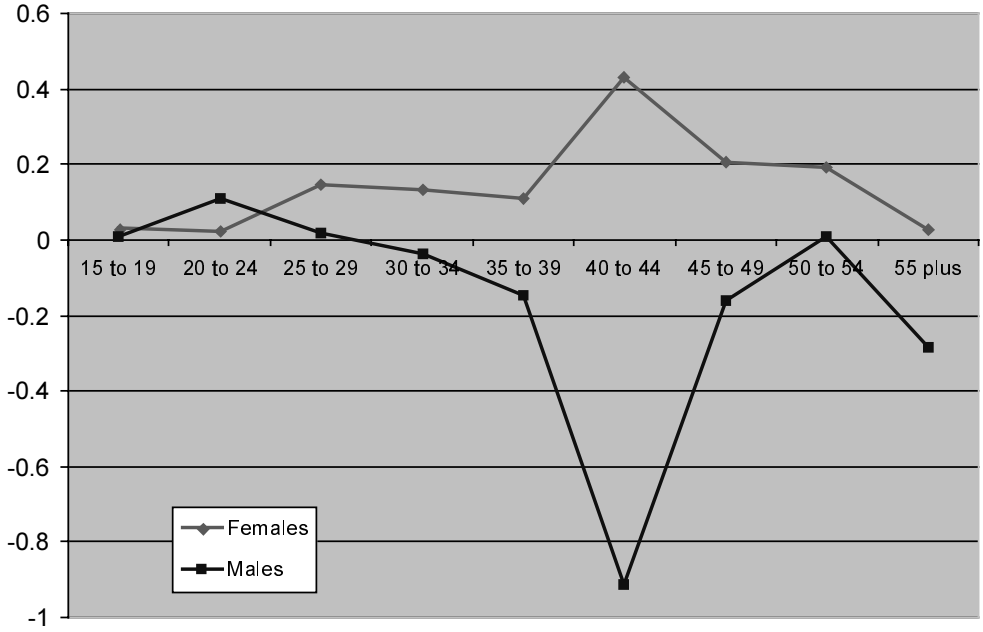
Earnings

Full-time average weekly earnings data (appendix 2) show that female TAFE graduates earnings were 75.1% of their male counterparts. The level of credential may partly explain this result whereby males are more likely to be qualified at associate diploma level, whereas females are more likely to be qualified at certificate level, which presumably results in a lower earning capacity. Nonetheless, a TAFE credential for females appears to widen rather than narrow the earnings gap when compared to all female workers who earn a slightly higher 78.3% of male earnings.

It does appear that female TAFE graduates earn more than all females matched for age group in this industry; however, male TAFE graduates earn less than all males matched for age group. This is not surprising given the overall low level of post-school qualified women in the industry relative to men. This in turn appears to be related to the overall substantial disparity between the earnings of all females relative to all males in the industry.

The markedly different occupational outcomes for men and women and the tendency for women to attain lower level qualifications for entry to the industry are suggestive of entrenched gender-based occupational segregation in this industry.

Figure 24: Relative income gain from VET in finance and insurance



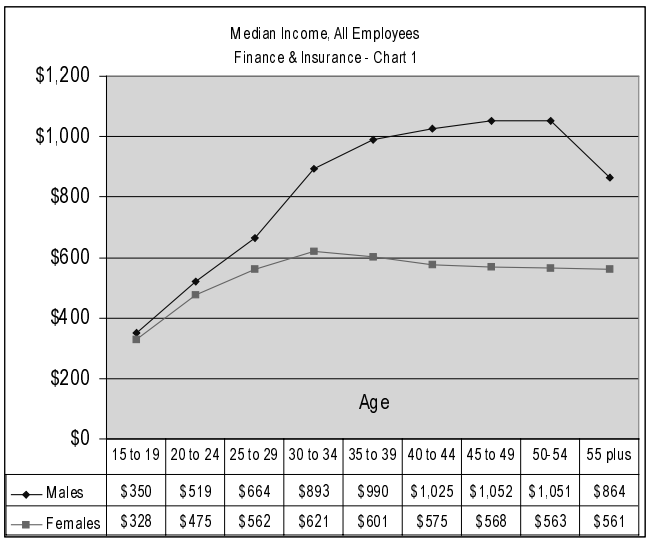
Source: NCVER 1997 GDS and ABS 1996 Census of Population and Housing

There are very wide income disparities between males and females across this industry. This has the effect of showing a substantial benefit for females obtaining a TAFE qualification (vis à vis all females in the industry), but at the same time males are significantly less well remunerated vis à vis all males in the industry. Figures on this industry at the end of this section show that the overall disparity between male and female earnings in this industry develops in the 30–34 age group and only begins to narrow for those aged 55+. For TAFE graduates, the income gap between males and females is much less pronounced, hence the negative value for male TAFE graduates' credentials, vis à vis all males.

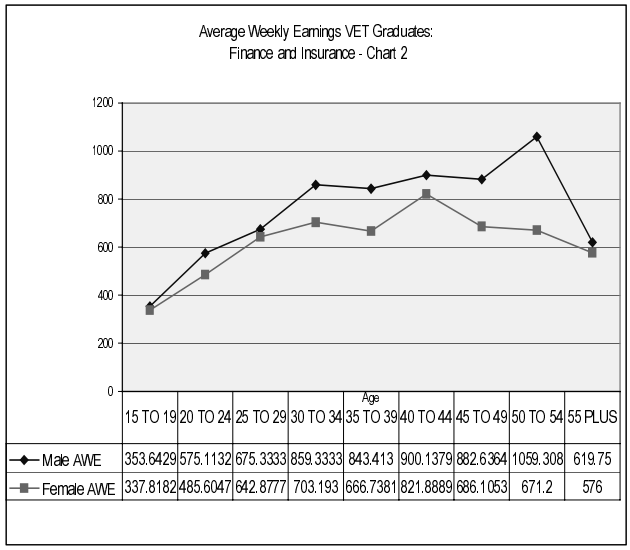
Female respondents made up 63% of all respondents working in this industry earning only 75.9% of the male wage. This poor result was due largely to low wages paid to female clerks (80% of the male wage), salespersons (77%) and para-professionals (73%) that together constituted almost 78% of female respondents. The female wage was not more than 85% of the male wage in any occupation significantly represented except for managers and administrators (90%). Interestingly, the differences between median male earnings for all workers and TAFE graduates are much less pronounced, with the gaps most noticeable for those aged 35–49. This suggests that there are relatively small numbers of very highly paid males in the industry skewing the average income data.

