

Industry training systems in other jurisdictions

Purpose of report

1. This report summarises industry training and vocational education systems in other countries. It provides information on government-subsidised industry training systems in:
 - Australia
 - United Kingdom (England and Scotland)
 - Republic of Ireland
 - France
 - Germany
 - British Columbia
 - Norway.
2. We chose these countries to provide a cross-section of different systems. Australia, the UK and Ireland are anglophone countries that we often compare ourselves to. France, Germany and Norway all have quite different systems to New Zealand's. British Columbia adopted and adapted the New Zealand system.
3. The country descriptions and analyses are attached as appendices to this report. The first appendix is a series of summary tables that compares the systems.
4. This report and its appendices highlight the strengths and weaknesses of these systems in relation to New Zealand's system of industry training.

Trade-offs in the design of industry training systems

5. The key trade-offs in the design of industry training are the flexibility versus the prescriptiveness of the system, and the extent to which the system is controlled by industry or by Government. In practice, these trade-offs are paired, so that more prescribed systems are largely government-controlled, and more flexible systems are industry-led. Both of these system types have strengths and weaknesses, which we will examine in greater detail in relation to each country.
6. Flexible industry training systems potentially enable more innovation in training delivery. They are more likely to cater to different types of learners and business needs, and to be able to respond to changing employer, industry, economic and social needs.
7. More prescriptive systems have the potential to enable more consistency across sectors, greater transferability and cross-sectoral recognition of skills and qualifications, clearer pathways for learners from school to initial vocational training, and from initial training to continuing vocational education. They are also likely to enable more rigorous monitoring and quality assurance of training and outcomes. However, these systems necessitate higher administrative and compliance costs.

8. Systems that are more industry-led can allow training to be highly responsive to the current needs of individual businesses and industries, and can have greater employer engagement and buy-in. Responsiveness and engagement may in turn translate into greater participation in training by firms. Industry-led systems may also need industry to contribute a higher proportion of funding to the system, or a higher contribution in terms of time spent giving input or hosting on-job training.
9. Systems that are more government-controlled allow greater strategic intervention, for example to orient training strategy and delivery towards the Government's broader economic and social priorities. Government has more levers to:
 - address existing skills gaps (eg. low LLN)
 - identify emerging skill needs
 - support disadvantaged groups
 - support key sectors.
10. However, government-controlled systems require greater public expenditure to consult with industry and to ensure industry relevance of the training. The need to consult is likely to mean that the system is slower to adapt to changing industry or economic conditions.

International overview

11. Different countries have chosen models with differing levels of government oversight and control. Below is the spectrum of industry training systems, ranging from those that are highly enabling, flexible and industry-defined, such as New Zealand's system, to those that are more heavily prescribed and regulated by Government, such as the current system in Ireland and Germany.



12. New Zealand has a flexible, industry-led system of industry training. Through enabling legislation, ITOs can configure themselves, and set their own business model and governance model. Employers (through ITOs) can determine the skill standards and the level of on-job and off-job training that suits the industry. ITOs have the responsibility of establishing the level and type of support for on-job training and assessment. There are few barriers to the participation of new industries in the system.
13. New Zealand's system has resulted in high participation, responsiveness to industry needs and wide coverage of different industries. However, credit attainment and completions have been relatively low. Most other countries concentrate their government subsidies on young people, whereas New Zealand has open access to all learners.
14. Australia has a more complex system than New Zealand, which is mainly due to the interaction between state and federal governments. Skill standards for both

apprenticeships and for vocational programmes in providers are set by Industry Skills Councils, which are funded by the federal Government. Government support for apprenticeships is provided by the federal Government, which provides subsidies to employers of apprentices, and state governments through subsidised off-job training at vocational education providers. Like New Zealand, Australian Apprenticeships have open access to all learners. Employers and apprentices arrange off-job training directly with tertiary providers. There is no formal support for on-job training.

