



Education and training

...covers pre-school education, primary and secondary school education, tertiary education, adult, community education and other education including driving & flying school operations and education support services.

Key points

- ▶ Education and training employs approximately 827,900 persons, accounting for around eight per cent of the total Australian workforce
- ▶ Employment in education and training is expected to grow strongly over the next five years
- ▶ Within the private sector, nearly half of the industry workforce (48 per cent) is employed in medium-sized enterprises (i.e. those that employ between 20 and 199 workers), with the remainder spread relatively evenly between small-sized enterprises (i.e. those that employ less than 20 workers) and large enterprises (i.e. those that employ 200 workers or more)¹
- ▶ 37 per cent of employment occurs in regional and remote areas, which is consistent with the all-industry average²
- ▶ The industry has the second highest proportion of female workers (after health and social assistance), at 69 per cent, and a high proportion of part-time workers, at 37 per cent
- ▶ The industry has the highest proportion of workers with a Bachelor degree or higher qualification (62 per cent, compared to 26 per cent for all industries) – and has the lowest proportion of workers without a post-school qualification (15 per cent, compared to an all-industry average of 39 per cent)
- ▶ A detailed employment profile for education and training (including information on its workforce, industry and occupational characteristics) can be found at www.skillsinfo.gov.au

Industry outlook

The education and training sector is a large and important industry, and provides essential services to the community. In terms of industry value added, the education and training industry contributed around \$53.1b (4.8 per cent) to the Australian economy in 2009-10.³

¹ Business size data refers only to private enterprises and excludes employment in the public sector.

² Regional and remote areas are defined as those outside state capital cities.

³ 'Industry value added' is the measure of the contribution by industry to gross domestic product (GDP) at basic prices. ABS (2010) *Australian System of National Accounts* (Cat. no. 5204.0).

Short-term growth

The rapid employment growth achieved over the last five years is anticipated to continue over the short-term, with growth to 2014-15 expected to exceed the national average.

Table 1 Current and past employment in education and training

Industry	Current employment		Past growth: five years	
	'000	% of total	'000	%
Education and training	827.9	7.5	117.7	16.6
All employed	11,044.6	100.0	1,060.1	10.6

Population: Employed people.

Source: DEEWR analysis of ABS trend data, May 2010 (Cat no: 6291.0.55.003).

Long-term growth

Skills Australia used scenario planning and economic modelling undertaken by Access Economics to calculate the skills demand for the economy into the future. The three scenarios are:

- ▶ Open Doors – assumes an industry and occupation structure that is driven by greater global openness, high economic growth and high productivity
- ▶ Low Trust Globalisation – assumes global competition but with more moderate participation rates, productivity growth and rates of growth of net migration, and accordingly, medium economic growth
- ▶ Flags – assumes a more protectionist economy, with a greater move to domestic self-sufficiency, a lower rate of net migration and productivity growth, and accordingly, assumes a low rate of economic growth.

The industry is forecast to grow relatively strongly whatever scenario eventuates.⁴ For each world, average employment growth per annum is expected to be just higher or equal to the all-industry average between 2010 and 2025.

As Table 2 shows, each subdivision within the education and training industry is forecast to have roughly the same amount of employment growth across all scenarios as that of the industry as a whole. The adult, community and other education sector is the only exception to this trend, and is forecast to experience below average growth in the Flags world.

⁴ A description of the scenarios and the Access Economics modeling of employment in each, with state and territory break-downs, is available at the Skills Australia web-site www.skillsaustralia.gov.au

Table 2 Average annual industry employment growth in three scenarios, 2010-15 and 2010-25 (%pa)

Industry	Open Doors		Low-Trust Globalisation		Flags	
	2015	2025	2015	2025	2015	2025
Education and training	2.2	2.2	1.5	1.5	1.0	1.0
Preschool and school education	2.2	2.2	1.5	1.5	1.0	1.0
Tertiary education	2.2	2.2	1.5	1.5	1.0	1.0
Adult, community and other education	2.5	2.3	1.8	1.6	0.8	0.7
All industries	2.6	2.1	1.9	1.5	1.3	0.9

Source: Access Economics (2009) *Economic modelling of skills demand*, Table D1; conversion to ANZSIC by CEET (2010).