Interestingly, the differences between median male earnings for all workers and TAFE graduates are much less pronounced, with the gaps most noticeable for those aged 35–49. This suggests that there are relatively small numbers of very highly paid males in the industry skewing the average income data.

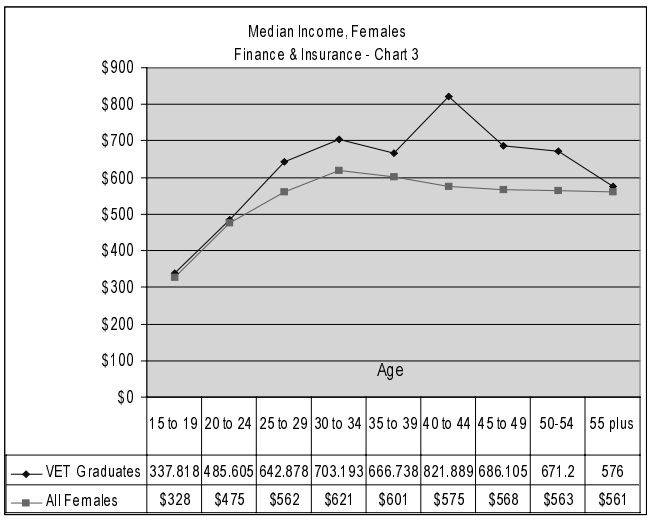
Figure 25: Finance and insurance earnings comparisons



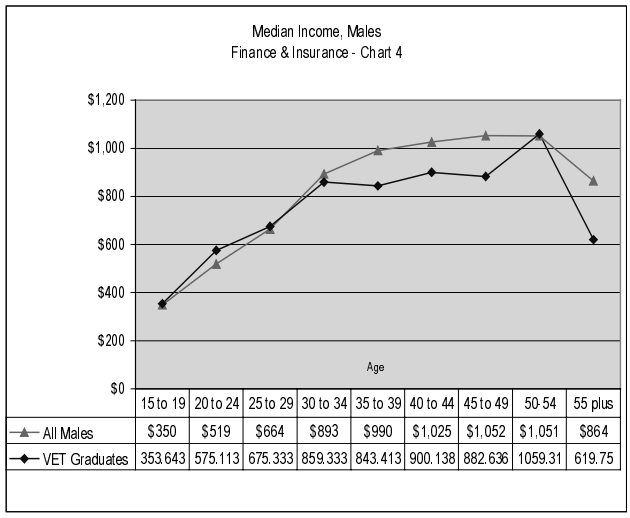
	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50-54	55 plus
Males	$350	$519	$664	$893	$990	$1,025	$1,052	$1,051	$864
Females	$328	$475	$562	$621	$601	$575	$568	$563	$561



	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 TO 44	45 TO 49	50 TO 54	55 PLUS
Male AWE	353.6429	575.1132	675.3333	859.3333	843.413	900.1379	882.6364	1059.308	619.75
Female AWE	337.8182	485.6047	642.8777	703.193	666.7381	821.8889	686.1053	671.2	576



	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50-54	55 plus
VET Graduates	337.818	485.605	642.878	703.193	666.738	821.889	686.105	671.2	576
All Females	$328	$475	$562	$621	$601	$575	$568	$563	$561



	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50-54	55 plus
All Males	$350	$519	$664	$893	$990	$1,025	$1,052	$1,051	$864
VET Graduates	353.643	575.113	675.333	859.333	843.413	900.138	882.636	1059.31	619.75

Note: These charts compare various data on male and female earnings from the NCVER 1997 GDS and the ABS Census of Population and Housing.

Health and community services

Main findings

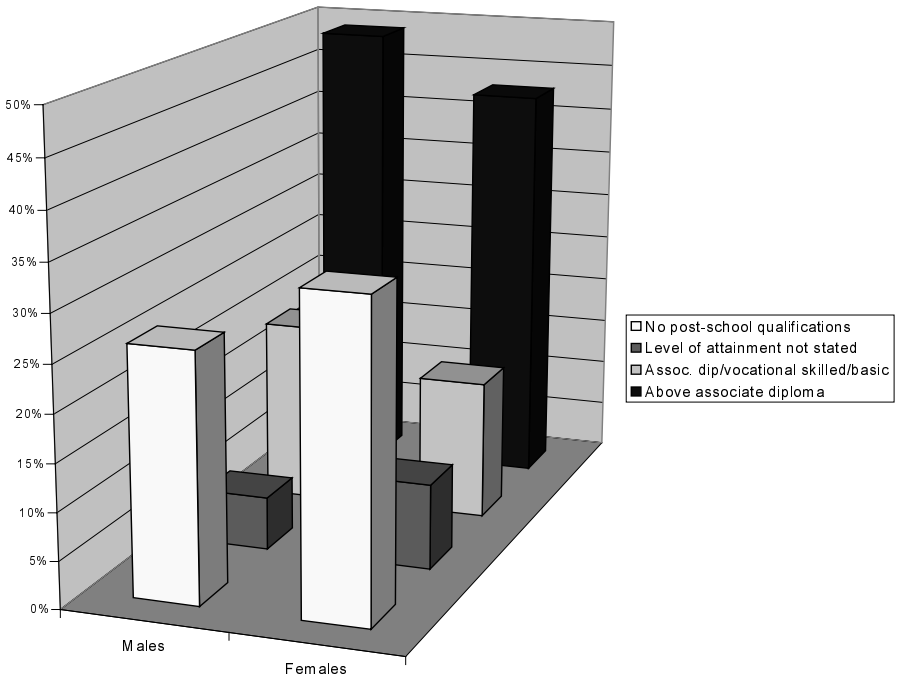
- TAFE graduates, both male and female, earn less than all workers in this industry division, apparently because of the high proportion of highly qualified workers in the industry.
- Despite there being no apparent gender differences in TAFE qualifications or field of study, full-time average weekly earnings data show that female TAFE graduates earnings were 80.6% of male graduate earnings in the industry.
- Income differences were greater between all males and females than between male and female TAFE graduates when matched by age group.