15. In the cases of England and Scotland, the Government appears relatively hands-off in terms of apprenticeships (possibly to a similar extent to New Zealand), although some of the inputs (e.g. age profile of trainees, what level training should be at, how much off-job training should take place) are prescribed in advance, more so than here. Unlike New Zealand's ITOs, the English and Scottish Sector Skills Councils are created by the UK Government, although industry governs and operates them. England and Scotland seek to strike a balance by giving industry bodies (albeit ones created by Government for the purpose) the responsibility of developing the apprenticeship content, provided it fits within some broad parameters and meets quality standards.
16. Ireland's current apprenticeship system is relatively inflexible and one-size fits all. It has a high level of government oversight, with a government agency prescribing the apprenticeship curriculum (under advice from a specialist group that includes industry representation), providing initial off-job training, and approving employers to participate in apprenticeships.¹
17. France has a hybrid system where initial vocational training is highly regulated by Government. However, continuing vocational education for employees is almost completely industry controlled and funded (via a compulsory levy). Government has an oversight role and only funds or provides continuing vocational education in the case of unemployed people, and other priority groups and sectors.
18. Germany has a dual system of apprenticeship where apprentices spend 3-4 days a week in a firm and around 12 hours a week in a part-time vocational school. Apprentices are generally school leavers. Employers bear all the costs of on-job training, while the state pays for off-job training. The German system is thorough and has a high level of industry buy-in, but it is relatively inflexible.
19. British Columbia has relatively strong government control of initial vocational education. A single Crown agency is responsible for strategy, accrediting trainers, purchasing off-job training, issuing credentials, overseeing individual apprenticeships and establishing standards. Not-for-profit organisations assigned to selected industries are co-funded by Government and enterprise to play a consultative and grass-roots engagement role.
20. Norway's system of apprenticeship is a 2+2 model: students spend two years in a vocational programme at a school learning theory components and then two years in a firm learning practical skills. The system has a high level of input and involvement from employers. The emphasis on student choice at upper secondary level and a lack of information about labour market demand means that many students do not progress to apprenticeships. Norway has more generous state subsidies than New Zealand, and adult learners have the same access to apprenticeships as young people.

¹ The Irish Government recently announced that this Government Agency (Foras Áiseanna Saothair, or FÁS) will be disestablished and its training functions transferred to statutory local education bodies, Vocational Education Committees. The Irish Government's announcement implies that a significant review of vocational training arrangements in Ireland is forthcoming.

21. There is no magic formula for success in investing in apprenticeship and other forms of systematic workplace training. Different countries have chosen different models as a result of economic, industrial, and political history and circumstances. Context matters and means that the models in other countries cannot be exported wholesale to New Zealand. But elements of other systems could be adapted for New Zealand.

Key findings from OECD's *Learning for Jobs* country studies

22. Australia, Germany and Norway were all reviewed as part of the OECD's 'Learning for Jobs', which was a programme of analytical work looking at vocational education and training in 17 countries. The country reviews were designed to help countries make their vocational education systems more responsive to labour market needs. The OECD summarised the common themes from the individual country reviews in the report *Learning for Jobs* (2010). We thought it would be useful to summarise the key findings from this report here.

23. The *Learning for Jobs* report emphasised the need for strong vocational education systems that are well-connected to labour market needs. VET is an important contributor to the competitiveness of OECD countries, as increasingly low-skilled jobs are moving to developing countries and so developed countries need to offer quality and value-add on the goods and services they provide. The review highlighted some key elements of well-performing vocational education and training systems.

Meeting the needs of the labour market

24. Publicly funded provision needs to serve the interests of the whole society by balancing student preferences and employer demand. Including an element of workplace training shows employers' willingness to offer training and reflects labour market demand for the skills gained through the VET programme.

Career guidance

25. Career guidance was found to be weak in many OECD countries because those offering the guidance do not know enough about the labour market or because career guidance is coupled with counselling services. This means that young people are less likely to be equipped to make informed choices about further education or pathways to jobs. The study stressed the need for well-resourced, independent and well-informed career guidance for young people.