Occupation outlook

Key occupations

The largest two occupation groups in the education and training sector are secondary and primary school teachers, which together comprise over a third of all employment in the industry. Education aides account for a further 7.9 per cent of the industry workforce, followed by university lecturers and tutors (4.9 per cent), vocational education teachers (4.5 per cent) and private tutors and teachers (3.6 per cent).

Table 3 Top ten education and training occupations

Occupation	People employed	Industry employment
ANZSCO	'000	% of total
2414 Secondary school teachers	137.6	17.2
2412 Primary school teachers	130.7	16.3
4221 Education aides	63.4	7.9
2421 University lecturers and tutors	39.2	4.9
2422 Vocational education teachers ^(a)	36.3	4.5
2492 Private tutors and teachers	29.1	3.6
5311 General clerks	21.5	2.7
1343 School principals	19.9	2.5
8112 Commercial cleaners	15.1	1.9
4523 Sports coaches, instructors and officials	14.7	1.8
Total	802.4	63.2

(a) This figure only reflects those workers who identify their *primary* occupation as vocational education teachers. It may therefore underestimate the total number of VET teachers who also work in other occupations (e.g. trades).

Source: ABS Labour Force Australia (2010), detailed quarterly report, 2009 average of four quarters (Cat. no. 6291.0.55.003).

Short-term growth

Table 4 indicates the long-term net job growth per annum expected in these occupation groups, according to Access Economics' scenario modelling. **Note that the figures refer to the expected number of people in these occupations across all industries, not just in education and training.**

Education aides, sports coaches, university lecturers and tutors, and school principals are all expected to achieve almost double the average growth for all occupations (9.2 per cent). In the case of special education teachers and child carers, growth is anticipated to be as much as three times the national average, at 31.7 per cent.

Table 4 Current and past employment in key occupations

Occupation	Current employment (all industries)		Past growth: five years	
	'000	% of total	'000	%
ANZSCO				
1343 School principals	21.1	0.2	3.2	17.8
2412 Primary school teachers	145.8	1.3	15.0	11.4
2414 Secondary school teachers	132.8	1.2	2.1	1.6
2415 Special education teachers ^(a)	12.9	0.1	-1.6	-10.8
2421 University lecturers and tutors	40.6	0.4	4.5	12.6
2422 Vocational education teachers ^(b)	35.2	0.3	5.0	16.4
2492 Private tutors and teachers	36.1	0.3	11.8	48.8
4211 Child carers ^(a)	105.5	1.0	17.5	19.8
4221 Education aides	64.9	0.6	11.3	21.1
4523 Sports coaches, instructors and officials	22.2	0.2	-4.0	-15.3
5311 General clerks	182.7	1.7	36.0	24.6
All employed	11,044.6	100.0	1,060.1	10.6

(a) Added to table as a 'key occupation' within the industry.

(b) This figure only reflects those workers who identify their *primary* occupation as vocational education teachers. It may therefore underestimate the total number of VET teachers who also work in other occupations (e.g. trades).

Population: Employed people.

Source: DEEWR analysis of ABS trend data, May 2010 (Cat no: 6291.0.55.003).

Long-term growth and job openings

Table 5 indicates the long-term net job growth expected in these occupations, according to Access Economics' scenario modelling.

In the longer-term, these are occupational groups which have average or above-average expected growth compared to other groups, with the exception of school teachers (to 2015) and sports and fitness workers (to 2025), which are forecast to have below-average growth in the Flags world. Education managers, tertiary education teachers, education aides and general clerks are all expected to show around 1.5 times the average occupational growth under each scenario.

Table 5 Average annual occupation growth in three scenarios, 2010-15 and 2010-25 (%pa)

Industry	Open doors		Low-trust globalisation		Flags	
	2015	2025	2015	2025	2015	2025
ANZSCO						
134 Education, health and welfare services managers	3.3	2.8	2.6	2.1	1.8	1.3
241 School teachers	1.9	2.3	1.3	1.6	0.8	1.1
242 Tertiary education teachers	4.7	3.0	3.4	2.2	2.3	1.5
249 Miscellaneous education professionals	2.7	2.7	2.0	1.9	1.2	1.1
421 Child carers	3.2	3.3	2.7	2.7	1.8	1.8
422 Education aides	3.2	3.2	2.7	2.7	1.8	1.8
452 Sports and fitness workers	2.7	2.1	2.2	1.5	0.9	0.3
531 General clerks	3.8	3.0	2.9	2.2	2.0	1.3
All occupations	2.6	2.1	1.9	1.5	1.3	0.9

Source: Access Economics (2009) *Economic modelling of skills demand*, Table D4 (ASCO); conversion to ANZSCO by CEET (2009). Three-digit ANZSCO job titles are used in this analysis.