Overview of ABS Census data

The full-time part of this industry, which comprises about 62% of all jobs in the industry, is characterised by a high proportion of females (70%), and a highly qualified workforce. Of all full-time workers 69% had post-school qualifications, while only 16% had vocational qualifications and 45% were qualified above associate diploma level. Vocationally qualified workers appear to have equal access to upper level occupations regardless of sex. Nonetheless, females with associate diplomas show a wider occupational spread compared to males.

Gender breakdowns show that 74% of all males had a post-school qualification; however, only 19% had a vocational qualification. While a substantial two-thirds of females had any post-school qualification, only 15% held a vocational qualification. A slightly higher proportion of males had higher qualifications (49%) than females (43%).

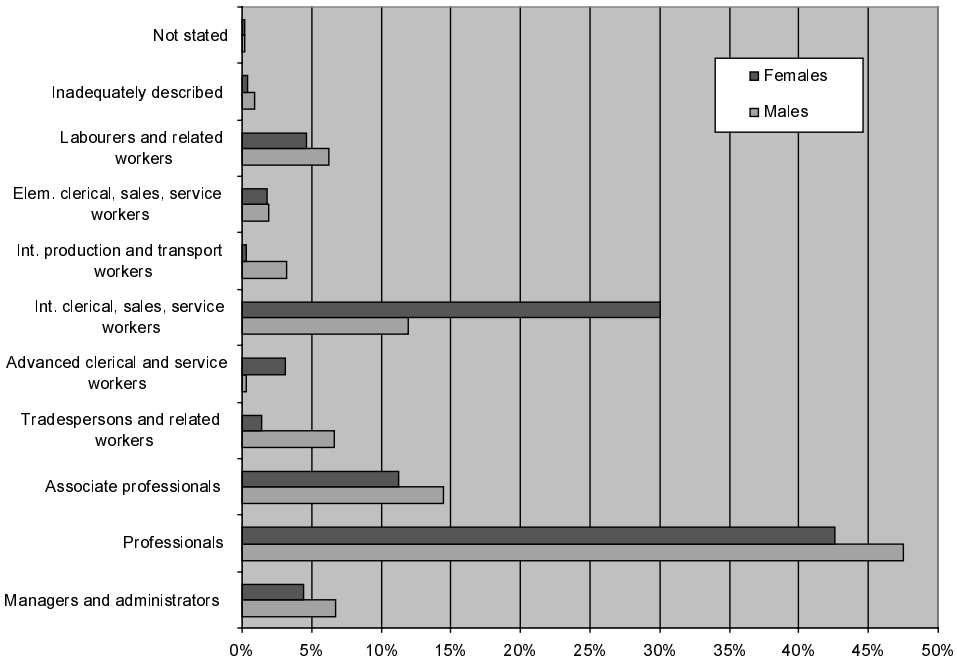
Figure 26: Skills profile of health and community services labour force



Source: ABS 1996 Census of Population and Housing

The overall occupational data show that a majority of males (60%) were in professional occupations, followed by 15% in the associate professions. Similarly, 59% of females were concentrated in professional occupations, followed by 19% in intermediate level clerical work/sales/service work.

Figure 27: Employment in health and community services, by occupation



Source: ABS 1996 Census of Population and Housing

The somewhat higher proportion of males with qualifications of all types seems to be reflected in the higher proportion of males in the management, professional and associate professional occupations in this industry. The domination of females in clerical and related occupations is a pattern repeated in most other industries. Nevertheless, it appears that even when females attain similar level VET qualifications (especially associate diplomas) to males in this industry, they do not attain the same level of occupational status and hence earnings. Both males and females have an equal share of professional work if qualified above associate diploma level.

The intersection of level of attainment and occupation data show that just over half of all males (54%) with a vocational qualification worked in either associate professional/professional/management occupations, followed by 21% in the trades. For females with vocational qualifications, the majority were divided between associate professionals/professionals/managers (51%) and intermediate level clerical work/sales and service work (39%).

Of those males with associate diploma qualifications a high 75% worked as either associate professional or professionals/managers. For females with associate diploma qualifications, a lower 49% worked in associate professional/manager/professional occupations, while 38% were found in intermediate level clerical/sales and service work.

Unexpectedly, those with basic vocational training are almost as likely to reach the upper occupational levels as those with associate diploma qualifications. About 70% of males with basic qualifications worked in either associate professional, professional or managerial work. Similarly, 56% of females with basic qualifications worked in associate professional, professional or managerial occupations.

Analysis of 1997 GDS data

Females comprise the vast majority (88%) of graduates surveyed in the 1997 GDS who were working full-time in this industry.

Level of qualification data show that almost one-quarter of males completed a certificate – n.e.c. (24%), followed by advanced certificate – other (17%) and associate diplomas (15%). Similarly, 29% of females had certificate – n.e.c., with the remainder spread across associate diplomas (14%), advanced certificates (other) (13%) and AQF III, (13%). The following table shows the qualification profile of the TAFE graduates surveyed in the 1997 GDS.