Effective teachers and trainers

26. Good teachers are the most important school-based factor in academic achievement. Learning for jobs found that good vocational education is dependent on good teachers in both the on-job and off-job environments. Some teachers in vocational schools lack recent workplace experience in the occupation. Trainers and supervisors of apprentices in companies often lack preparation in how to teach, although preparation in how to teach has been shown to have positive outcomes.

Good quality workplace learning

27. Workplaces are a good learning environment – they provide trainees with hard skills on up to date equipment, and soft skills such as team work and communication. Workplace training facilitates recruitment and is also a direct expression of employer needs.

28. However, the benefits of workplace training depend on the quality. Without quality control, trainees provide cheap labour for firms but do not gain the transferable skills on which to build a career. Workplace training requires adequate incentives for employers to offer training places.

Standardised assessment of qualifications

29. A standardised national assessment of VET qualifications can help ensure consistency in standards, the mix of skills acquired and the level of skills necessary. This also allows competencies to be gained in diverse ways and provides a clear basis for recognition of prior learning.

30. Countries can achieve standardised national assessment in many different ways. Some of the approaches mentioned are: periodical inspections of VET providers, inspection of examination bodies, random evaluation of student performance, self-evaluation of providers and peer reviews, and clear national guidelines of assessment.

Appendix 1: International comparison tables

Country	Size of apprenticeship system
New Zealand	At 31 December 2010, there were 104,825 trainees (including Modern Apprentices).
Australia	Currently around 459,000 apprentices and trainees. 25% of people enrolled in vocational education and training are apprentices or trainees.
England	In 2008, there were 271,000 apprentices; Further Education Colleges, which provide the bulk of trade-level vocational education and training, generally account for 4-5 million students
Scotland	In 2010, there were 36,156 Modern Apprentices, compared with 347,336 students in Further Education Colleges in 2009/10
Ireland	In 2009, there were 23,000 apprentices in Ireland, compared to 154,000 full-time vocational students in institutions. However, the number of new apprentices in Ireland has declined significantly since 2008 due to the economic downturn.
France	In 2008, there were 434,000 apprentices.
Germany	In 2009, approximately 1,570,000 young people were in an apprenticeship in Germany.
British Columbia	In 2009/2010, there were about 42,000 registered participants in the BC industry training system, of which approximately 34,000 were apprentices.
Norway	In 2010, there were 34,165 apprentices.

Country	Government subsidy for off-job training
New Zealand	New Zealand bulk funds Industry Training Organisations and does not fund off-job separately. Industry training is funded on the basis of the standard training measure (STM), which is based on the number of credits within a programme and therefore may fund more than one trainee within a year. The STM rate for 2011 is \$2,919 (GST exclusive). Modern apprentices also attracted a further subsidy of either \$1,777 or \$1,956 (both figures exclude GST) per apprentice for the co-ordination function, which involves additional support for apprentices and their employers.
Australia	State governments subsidise off-job training at vocational education providers. In 2008 and 2009, the estimated average cost of all government support (including incentives to employers and income support payments) for one year of an apprenticeship was \$7,081.
England	Providers receive government funding from the National Apprenticeship Service for off-job training, although large employers with more than 5,000 employees can receive direct funding for training. The size of the government contribution varies depending on the sector and the age of the candidate. If the apprentice is aged 16-18, the Government funds 100% of the cost of the training; if the apprentice is 19+, the Government funds up to 50%.
Scotland	Modern Apprenticeships are free to those in employment aged 16 years and over, with the costs of off-job training shared between employers and the Scottish Government. For a Modern Apprentice aged between 16 and 19, the Scottish Government contribution ranges from £3,000 to £9,000 per year for approximately four years.