As noted, the data in Table 5 concerns employment growth in an industry. The number of total **job openings** which includes both employment growth and **the replacement resulting from individuals leaving the occupation net of those re-entering** can also be estimated. This replacement requirement is particularly significant in industries where there are high numbers of people retiring or leaving the occupation.

Table 6 shows the average annual job openings projected in key education and training occupations to 2025.

Table 6 Average annual job openings, pa 2010 to 2025, in three scenarios

Occupation	Open doors		Low trust globalisation		Flags	
	('000)	%	('000)	%	('000)	%
ANZSCO						
134 Education, health and welfare services managers	3.6	5.4	3.0	4.7	2.3	3.9
241 School teachers	17.0	4.9	13.7	4.2	11.5	3.6
242 Tertiary education teachers	4.6	5.2	3.6	4.3	2.8	3.6
249 Miscellaneous education professionals	2.3	4.5	1.8	3.8	1.3	3.0
421 Child carers	6.9	5.2	6.0	4.7	4.5	3.8
422 Education aides	4.4	5.5	3.8	4.9	2.9	4.0
452 Sports and fitness workers	3.4	4.0	2.8	3.5	1.7	2.3
531 General clerks	12.6	5.6	10.0	4.8	7.6	3.9
All occupations	579.1	4.4	465.9	3.8	373.7	3.2

Source: Access Economics (2009) *Economic modelling of skills demand*, Table D4 (ASCO); conversion to ANZSCO and net replacement demand by CEET (2009). Three-digit ANZSCO job titles are used in this analysis.

As Table 6 shows, the majority of job openings are expected to be driven by new growth under the Open Doors scenario, rather than by replacement requirements. The only exceptions to this trend are education, health and welfare services managers (with 50.2 per cent of job openings created by replacement demand), and school teachers, at 53.6 per cent. With a slower rate of growth forecast under the Flags scenario, however, replacement demand is predicted to outstrip new growth in all key occupations by 2025.

Table 7 Total job openings (growth and net replacement) in three scenarios, 2010 to 2025

7.1 Open Doors

Occupation	Total growth (persons)		Net replacement estimates (persons)		Total job openings (persons)	
	('000)	%	('000)	%	('000)	%
ANZSCO						
134 Education, health and welfare services managers	28.9	49.8	29.1	50.2	58.0	100.0
241 School teachers	126.1	46.4	145.8	53.6	272.0	100.0
242 Tertiary education teachers	41.8	56.3	32.4	43.7	74.2	100.0
249 Miscellaneous education professionals	20.9	57.5	15.5	42.5	36.4	100.0
421 Child carers	67.4	60.9	43.2	39.1	110.7	100.0
422 Education aides	40.8	57.9	29.6	42.1	70.4	100.0
452 Sports and fitness workers	27.9	50.6	27.3	49.4	55.2	100.0
531 General clerks	106.9	52.9	95.3	47.1	202.2	100.0
All occupations	4,425.7	47.8	4,840.1	52.2	9,265.8	100.0

7.2 Low-Trust Globalisation

Occupation	Total growth (persons)		Net replacement estimates (persons)		Total job openings (persons)	
	('000)	%	('000)	%	('000)	%
ANZSCO						
134 Education, health and welfare services managers	20.3	42.6	27.3	57.4	47.6	100.0
241 School teachers	81.3	37.1	137.6	62.9	218.9	100.0
242 Tertiary education teachers	27.4	47.9	29.8	52.1	57.2	100.0
249 Miscellaneous education professionals	14.1	49.2	14.5	50.8	28.6	100.0
421 Child carers	54.4	56.8	41.4	43.2	95.7	100.0
422 Education aides	32.8	53.7	28.3	46.3	61.1	100.0
452 Sports and fitness workers	19.6	43.0	26.0	57.0	45.6	100.0
531 General clerks	72.3	45.1	88.0	54.9	160.3	100.0
All occupations	2,892.9	38.8	4,561.3	61.2	7,454.2	100.0