Field of study data show that over half of both men (51%) and women (60%) had studied in the health/community services field of study. The next largest area of study was business/administration/economics, making up 20% of males and 16% of females. The intersection of level of qualification and field of study by sex shows that health/community services is most commonly studied by women through the certificate – n.e.c., and either the AQF diploma or associate diploma. For males, this field is most commonly studied through the certificate – n.e.c., advanced certificate or associate diploma.

Table 12: Graduates in health and community services, by qualification

Level of qualification	Males	% Males	% Total	Females	% Females	% Total	Total
Diploma	11	1%	0%	21	0%	0%	32
Assoc. diploma	111	15%	2%	767	14%	12%	878
Adv. cert. – Post-trade	4	1%	0%		0%	0%	4
Adv. cert. – Other	127	17%	2%	691	13%	11%	818
Cert. – Trade	35	5%	1%	24	0%	0%	59
Cert. – n.e.c.	179	24%	3%	1584	29%	26%	1763
AQF – Cert. I	9	1%	0%	66	1%	1%	75
AQF – Cert. II	69	9%	1%	439	8%	7%	508
AQF – Cert. III	81	11%	1%	686	13%	11%	767
AQF – Cert. IV	87	12%	1%	470	9%	8%	557
AQF – Diploma	32	4%	1%	648	12%	10%	680
AQF – Adv. diploma	7	1%	0%	25	0%	0%	32
Total	**752**	**100%**	**12%**	**5421**	**100%**	**88%**	**6173**

Source: NCVER 1997 GDS

Earnings

Despite there being no apparent gender differences in TAFE qualifications or field of study, full-time average weekly earnings data show that female TAFE graduates earnings were 80.6% of male graduate earnings in health and community services. By comparison, females in the industry as a whole earn a marginally higher 82.9% of male earnings according to the ABS Employee Hours and Earnings survey. However, when earnings are compared age group by age group, earnings of male and female TAFE graduates are closer than all males and females. This is largely because male TAFE graduates earn well below all males in the industry.

As figure 28 shows, neither male nor female TAFE graduates achieve above average earnings in this industry, which is dominated by university-qualified workers. About 49% of workers in this industry possess either university qualifications (32.6%) or higher level VET qualifications (16.4%). As is shown in the figures at the end of this section, the gap between male and female TAFE graduates' earnings is, however, less than the overall gap between male and female earnings in the industry.

This finding contradicts the initial hypothesis that a TAFE credential seemed to widen the earnings gap between males and females working full-time in this industry. This hypothesis was based on more limited ABS data than the ABS Census earnings data that are now used in this analysis.

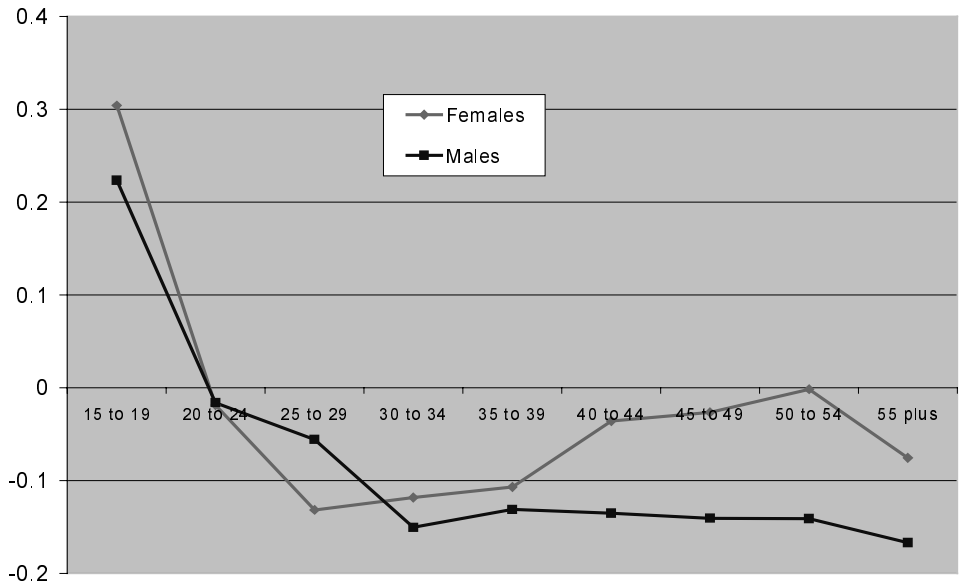
Female TAFE graduates narrow the earnings gap with all females from the age of 40 and onwards, but, for males, a marked earnings gap of around $100 (median weekly earnings) between TAFE graduates and all workers exists past the age of 30.

Females made up 84% of the 2600 respondents working in this industry and were employed predominantly as sales and personal service workers (47% of all females) and para-professionals (19%). Female wages averaged 80% of male wages but were well below male wages in the important para-professional and personal service occupations at 81% and 82% of male wages respectively.

The figures on the following page show that the income disparities between all males and females in this industry occur at all age groups but are most pronounced in the age groups 33–54. The gap between earnings of male and female TAFE graduates is less than the gap between all males and females in the industry (charts 1 and 2 in figure 29), and in the older age groups female TAFE graduates' earnings approach those of all workers in the industry. On the other hand, older male TAFE graduates have median incomes around $100 per week below that of all males in the industry.