Country	Government subsidy for off-job training
Ireland	Public funding for training in Ireland is channelled through the National Training Fund (NTF). The fund is fed from a levy on all employers of 0.7% of employee earnings. The fund is disbursed by the national education and training authority; it meets the full cost of off-the-job apprentice training and the cost of an allowance paid to apprentices in lieu of wages during off-the-job training. The national education and training authority also pays travel and accommodation expenses where appropriate to apprentices during their off-the-job training.
France	Funding for off-job training centres for apprentices is provided by the Ministry of Education. Regional authorities enter into a contract with the provider body for a five-year period for the provision of off-the-job training.
Germany	The cost of the one-day a week full-time education and training provided for apprentices in vocational schools is met by the regional education authority. Costs of external assessment and examinations are met by the Chambers of Commerce (or similar organisations) which are funded through a compulsory membership subscription paid by all businesses.
British Columbia	The Industry Training Authority funds training at public, and some private, institutions.
Norway	Off-job training is provided at a vocational high school before a person gets an apprenticeship. The subsidy for vocational high school is approximately €12,000 per year. Tertiary vocational education is an alternative to vocational high schools. Most of the schools offering this kind of education are private ones, apart from the traditional schools of technical management and maritime subjects which are publicly financed (by the county authorities).

Country	Government subsidy for employers
New Zealand	The Government does not provide direct subsidies to employers to hire apprentices through the Industry Training Fund. Some industry training organisations (ITOs) provide a subsidy per credit achieved to their employers. The Government, through the Skills for Growth programme, provides a \$5,000 subsidy for firms employing 16 to 24 year olds enrolled in an industry-recognised qualification at level 2 or higher on the New Zealand Qualifications Framework. Firms are only able to claim this subsidy for permanent, full-time employees. The payments are made in three instalments: \$1,000 on commencement of the job and training plan; \$3,000 after 13 weeks of training and work; and \$1,000 at either the completion of the qualification or the completion of 12 months' employment.
Australia	A range of benefits are available to apprentice employers from Federal and State sources. The most widely available Federal benefit to employers who take on an apprentice is a one-off payment of around AU\$1,500 plus a possible completion bonus of AU\$2,500.
England	In 2009, the Government announced that businesses with a proven track record in offering high-quality apprenticeships would be able to access additional funds to train extra apprentices – over and above those they already employ. There are also additional wage subsidies available to small businesses which employ 16-18 year old apprentices through one of the newly-established Apprentice Training Agencies (ATAs).
Scotland	Same as England.
Ireland	In 2010, the national education and training authority established a scheme to enable

Country	Government subsidy for employers
	apprentices who had been made redundant to complete their apprenticeship. This pays the employer who takes on a redundant apprentice a wage subsidy of €340 a week. There are also grants to encourage employers to recruit and register female apprentices.
France	The Government incentivises employers to hire people under 25 and jobseekers using fixed-term work-study contracts. The employers' businesses are exempt from social security contributions and can pay young people on these contracts below minimum wage. All firms pay an apprenticeship tax which is set at 0.05% of the salaries for firms with less than 250 employees and 0.06% for firms with more than 250 employees. Exemption from the tax is conditional on firms training a specified number of apprentices. The firm can choose to pay the tax to an education establishment of its choice – including universities – and there is considerable competition among education establishments for firms' contributions from the tax. One of the proposals put forward by the Apprenticeship Charter employer group is for the apprenticeship tax to be used directly to finance apprenticeship. Firms which take apprentices receive payments from the regional authorities (which have direct control of training funds) and these payments vary by region. The most generous region (Lower-Normandy) pays up to €6,500 per apprentice while a less generous region may pay around €3,500 per apprentice.
Germany	German firms that recruit apprentices do not receive direct subsidy from public funds. However, Federal and regional funds have been made available to encourage firms already training to offer additional apprenticeships, particularly in the former East. A higher subsidy is available for firms that take young people with some form of disability. Public funds are also available to assist groups of small firms to set up and run joint training facilities (Group Training Associations).
British Columbia	Employers of apprentices registered in Red Seal (the interprovincial standard of excellence) trades' courses may be eligible to claim the Apprenticeship Job Creation Tax Credit. The AJCTC is a non-refundable tax credit equal to 10% of the salaries and wages payable to eligible apprentices. The maximum credit an employer can claim is CA\$2,000 per year for each eligible apprentice. An eligible apprentice is someone in the first two years of their apprenticeship contract. There are also refundable income tax credits for employers and employees who are engaged in apprenticeship programs administered through the Industry Training Authority. There are three main elements to these tax credits: basic credits for non-Red Seal training programs; completion credits for both Red Seal and non-Red Seal training programs; and enhanced credits for First Nations individuals and persons with disabilities.
Norway	Employers taking on apprentices receive direct subsidies from the county. The basic subsidy for two years is equivalent to the subsidy for one year in a vocational secondary school (approximately €12,000). Top-up subsidies of approximately €5,000 are available for small, traditional trades deemed worthy of preservation (e.g. goldsmithing). Additional subsidies are also available for companies taking on apprentices with special needs.

