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What has been happening to vocational education and training diplomas and advanced diplomas?

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About the research

What has been happening to vocational education and training diplomas and advanced diplomas?

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As part of the Council of Australian Governments (COAG) work on skills, there has been a policy push to increase the number of people completing higher-level VET qualifications—diplomas and advanced diplomas. The foundation for this paper was a set of projections prepared by the Centre for the Economics of Education and Training (CEET) which pointed to a significant shortfall in people with diploma and advanced diploma-level qualifications in 2016. The paper outlines recent trends in the provision of these qualifications; overall there has been virtually no growth over the period 2003–07, with growth in some areas offset by declines in others. It also looks at how those with diplomas and advanced diplomas are faring in the labour market. The picture is rather mixed, suggesting that people with diplomas and advanced diplomas fare, on average, better than those with other vocational qualifications or no post-school qualifications, but face stiff competition from degree holders and others who have obtained skills through experience.

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1 Some trends

Growth targets for VET diplomas and advanced diplomas were based on projections made by the Centre for the Economics of Education and Training of a shortfall in 2016

Shah and Burke (2006) projected a shortfall of 545 000 people with diplomas and advanced diplomas by 2016. The projections were based on expected growth in professional and associate professional occupations and a continuation of an historical trend toward skill deepening; that is, an increase in the proportion of people with higher-level qualifications.

The skill deepening assumption is important

The Centre for the Economics of Education and Training projected two scenarios. Under the skill-deepening scenario the target for 2016 for the number of people employed with a diploma or advanced diploma is 1 479 000. Without skill deepening the target would be 1 003 000.

Training activity in diplomas and advanced diplomas in the public vocational education and training (VET) system has declined over the last four or five years

Table 1 provides data on the level of activity under four measures: student numbers, full-year training equivalents (to account for the large number of part-time students), awards (completions) and qualification equivalents (to capture all successful module completions). In 2006 and 2007, activity was lower than in both 2002 and 2003 for most of the measures.

Table 1 Level of activity in VET diplomas and above, 2003–07

	2002	2003	2004	2005	2006	2007
Number of students	197 352	188 534	175 971	173 112	167 680	165 965
Full-year training equivalents	103 861	103 986	99 534	100 213	100 171	102 510
Number of awards	40 711	40 445	38 022	42 279	43 934	n.a.
The number of qualification equivalents	n.a.	50 015	48 107	48 307	48 312	51 189

Note: na = not available

Source: NCVER VET Provider Collection in Department of Education, Employment and Workplace Relations (2007).

Trends in student numbers are very varied by field; health has grown particularly rapidly, information technology has significantly declined, while engineering has increased recently after a period of decline

Table 2 presents the trends by field of education using one of the four activity measures, qualification equivalents. This variable presents the most comprehensive measure of the acquisition of skills. As can be seen from the table, the distribution of activity is quite uneven by field, with the largest numbers in management and commerce, and society and culture. There are also significant numbers in engineering and related technologies, creative arts, health, information sciences, and architecture and building. There has been positive growth in a number of fields: putting to one side the small fields, growth has been very substantial in health (91.3%), architecture and building (21.7%), and engineering and related technologies (11.1%). On the

other hand, there have been significant declines in information technology (a 45.7% decline) and creative arts (a 14.3% decline).

Table 2 The number of qualification equivalents successfully completed in VET diplomas and above, by fields of education, 2003–07

	2003	2004	2005	2006	2007	Change 2003–07
01 - Natural and physical sciences	754	767	761	667	614	–18.5%
02 - Information technology	4 737	4 048	3 200	2 986	2 570	–45.7%
03 - Engineering and related technologies	4 898	4 516	4 940	4 427	5 441	11.1%
04 - Architecture and building	1 860	1 996	2 109	2 095	2 264	21.7%
05 - Agriculture, environmental and related studies	1 857	1 863	1 569	1 464	1 577	–15.1%
06 - Health	1 610	1 727	2 170	2 540	3 080	91.3%
07 - Education	386	280	304	280	318	–17.5%
08 - Management and commerce	18 385	17 858	17 951	18 053	19 659	6.9%
09 - Society and culture	9 624	9 311	9 360	10 169	10 209	6.1%
10 - Creative arts	5 384	5 242	5 307	4 924	4 614	–14.3%
11 - Food, hospitality and personal services	324	313	397	434	486	50.1%
12 - Mixed field programmes	196	186	238	273	357	82.7%
Total	**50 015**	**48 107**	**48 307**	**48 312**	**51 189**	**2.3%**

Source: NCVER VET Provider Collection in Department of Education, Employment and Workplace Relations (2007).