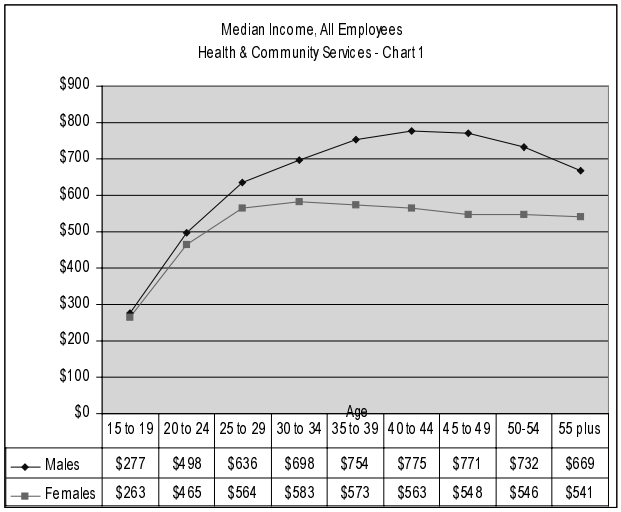
Clearly the high level of professional workers in this industry explains much of the difference between earnings of TAFE graduates and all workers, while income differences across the board between males and females appear to be a result of occupational gender segregation at the individual occupation level.

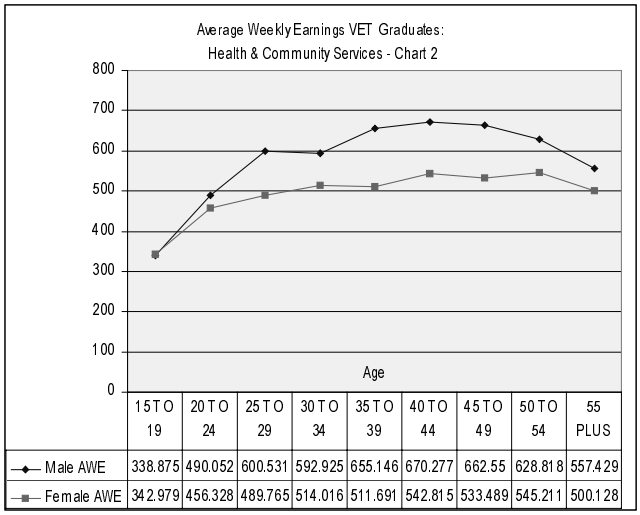
Figure 28: Relative income gain from VET in health and community services

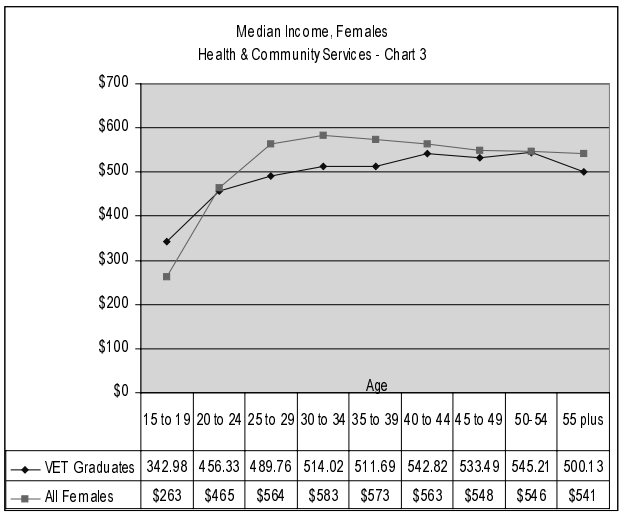


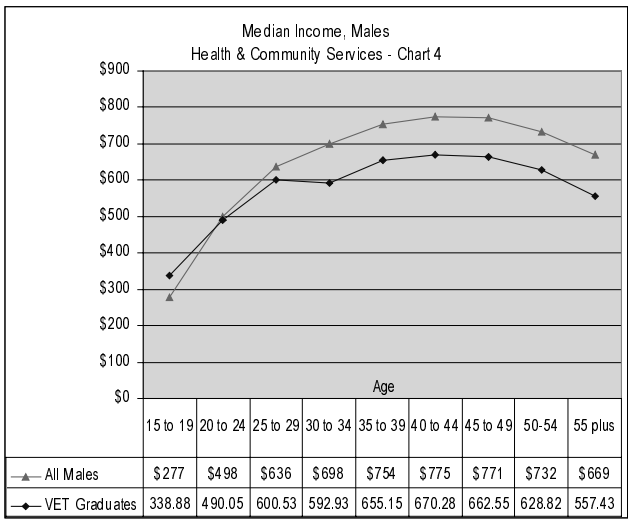
Source: NCVER 1997 GDS and ABS 1996 Census of Population and Housing

Figure 29: Health and community services earnings comparisons









Personal and other services

Main findings

- This is the one industry where females predominate in the trades area.
- Males with vocational qualifications predominate in professional, associate professional and managerial jobs, while females predominate in the trades occupations.
- Male earnings substantially exceed females' in all age groups, although the differences are less for TAFE graduates.

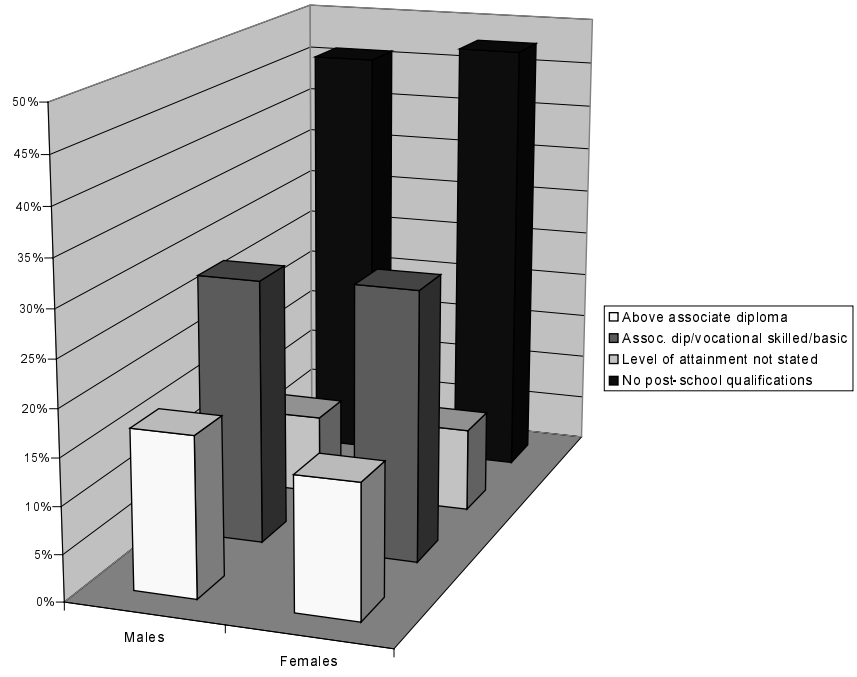
Overview of ABS Census data

While males and females in the personal and other services industry share vocational and tertiary qualifications in roughly equal proportions, the industry is dominated by males in the professional/managerial areas and females in the trades. This domination of females in trades level occupations is a unique pattern among all industries.