7.3 Flags

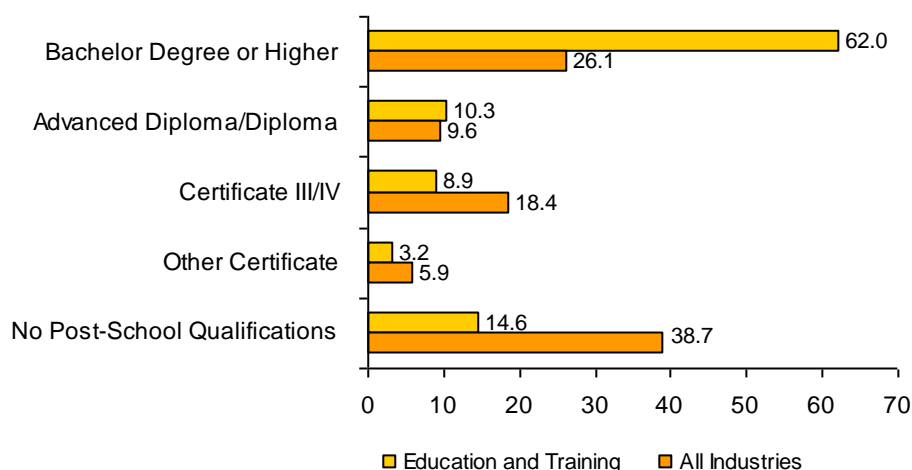
Occupation	Total growth (persons)		Net replacement estimates (persons)		Total job openings (persons)	
	('000)	%	('000)	%	('000)	%
ANZSCO						
134 Education, health and welfare services managers	11.9	31.7	25.5	68.3	37.4	100.0
241 School teachers	51.4	28.0	132.1	72.0	183.5	100.0
242 Tertiary education teachers	17.6	38.6	27.9	61.4	45.5	100.0
249 Miscellaneous education professionals	7.5	35.6	13.6	64.4	21.1	100.0
421 Child carers	33.1	46.4	38.2	53.6	71.3	100.0
422 Education aides	20.0	43.3	26.1	56.7	46.1	100.0
452 Sports and fitness workers	4.4	15.7	23.4	84.3	27.8	100.0
531 General clerks	41.0	33.5	81.3	66.5	122.3	100.0
All occupations	1,681.7	28.1	4,297.2	71.9	5,978.9	100.0

Source: Access Economics (2009) *Economic modelling of skills demand*, Table D4 (ASCO); conversion to ANZSCO and net replacement demand by CEET (2009). Three-digit ANZSCO job titles are used in this analysis.

Education and training profile

The education and training sector has the highest proportion of tertiary-educated workers, with 62 per cent having completed a Bachelor degree or higher, and a further 10.3 per cent having attained a Diploma or Advanced Diploma. Only 14.6 per cent of the workforce does not hold post-school qualifications, which represents the lowest proportion of any industry, and less than half the all-industry average of 38.7 per cent.

Figure 1 Education profile of the education and training workforce (%)



Source: DEEWR (2010) *Australian Jobs 2010*.

Figure 2 shows how demand for qualifications is expected to change over time. It shows the current education profile for each respective occupation: across all industries and within the education and training industry. It also shows projected levels of educational attainment to 2015 and 2025 by each occupation group depending on which of the three scenarios eventuates.