The growth has also been variable by state and territory

Table 3 shows that positive growth has occurred in Victoria (15.5%) and Queensland (3.4%), with little change in South Australia (0.9% growth) and declines in the other states and territories.

Table 3 Number of qualification equivalents successfully completed in VET diplomas and above, by state/territory, 2003–07

	2003	2004	2005	2006	2007	Change 2003–07
NSW	15 507	14 374	14 512	14 753	14 709	–5.1%
Vic.	17 087	17 094	17 137	16 709	19 734	15.5%
Qld	8 031	7 245	7 621	7 863	8 301	3.4%
SA	2 294	2 389	2 197	2 510	2 315	0.9%
WA	4 018	4 031	3 991	3 856	3 687	–8.2%
Tas.	967	919	924	781	830	–14.2%
NT	194	214	170	139	128	–33.9%
ACT	1 916	1 842	1 754	1 701	1 485	–22.5%
Australia	50 015	48 107	48 307	48 312	51 189	2.3%

Source: NCVER VET Provider Collection in Department of Education, Employment and Workplace Relations (2007).

2 Some observations: Does this reflect an impending shortage?

It appears that the trends in provision of diplomas and advanced diplomas are not in line with policy targets (see Council of Australian Governments, Productivity Agenda Working Group 2008). In assessing whether this reflects an impending shortage of people with diplomas and advanced diplomas, we can make a number of observations.

Don't forget that the private training market produces considerable numbers of diploma and advanced diploma graduates

The projections by the Centre for the Economics of Education and Training understandably focused on the output of the public VET system. In worrying about future skill shortages, however, the extent of training in the private market should not be overlooked. We know from Harris, Simons and McCarthy (2006) that private providers are active in this part of the training market. I did some indicative calculations based on Harris's survey which show that the output of the private market is of real substance. My estimate was 110 000 diploma and advanced diploma completions in a year, but with a standard error of 50%—a rather inaccurate estimate, but suggestive of significant provision.

People with degrees, and people with lower-level qualifications who learn through experience, are close substitutes for people with diplomas or advanced diplomas

Even among associate professionals, diploma and advanced diploma holders accounted for only 14.6% of the workforce in 2005 (ABS Survey of Education and Work, cited in Shah & Burke 2006), compared with 21.6% with degrees, 28.4% with other VET qualifications and 35.5% with no post-school qualifications.

Foster et al. (2008) find that entry-level job applicants with a higher-level VET qualification are in a competitive labour market, competing with existing workers with a high level of technical competence and workplace experience, as well as, in some cases, people with degrees.

The demand for diploma and advanced diploma graduates is industry-dependent, and regulation is a big driver

Foster and her colleagues make the important, if perhaps obvious, point that the situation depends on the industry. In nursing and disability services the demand for qualifications is driven by regulation (for example, enrolled nurses require a certificate IV or diploma, depending on the state). Engineering and electronics/electro-technology employers value a relevant qualification together with workplace experience, and prefer people with a degree or a trade background for associate professional jobs. Higher-level VET qualifications are required for some technical roles with occupational health and safety responsibilities. Employers in the creative industries, by contrast, look for experience and talent (usually demonstrated through portfolios) over qualifications. Where qualifications are desired, university graduates are preferred.

Students undertaking diploma and advanced diploma studies fall into two main groups: young new entrants, mostly studying full-time, and older workers, many with prior qualifications mostly studying part-time

It is a mistake to think of those doing diploma and advanced diploma studies as a homogenous group (Stanwick 2006).

One group is made up of younger people, for whom a diploma or advanced diploma qualification is an alternative to a degree. Around one-half are studying full-time, and around one-third of diploma and advanced diploma graduates (with higher rates in management and commerce) go on to a degree (table 4). Thus, many young diploma and advanced diploma graduates are not actually adding to the pool of people whose highest qualification is a diploma or advanced diploma.

Table 4 Proportion of diploma and advanced diploma graduates going on to further study at bachelor degree level or higher (per cent)

Field of education	Proportion going on to further study at bachelor level or higher	
	Aged 15–24	Aged 25 and over
Information technology	37	13
Engineering and related technologies	33	9
Architecture and building	21	5*
Agriculture	29	18
Health	26	14
Management and commerce	39	15
Banking and finance	54	22
Accountancy	53	23
Society and culture	24	16
Human welfare studies	27	20
Creative arts	24	17
Total	**32**	**14**

Note: * Figure should be treated with caution as it has a relative standard error of greater than 25%.
Source: Stanwick (2006).