Country	Apprentice wages
New Zealand	The training minimum wage only applies where employees are required under their employment agreement to undertake at least 60 credits a year of an industry training programme to become qualified for the occupation they are employed in. The training

Country	Apprentice wages
	programme must be registered on the National Qualifications Framework. As of 1 April 2011, the training minimum wage is \$10.40 an hour.
Australia	Australian Apprentices are usually employed under a federal or state award or agreement. Awards set out minimum wages and conditions of employment for specified employees, including those of Australian Apprentices. They are paid a wage which varies depending on the number of years of school they completed, which year of their training they are in, the type of Australian Apprenticeship they are doing, and the industry or occupation. Though Australian Apprentices are usually paid a training wage that is less than the average award wage, they have the same rights to superannuation, workers' compensation and other entitlements or requirements as all other workers in Australia. From 1 July 2011 special national minimum wages have been set for apprentices who are not covered by any award or agreement: Year 1 of apprenticeship AUS\$9.93 per hour; Year 2 of apprenticeship AUS\$11.74 per hour; Year 3 of apprenticeship AUS\$14.45 per hour; Year 4 of apprenticeship AUS\$17.16 per hour.
England	A national minimum apprenticeship wage is set by statute. The wage applies to all apprentices aged under 19 and all apprentices aged 19 or over in the first year of their apprenticeship. The wage is currently £2.60 per hour and applies to time working, plus time spent training that is part of the apprenticeship.
Scotland	Same as for England.
Ireland	Employers pay apprentice wages and the cost of work-based training. Apprentice earnings are set at a percentage of the adult craft rate: Year 1 - 30%; Year 2 - 45%; Year 3 - 65%; Year 4 - 80%.
France	The state sets a minimum apprentice wage level (between 25% and 78% of the minimum wage depending on age and stage in the contract). For example, if less than 17 years old, the apprentice earns 25% of the minimum wage in the first year of the contract, 37% in the second year, and 53% in the third year. If the apprentice is between 18 and 20 year of age, the wage is equal to 41% of the minimum wage level during the first year of the contract, 49% in the second year, and 65% in the third year. Over 21 years of age, these percentages are 53%, 61% and 78%, respectively.
Germany	On average, apprentice wages in Germany were €150 a week in 2008 but lower in the East.
British Columbia	There is no minimum wage for apprentices. Some union agreements set the wages of apprentices as a percentage of the journeyman wages, which increase as the apprentice progresses through their training. Apprentices are eligible for federal grants and provincial tax credits of CA\$1,000 or more when each level of technical training and the accompanying work-based training hours are successfully completed. In addition, since 2009, a completion grant has been available upon achieving certification.
Norway	Apprenticeship contracts are collective agreements between employers, apprentices, and the county's vocational education office. Apprentices are paid an apprenticeship wage by their employer in accordance with the collective agreement. Apprentice wages increase from 30% to 80% of a skilled worker's salary during the two years of the apprenticeship