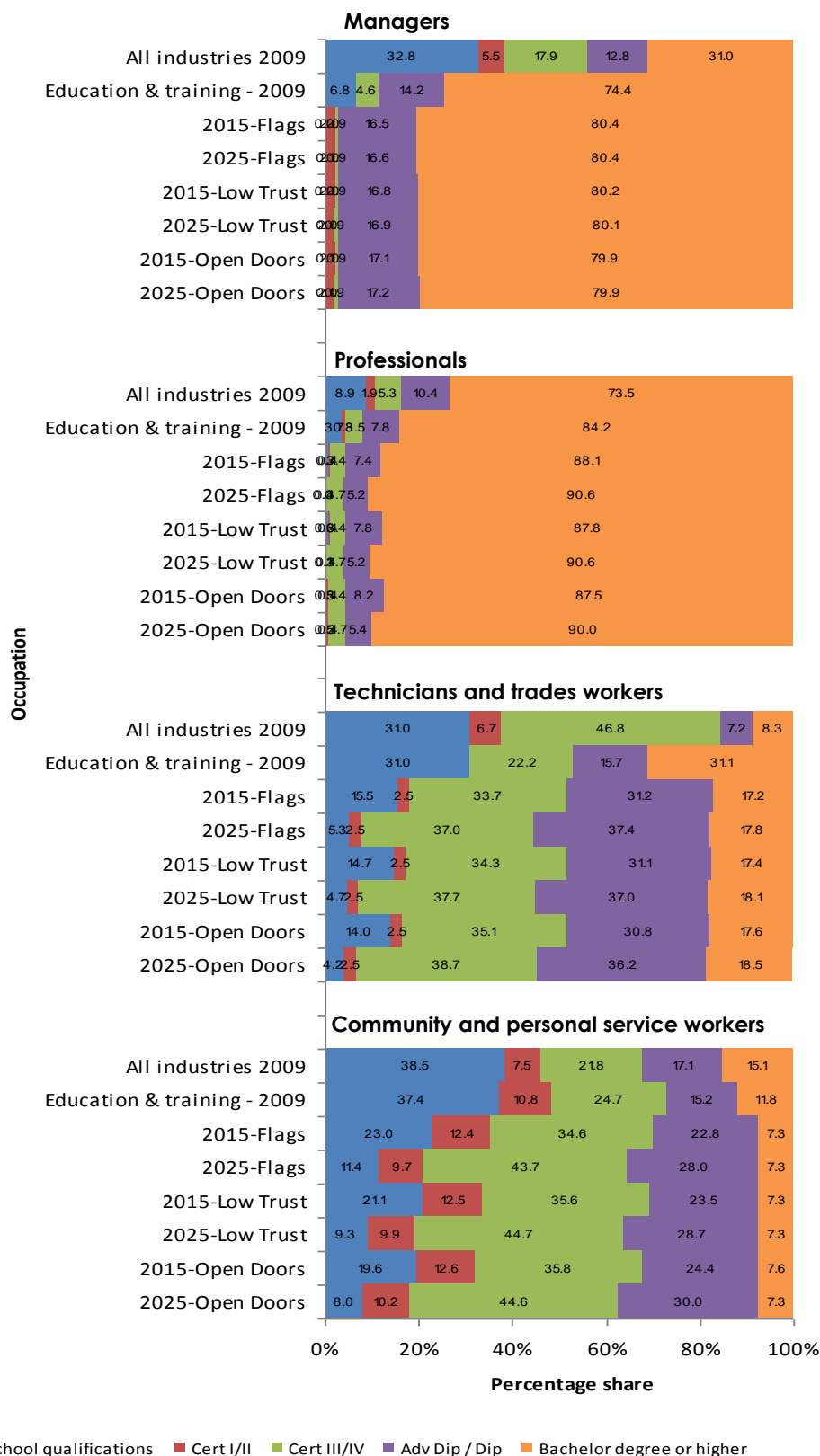
As Figure 2 shows, the managerial and professional occupations overwhelmingly hold a Bachelor degree or higher qualification, and this level of educational attainment is expected to remain the case irrespective of which scenario eventuates.