Of all workers, just over half (53%) had post-school qualifications, while 29% had vocational qualifications and 16% were qualified above associate diploma level.

Gender breakdowns show that almost equal proportions of males (54%) and females (52%) had a post-school qualification. Also, equal proportions of males (28%) and females (29%) also had vocational qualifications, although slightly more males (17%) had higher qualifications than females (14%).

Figure 30: Skills profile of the personal and other services industry



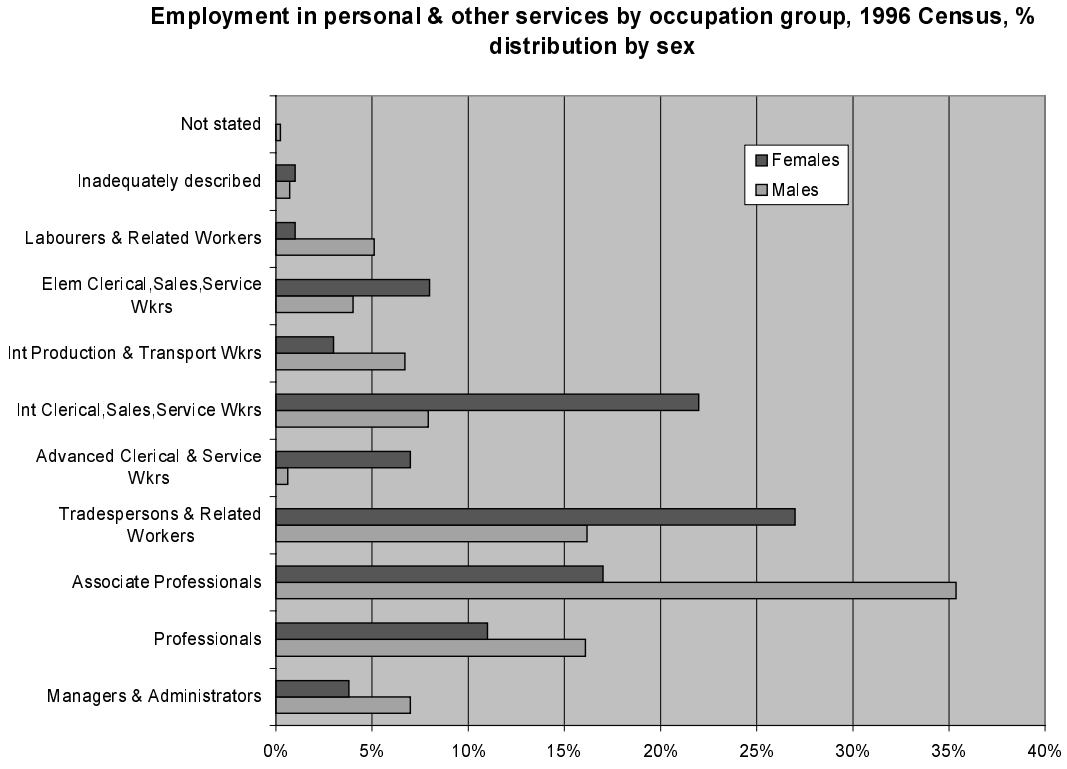
Source: ABS 1996 Census of Population and Housing

The overall occupational data show that over half (58%) of all males are in associate professional/professional or managerial positions, while there were only 28% of all females in the industry working at these levels. Males also were more likely to be classified as managers (7% of all males) compared with 4% of all females in the industry. In fact, 16% of males were in trades occupations and a substantial 27% of women were in the trades. About 37% of women were in various clerical/sales/service occupations, while only about 12.5% of men worked in these jobs.

Cross-tabulated data showing level of attainment and occupation data indicate half of males with a vocational qualification work as associate professionals, professionals or managers followed by 30% in trade occupations. By contrast, 59% of females with vocational qualifications are concentrated in trades occupations.

Of those males with associate diploma qualifications the majority (80%) worked in either associate professional or managerial/professional occupations, compared to only 52% of females. Almost one-third of these females remained in clerical/sales/service work.

Figure 31: Employment in personal and other services, by occupation



Source: ABS 1996 Census of Population and Housing

Unexpectedly, over two-thirds (68%) of males with basic vocational qualifications also work in the upper occupational levels (associate professional, professional or managerial work), whereas only around 40% of males with skilled vocational qualifications worked at these levels. This pattern is repeated for females to a lesser extent, where 42% with basic training occupied associate professional, professional or managerial positions but over 80% with skilled trades qualifications worked in the trades category.

While not directly within the scope of this study, it is also interesting to see that 89% of males with qualifications above associate diploma were employed in management or professional jobs, compared to only 65% of females.

Analysis of 1997 GDS data

Females comprised the majority (63%) of graduates surveyed in this industry working full-time in the 1997 TAFE GDS, although they represent only about 40% of full-time workers in the industry in total.

TAFE qualifications for males were most commonly certificate – n.e.c. (18%), AQF Cert. IV (16%) and the AQF diploma (14%). As reflected in the ABS census data, females were concentrated in trades certificates (33%), and certificate – n.e.c. (17%). Of all male graduates 11.5% had an associate diploma, compared to 4% of females.