Older graduates come with considerable experience and prior education qualifications

Almost 50% (47.4%, cited in Stanwick 2006) of students aged 25 years and above studying diplomas or advanced diplomas had a prior qualification at certificate III level or above. Many of these people will not be adding to the potential labour supply, but rather will be improving the level of skill in their current jobs. This is evident from job outcomes observed in the Student Outcomes Survey, with a high correspondence between occupations before and after training. As can be seen from table 5, over 90% of those (aged 25 years and over) previously employed as managers and administrators, professionals or technicians and associate professionals had post-training occupations of associate professional or higher.

Table 5 Proportion of graduates employed as associate professionals or higher after the course, by pre-course occupation level for students aged 25 and over

Occupation level	Associate professional or higher (%)
Managers and administrators	91
Professionals	92
Technicians and associate professionals	91
Tradespersons and related workers	22
Advanced clerical and service workers	26
Intermediate clerical, sales and service workers	28
Intermediate production and transport workers	**
Elementary clerical, sales and service workers	36
Labourers and related workers	**

Note: ** Percentage could not be reported as there is a cell count of fewer than five people.
Source: Stanwick (2006).

It is a struggle breaking into associate professional, professional and management jobs

Table 5 also shows that relatively low proportions of diploma and advanced diploma graduates with prior jobs at lower occupational levels obtained, after graduation, employment at the associate professional or higher occupational level.

Similarly, younger graduates (who are unlikely to have been in an associate professional or higher job before training) find it difficult to obtain a job commensurate with their training. There is some improvement in the proportions after a period of time (table 6).

Table 6 Occupation level after training for diploma and advanced diploma graduates, aged 15–24 years

	6 months after training	30 months after training
Managers and administrators	5	13
Professionals	13	17
Technicians and associate professionals	9	19
Tradespersons and related workers	6	7
Advanced clerical and service workers	2	4
Intermediate clerical, sales and service workers	31	25
Intermediate production and transport workers	4	2*
Elementary clerical, sales and service workers	23	13
Labourers and related workers	7	2*
Total	**100**	**100**

Notes: * Figure should be treated with caution as it has a relative standard error of greater than 25%.
Source: Stanwick (2006).

So diploma and advanced diploma graduates are finding the labour market pretty competitive.

Nevertheless, there is clearly a return to diploma and advanced diploma level qualifications

Table 7 shows that, for people over the age of 24 years (by which age most have completed their initial tertiary educations), full-time employment rates of those with diploma or advanced diploma-level qualifications are appreciably higher than those with lower-level qualifications (certificates I and II or no post-school qualification). However, there is little difference between full-time employment rates of those with diplomas and those with certificates III or IV.

Table 7 Proportion of the population in full-time employment (per cent)

	20 to 24-year-olds		25 to 44-year-olds		45 to 64-year-olds	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**
Postgraduate[(a)]	50.4	46.4	86.7	52.5	77.7	51.7
Bachelor degree	52.9	60.5	82.7	50.3	76.7	49.2
Advance diploma/diploma	47.4	65.1	84.0	43.8	69.0	36.1
Certificate III/IV	75.9	55.8	88.8	40.3	70.4	37.8
Certificate I/II	62.7	40.1	65.4	23.2	59.0	22.0
Year 12	43.6	35.0	79.8	37.0	64.9	35.9
Year 11 and below	64.3	27.8	74.1	24.5	59.5	23.8

Notes: (a) includes postgraduate degree and graduate diploma/certificate.
Those with certificates not defined are omitted.
Source: ABS Survey of Education and Training (2005, confidentialised unit record file).

In most cases diploma and advanced diploma graduates receive higher wages than any group other than those with degrees.

Table 8 Average weekly earnings in current full-time job by age, sex and highest educational attainment, 2005 ($)