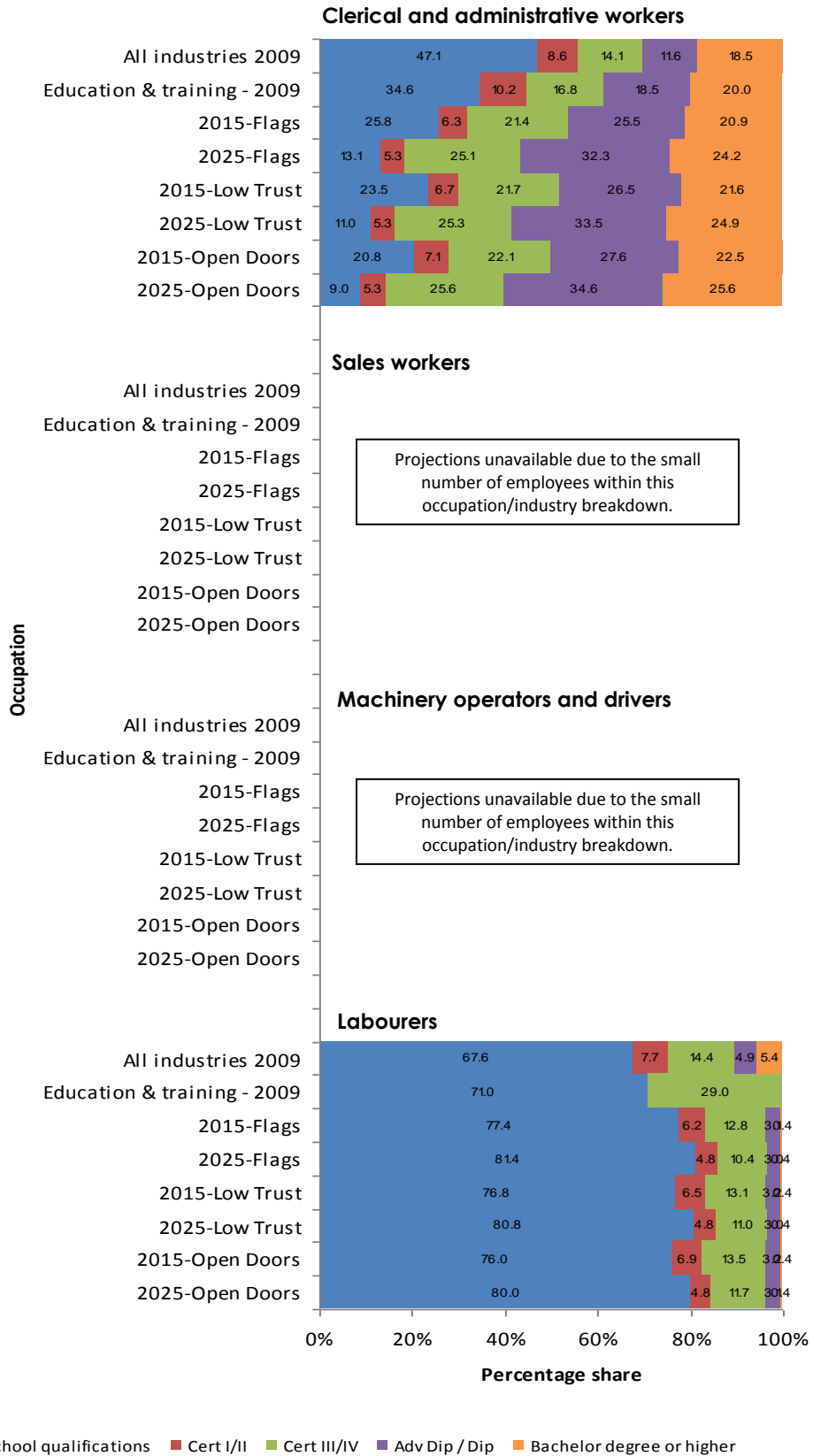
The proportion of technicians and trades workers with a Bachelor degree or higher is expected to decrease over time under all scenarios, although the overall educational attainment level will increase with significant gains in the share of workers with Certificate III/IV and Diploma level qualifications. However, it should also be noted that pushes to upskill within certain occupations and industry sectors are more likely to be driven by factors intrinsic to the industry (such as regulation, competition and consumer expectation) than by universal population trends toward higher qualification attainment.

The proportion of community and personal service workers and clerical and administrative workers with no post school qualifications is expected to decrease by more than 25 per cent, with most gains made at the Certificate III/IV qualification level.

Occupations with lower skill levels such as sales workers and labourers, have small employment numbers in this industry, making future projections difficult, however, levels of educational attainment for labourers is expected to remain relatively stable over in the long-term.

Figure 2 Level of educational attainment in the education and training industry by occupation, 2009 and projections to 2015 and 2025 (%)





Source: ABS (2009) *Survey of Education and Work 2009* (Cat. no. 6227.0).