Country	Development of qualifications
New Zealand	Industry Training Organisations (ITOs) are set up by industries, and recognised by Government. They are funded by both industry and Government. ITOs work with industries and providers to develop qualifications. Qualifications are approved by the New Zealand Qualifications Authority (NZQA) using a two stage process. The first stage involves approval to develop a qualification. This stage ensures that all new qualifications are relevant and do not duplicate existing qualifications. The second stage occurs once the qualification has been developed and involves approval of the qualification. NZQA works with qualification developers and providers to ensure that groups or clusters of qualifications are a good fit with overarching sector objectives.
Australia	Skill standards for apprenticeships and vocational programmes in providers are set by Industry Skills Councils, which are funded by the federal Government. Providers are regulated through the Australian Quality Training Framework. The training market includes public and private providers who compete for clients and training dollars.
England	The English Sector Skills Councils (SSCs) are created by the UK Government, although industry governs and operates them. SSCs approve all vocational qualifications offered by Further Education Colleges, design and approve apprenticeship frameworks, and set National Occupational Standards on which National Vocational Qualifications are based.
Scotland	Scottish Vocational Qualifications are based on National Occupational Standards, which are set by the wider UK SSC industry-led network. The Scottish Qualifications Authority (SQA) works in partnership with different business sectors and educational practitioners in devising, developing and reviewing qualifications. The SQA is a partner in the Scottish Credit and Qualification Framework, which brings together all the mainstream Scottish qualifications and covers schools, further education, higher education and workplace learning.
Ireland	A new further education and training authority, SOLAS, is to be established. SOLAS will co-ordinate and fund the training and further education programmes in Ireland, and set the skills strategy for the country. Apprenticeship qualifications in Ireland (usually a National Craft Certificate) are based on standards written by industry subject matter experts who have been nominated by employers, trades unions, the national education and training authority and the Department of Education and Skills. All apprenticeship qualifications are lodged on a 10-level national framework of qualifications.
France	Apprentices in France study for the same nationally recognised qualifications as students on full-time vocational courses in vocational schools. Some national vocational qualifications are managed and issued by central government using formal consultation processes with industry, employer organisations and unions. Others are developed and managed by industry organisations and can be obtained by part-time study or by skills recognition. Implementation of regional training plans is monitored by Regional government, by reference to quality charters co-signed by industry groups. The National Lifelong Vocational Learning Council evaluates regional apprenticeship and vocational education training policies, and has a mandate to oversee contributions and spending on apprenticeships.

Country	Development of qualifications
Germany	New training occupations and revisions of existing occupations are normally initiated by the appropriate sector employer and employee organisations in discussion with the Federal Training Institute. These same employer and employee organisations must be consulted at specified stages in agreeing the content of apprenticeship occupations. They also participate in the regional education authorities' decision-making on the occupationally-relevant elements of the vocational school syllabus. Employer and employee representatives take part in the examination and assessment process, together with a representative of the school authority.
British Columbia	An Industry Training Organisation (ITO) is an independent, non-profit association responsible for consulting with industry to develop and maintain provincial program standards for each trade and recommend changes for approval by the Industry Training Authority (a government agency which also accredits training providers). Program standards are the basis of technical training programs.
Norway	Employer associations and unions influence the curriculum of vocational education through representation on advisory bodies, which include the National Council for Vocational Education and Training, the nine Vocational Training Councils, and the County Vocational Training Board.