The most common field of study for men was business/administration/economics, which accounted for 31% of all males in this industry whereas over half the women (57%) studied in the service/hospitality/transportation field.

The intersection of level of qualification and field of study by sex shows that service/hospitality/transportation is most commonly studied by women through trades certificates. About one in three of all women TAFE graduates in the 1997 survey working full-time had

undertaken a trade certificate (most probably in hairdressing). The following table presents a picture of the different qualifications obtained by the TAFE graduates surveyed in the 1997 GDS working in this industry full-time.

Table 13: Graduates in personal and other services, by qualification

Qualification	Males	% Males	% Total	Females	% Females	% Total	Total
Diploma	2	0%	0%	10	1%	1%	12
Assoc. diploma	82	12%	4%	50	4%	3%	132
Adv. cert. – Post-trade	3	0%	0%		0%	0%	3
Adv. cert. – Other	80	11%	4%	55	5%	3%	135
Cert. – Trade	68	10%	4%	405	33%	21%	473
Cert. – n.e.c.	131	18%	7%	217	18%	11%	348
AQF – Cert. I	14	2%	1%	36	3%	2%	50
AQF – Cert. II	60	8%	3%	116	10%	6%	176
AQF – Cert. III	41	6%	2%	222	18%	12%	263
AQF – Cert. IV	115	16%	6%	60	5%	3%	175
AQF – Diploma	99	14%	5%	41	3%	2%	140
AQF – Adv. diploma	16	2%	1%	6	0%	0%	22
Total	**711**	**100%**	**37%**	**1218**	**100%**	**63%**	**1929**

Source: NCVER 1997 GDS

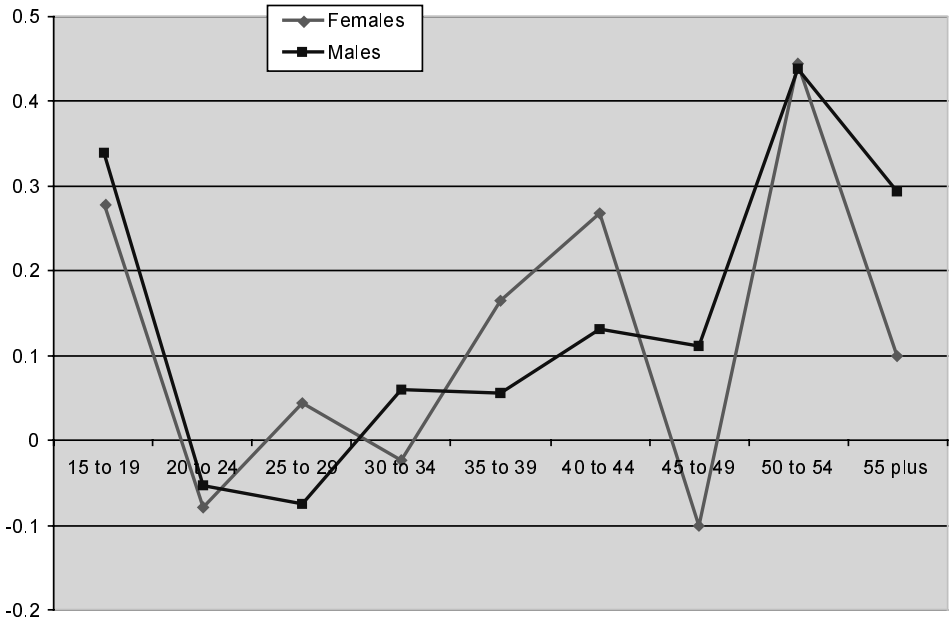
It is ironic that in the one industry where females outnumber males in the proportion completing a trade certificate, their earnings outcomes are to some extent worse than in those areas where males dominate in the trades area. At most age groups, male average full-time weekly earnings in this industry exceed those of comparably aged females working full-time by more than $200.

The predominance of women studying service/hospitality/transportation and taking up trades (hairdressing), as opposed to men concentrating on business/administration studies and higher level courses, appear to contribute to the greatly reduced earning capacity of female graduates. It should be noted, however, that obtaining a TAFE qualification does marginally advantage women in relation to all women in the industry in most age groups. This issue is examined in more detail in the following section.

Earnings

Figure 32 reveals that TAFE graduates working in personal and other services showed a gain in earnings relative to all workers in the industry in most age groups. As figure 32 shows, the gains varied sharply between the different age groups and in several age groups for both male and female TAFE graduates there was no earnings gain in comparison with all workers in the industry.

Figure 32: Relative income gain from VET in personal and other services



Source: NCVER 1997 GDS and ABS 1996 Census of Population and Housing

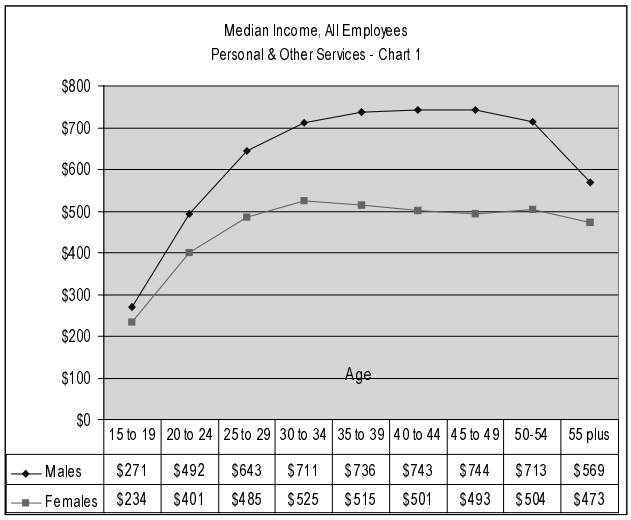
As noted elsewhere in this report, the personal and other services industry was marked by large disparities in the earnings of all males and females in the industry. This situation applied to both the sample of TAFE graduates surveyed in the 1997 GDS as well as to all employees in the industry from ABS 1996 Census data. Figure 33 shows that for all employees in the industry, from the age of 30, male and female employees' weekly earnings diverge by around $200, growing to about $250 for those aged 35–50. Male and female TAFE graduates' earnings showed a similar pattern, with TAFE graduates' earnings for the 45–54 age group diverging by around $250 per week.