Specialised occupations

In *Workforce Futures*, Skills Australia has proposed that national skills and workforce planning should focus on **specialised occupations**. Specialised occupations are defined as those 'where specialised skills, learned in formal education and training, are needed at entry level and where the impact of market failure is potentially significant for the economy and/or the community.'

Specialised occupations demonstrate these characteristics:

- ▶ long lead time—skills are highly specialised and require extended learning and preparation time over several years;
- ▶ high use—skills are deployed for the uses intended (i.e. good occupational 'fit');
- ▶ high risk—the disruption caused by the skills being in short supply is great, resulting either in bottlenecks in supply chains or imposing significant economic or community costs because an organisation cannot operate; and
- ▶ high information—the quality of information about the occupation is adequate to the task of assessing future demand and evaluating the first three criteria.

Specialised occupations associated with the education and training industry include:

Health and welfare service managers
School principals
Other education managers
Teachers of English to speakers of other languages
Early childhood (pre-primary school) teachers
Primary school teachers
Middle school teachers
Secondary school teachers
Special education teachers
University lecturers and tutors

More detailed information about specialised occupations is available from *Australian Workforce Futures: A National Workforce Development Strategy* at http://www.skillsaustralia.gov.au/PDFs_RTf/WWF_strategy.pdf.

Example workforce development initiatives

Investment in workforce development has been shown to maximise people's capabilities, lift productivity and increase workforce participation. Employee satisfaction levels and engagement also increase when enterprises make better use of their employees' skills.⁵ Current workforce development initiatives in education and training include the following examples:

- ▶ The **Professional Learning Policy** is a key strategic document of the ACT Department of Education and Training. It aims to foster innovation and support the adoption of proven contemporary practice in teaching, learning, school leadership and career development for all staff. It mandates that ongoing professional learning and development opportunities be provided to educators. For further information, see http://www.det.act.gov.au/_data/assets/pdf_file/0004/68305/proflearn_Policy2009.pdf.
- ▶ The **Inclusion and Professional Support Program Initiative** has been funded by the Australian Government to provide professional support and educational opportunities to people working in children's services in New South Wales. The program is managed by Children's Services Central - a consortium of key organisations that resource and support the children's service sector. The program aims to: promote and maintain high quality care and inclusion for all children in eligible child care services by increasing the skill level of carers and service staff in line with nationally consistent principles; and provide all children's services in New South Wales, with access to quality professional support that is relevant, appropriate and timely. For further information, see <http://www.cscentral.org.au/about/index.html>.
- ▶ The **Teachers Returning to Teaching Program** is designed to support teachers who are contemplating returning to the teaching force after resignation, or those who are eligible for registration as a teacher and who want to apply for a teaching position with the South Australian Department of Education and Children's Services. The program aims to provide a professional learning experience, which links closely with the requirements for teacher selection. Retraining and upskilling, and financial support is also available for teachers who require retraining to meet workforce needs in country locations. For further information, see <http://www.decs.sa.gov.au/employmentopps/default.asp?id=14095&navgrp=2358>.
- ▶ The Department of Education, Employment and Workplace Relations' **Language, Literature and Numeracy scholarship program** aims to develop more skilled LLN practitioners in the VET sector. It provides an incentive for individuals to enter the adult LLN field by supporting them to undertake approved study towards an adult LLN practitioner qualification.

⁵ Skills Australia (2010) *Australian Workforce Futures: A National Workforce Development Strategy*.

- ▶ The Australian Learning and Teaching Council receive \$27m annually to support the quality of teaching in universities. **National Teaching Fellowships** are awarded to outstanding scholars who are respected leaders in learning and teaching in higher education. National Teaching Fellows undertake a significant program of fellowship activities, contribute to various ALTC events and develop national and international networks appropriate to the Fellowship activities. They are also expected to establish a collaborative team of internationally recognised scholars and to lead an extended seminar as part of their Fellowship program.
- ▶ **Teach for Australia** is a national initiative (non-profit with public and private sector partners) aimed at on providing quality education in disadvantaged areas. It also operates as a workforce development program by emphasising opportunities for skill building and change for the participating teachers and graduates.
- ▶ The Australian Government's **Enterprise Based Productivity Places Program** has enabled IBSA to broker funding for upskilling existing workers in the Education and Training sector for a number of enterprises including Franklyn Scholar, Central Coast Conservatorium, Viva College and Capability Resources.