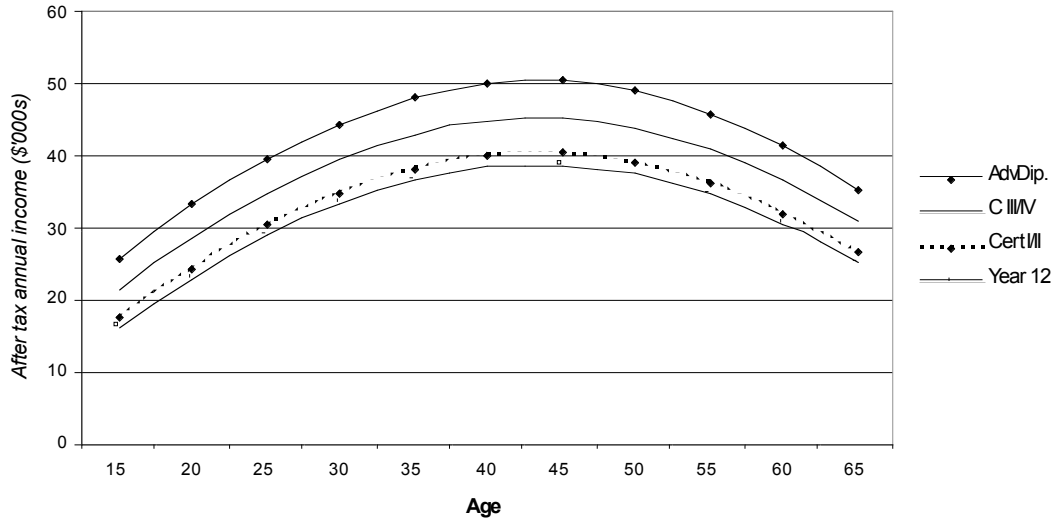
	20 to 24-year-olds		25 to 44-year-olds		45 to 64-year-olds	
	Male	Female	Male	Female	Male	Female
Postgraduate[(a)]	585	753	1407	1183	1484	1223
Bachelor degree	808	783	1247	1046	1430	1159
Advance diploma/diploma	808	660	1146	902	1214	895
Certificate III/IV	805	609	1027	759	1041	734
Certificate I/II	755	704	868	625	842	806
Year 12	628	609	969	829	1193	819
Year 11 and below	690	541	896	754	927	728

Notes: (a) includes postgraduate degree and graduate diploma/certificate.
Averages calculated by taking mid-point of earnings categories, except for end category where lower bound was taken.
Earnings unknown or not stated are excluded from calculations.
Calculations include only wage and salary earners.
Those with certificates not defined are omitted.

Source: ABS Survey of Education and Training (2005, confidentialised unit record file).

Rather more sophisticated modelling (Long & Shah 2008) provides a similar picture, with those with a diploma or advanced diploma receiving incomes of around 30% (males) or 20% (females) higher than people with Year 12 and no post-school qualification.

Figure 1 Estimated after-tax annual income—males who have completed Year 12



Source: Long and Shah (2008, figure 1).

But there is little evidence to indicate that the labour market for people with diplomas and advanced diplomas is getting noticeably tighter

While not disputing that diploma and advanced diploma graduates have an advantage in the labour market, there is little evidence that the labour market is moving in favour of them. Table 9, derived from the NCVER Student Outcomes Survey, provides further evidence that diploma and above graduates get paid more than those with lower-level qualifications, but the relativities have not increased over the last five years.

Table 9 Government-funded TAFE[(a)] graduates in first full-time job by qualification, mean weekly earnings relativities, 2003–07

	2003	2004	2005	2006	2007
Certificate I & II	1.00	1.00	1.00	1.00	1.00
Certificate III & IV	1.55	1.24	1.27	1.18	1.10
Diploma and above	1.39	1.46	1.35	1.27	1.19

Notes: (a) Government-funded TAFE students are students from a technical and further education (TAFE) institute undertaking VET funded by Commonwealth/state recurrent or specific funding.
Since 2005 students from other government providers, such as agricultural colleges, are also included.
Source: NCVER Student Outcomes Survey.

Trends in employment rates (of graduates not employed before training) also provide no indication that the labour market is becoming friendlier to diploma and above graduates, relative to people requiring other levels of VET qualifications.

Table 10 Government-funded TAFE[(a)] graduates not employed before training, percentage employed after training, 2003–07

	2003	2004	2005	2006	2007
Certificate I & II	34.0	35.1	36.0	38.6	37.0
Certificate III & IV	46.6	48.0	51.3	52.3	55.3
Diploma and above	49.0	42.3	53.9	51.5	50.6

Notes: (a) Government-funded TAFE students are students from a TAFE institute undertaking VET funded by Commonwealth/state recurrent or specific funding.
Since 2005 students from other government providers, such as agricultural colleges, are also included.
Source: NCVER Student Outcomes Survey.

3 Conclusion: Is it time to rethink the role of diplomas and advanced diplomas?

There is no doubt that graduates with diplomas and advanced diplomas do well in the labour market. Their performance is on average better than those with lower-level VET qualifications, but typically not as good as that of university graduates. However, they do not hold a privileged position in the labour market except in areas where regulation mandates diploma and advanced diploma-level qualifications. They must compete against degree holders on one hand and people with other qualifications and experience on the other. For a sizeable proportion of diploma and advanced diploma graduates the qualification is a stepping stone to a degree.

In looking forward, the future of diplomas and advanced diplomas is not assured. Even in associate professional occupations, they do not dominate and could easily lose share to degrees. The policy challenge is to ensure that the position of diplomas and advanced diplomas is consolidated, by building up articulation arrangements with degrees where appropriate, and by improving the attractiveness of diploma and advanced diploma graduates for employers. Growth in numbers, arguably, should not be the focal point of policy.

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