The figure above shows that male TAFE graduates aged 30+ consistently benefited from their qualification in comparison with all workers in the industry, whereas female TAFE graduates showed a net benefit in only some age groups. It should be noted, however, that the age distribution of male and female TAFE graduates varied markedly, with females clustered in younger age groups. This explains in part the wide average income disparity across all surveyed graduates (see appendix 5).

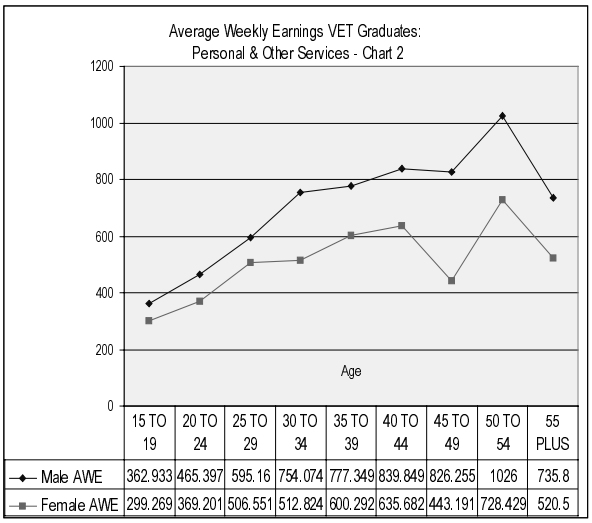
Females comprised 59% of the respondents for this industry, with their numbers dominated by the trades occupational group who made up 68% of all females in the industry. This fact, together with the relatively high wages paid to the dominant male occupation, para-professionals (which wages were not shared by female para-professionals), resulted in female wages in this industry averaging only 53.6% of male wages.

It would appear that there is well established occupational gender segregation in this industry and that VET is not, on this evidence, changing this situation, thereby maintaining marked income inequalities between males and females. As noted earlier in this section, males in the industry are aggregated in the professional, associate professional and managerial occupations, while females are concentrated in the trades. The selection of courses appears to influence this outcome as about 33% of females in the industry (from the 1997 GDS) undertook a trade certificate, while about 28% of males in the 1997 GDS had studied at the associate diploma, diploma or advance diploma level.

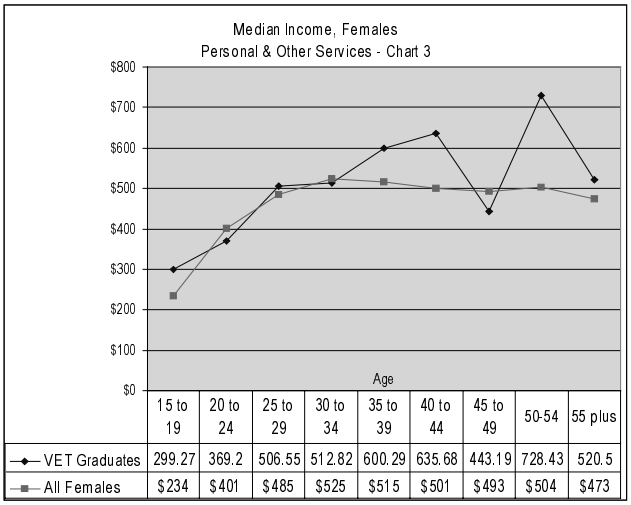
Figure 33: Personal and other services earnings comparisons



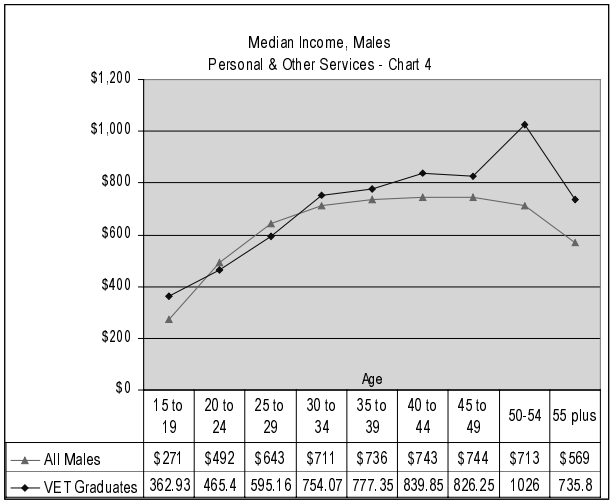
	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50-54	55 plus
Males	$271	$492	$643	$711	$736	$743	$744	$713	$569
Females	$234	$401	$485	$525	$515	$501	$493	$504	$473



	15 TO 19	20 TO 24	25 TO 29	30 TO 34	35 TO 39	40 TO 44	45 TO 49	50 TO 54	55 PLUS
Male AWE	362.933	465.397	595.16	754.074	777.349	839.849	826.255	1026	735.8
Female AWE	299.269	369.201	506.551	512.824	600.292	635.682	443.191	728.429	520.5



	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50-54	55 plus
VET Graduates	299.27	369.2	506.55	512.82	600.29	635.68	443.19	728.43	520.5
All Females	$234	$401	$485	$525	$515	$501	$493	$504	$473



	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50-54	55 plus
All Males	$271	$492	$643	$711	$736	$743	$744	$713	$569
VET Graduates	362.93	465.4	595.16	754.07	777.35	839.85	826.25	1026	735.8

Note: These charts compare various data on male and female earnings from the NCVER 1997 GDS and the ABS Census of Population and Housing.

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