Country	Quality assurance
New Zealand	Quality assurance functions are performed by the New Zealand Qualifications Authority (NZQA), the Tertiary Education Commission (TEC), and Industry Training Organisations. NZQA approves qualifications and standards. NZQA also provides quality assurance of ITOs' capability and processes through the External Evaluation and Review process. The TEC monitors the number of trainees and compliance with funding rules. ITOs provide quality assurance through their assessment and moderation functions.
Australia	The Australian Skills Quality Authority is the national regulator for Australia's vocational education and training sector and regulates courses and training providers to ensure nationally approved quality standards are met.
England	Awarding bodies are regulated by OfQual (Office of the Qualifications and Examinations Regulator) via recognition requirements. For apprenticeships, SSCs must satisfy the relevant awarding body that a proposed qualification is the appropriate level of difficulty to be included in the apprenticeship framework. Qualifications that are approved by awarding bodies are eligible to be put on the National Qualifications Framework.
Scotland	The Scottish Qualifications Authority (SQA) is the national accreditation and awarding body in Scotland. SQA authorises all vocational qualifications available in Scotland and approves the organisations that wish to deliver them. As part of its core activity, SQA Accreditation ensures the quality of both the awarding bodies that are approved and the qualifications that are accredited.
Ireland	In July 2011, legislation was introduced to amalgamate the National Qualifications Authority of Ireland, the Higher Education and Training Awards Council, the Further Education and Awards Council, and the Irish Universities Quality Board into a single national agency, Qualifications and Quality Assurance Ireland (QQAI). It is anticipated that QQAI will be established in 2012. Currently the Higher Education and Training Awards Council monitors institutional quality assurance procedures for third-level educational and training institutions outside the university sector.

Country	Quality assurance
France	The Ministry of Education is the central body defining strategies, policies, framework and learning and teaching programs and ensures staff recruitment and management of training activities. At a regional level, regional councils have adopted 'quality charters'. These documents are co-signed by vocational bodies representing particular sectors, or by training organisations that enter into contractual agreements with the region.
Germany	Quality assurance in Germany has traditionally been through state supervision and monitoring of education and training. Recently, the Federal Ministry of Education and Research has tasked the Federal Institute for Vocational Education and Training with setting up a National Reference Point for Quality Assurance in Vocational Education and Training.
British Columbia	The BC Council on Admissions and Transfer is the quality assurance mechanism for public institutions in BC. All non-public training institutions offering trades programs that fall under the authority of the Industry Training Association (ITA) must go through the ITA training provider designation process. Public post-secondary institutions and public high schools may also pursue ITA designation through the same process. For private training institutions, the designation review process is designed to inform and complement the Private Career Training Institutions Agency's (PCTIA) registration and accreditation processes.
Norway	The Norwegian Agency for Quality Assurance in Education (NOKUT) is an independent agency with the task of carrying out external quality assurance of higher education and tertiary vocational education in Norway.

Country	Training requirements
New Zealand	There is no minimum off-job training requirement for industry training in New Zealand. An industry training programme must be a minimum of 20 credits to receive a government subsidy.
Australia	The minimum off-the-job requirement will vary depending on the apprenticeship/traineeship qualifications aimed for. Where the qualification is at Certificate III or above, the minimum off-the-job training period averaged over a four week cycle is three hours per week. Where training is at Certificate I and II, the off-the-job training minimum is 1.5 hours per week averaged over a two-month cycle
England	The minimum requirements to be included in a recognised English Apprenticeship framework are set out by law and currently include an occupational qualification, related technical knowledge, Functional Skills, Employee Rights and Responsibilities, and Personal Learning and Thinking Skills units. Apprenticeship Frameworks are available at Level 2 in all sectors and at Levels 3 and 4 in most sectors. There is no minimum time for the completion of an apprenticeship but most Level 2 apprenticeships take between 9 months and a year to complete while most Level 3 apprenticeships take between 18 months and two years to complete. Apprentices must receive a minimum of 280 Guided Learning Hours per year of which a minimum of 100 hours (approximately one day a month) must be off-the-job.
Scotland	Same as England.

Country	Training requirements
Ireland	<p>All apprenticeships last for four years and comprise seven phases regardless of sector/occupation. Three of the phases are off-job and apprentices attend a national education and training authority Training Centre for the first phase and an Institute of Technology for the subsequent two phases over a total period of forty weeks. The remaining four phases are spent in the workplace. Employers are given a list of activities to be completed on the job and the employer certifies that these have been performed satisfactorily. Successful completion of all phases leads to a national award of an Advanced Certificate at Level 6 of the National Qualification Framework. This qualification is considered equivalent to a Higher National Certificate in England and in the devolved administrations of the UK and can serve as an entry qualification to vocationally-specific degree courses in Ireland.</p>
France	<p>Apprentices in France study for the same nationally recognised qualifications as students in full-time vocational high schools. Apprenticeships normally last for between one and two years and at NVQ 2 level the apprentice spends 430 hours a year off-job at a training centre – approximately one day a week. Off-job study periods for qualifications at Level 3 and above are longer – 675 hours a year. At NVQ Level 2, in addition to technical knowledge, apprentices study and are examined in French, mathematics, P.E., art and social science. The employing firm must provide the apprentice with a suitably-qualified supervisor.</p>
Germany	<p>Apprenticeships normally last for three years but can be shortened to two years if an apprentice is judged capable of completing more quickly. At least one day a week must be spent in the vocational school where a Federally agreed programme of general education and occupationally-relevant technical knowledge are taught. The firm also provides work-place training following the outline of the Training Regulations for the appropriate occupation. Apprenticeship firms must show that they have the equipment and facilities to provide this training and have a qualified person to supervise the apprentice. If firms lack some equipment/facilities, these can be supplied at a Group Training Centre financed from private and public funds.</p>
British Columbia	<p>Apprenticeship programs vary in length but most take about four years to complete. About 80% of an apprenticeship program is completed through work-based training. Completion of a set number of work-based training hours under the direct supervision of a certified tradesperson or equivalent is required and must be completed and approved by the employer. About 20% of the apprenticeship program is technical training which consists of both theoretical and practical assessments. Apprentices must obtain a minimum score of 70% overall to be granted credit for a level of technical training. The final stage of all apprenticeships is a certification exam. If the exam is passed, a Recommendation for Certification is completed by the employer at the request of the Industry Training Association.</p>
Norway	<p>Young people who have completed primary and lower secondary education, or the equivalent, have a right to three years' upper secondary education and training leading either to admission to higher education, to vocational qualifications or to basic skills. Vocational education and training mainly leads to a craft or journeyman's certificate, usually after two years in school and two years in-service training in an enterprise as an apprentice. If it is impossible to provide enough training places, the county authorities are obliged to offer a third vocational year in school. The final craft or journeyman's examination is the same whichever way the training is undertaken.</p>

Appendix 2: Australia

Country context

1. Australia has a population of approximately 22.6 million² and GDP per capita of US\$39,400, (New Zealand's is US\$29,800).³ Australia has abundant natural resources that attract high levels of foreign investment, including reserves of coal, iron ore, copper, gold, natural gas, uranium and renewable energy sources. Construction is the third largest sector in Australia and is experiencing strong growth as a result of flow-on effects of its mining boom, rollout of the National Broadband Network, and the on-going demand for expanded housing, due to population growth. Australia also has an ageing population, which is leading to strong growth in demand for aged care services.

Australian Apprenticeships – overview

2. The Australian industry training system is made up of apprenticeships and traineeships. Apprentices and trainees represent around a quarter of those enrolled in formal vocational education and training and around 3.8% of the entire workforce.⁴ In comparison, 8.9% of the New Zealand workforce participates in industry training.⁵ The total number of students enrolled in publicly funded vocational education and training in Australia reached 1.8 million in 2010, including 441,000 apprentices and trainees (as at 31 December 2010).
3. The federal Government makes no distinction between apprenticeships and traineeships and uses the term Australian Apprenticeships to cover both types of industry training. States and territories however classify certain qualifications or occupations as either apprenticeships or traineeships, and classifications can vary between each state and territory. In general, apprenticeships are associated with occupations in the traditional trades, with an occupational entry level qualification at Certificate III or IV level and a duration of 3-4 years. Traineeships generally cover a wider range or more service-oriented occupations, are undertaken at Certificate II or III level, and have a duration of less than 2 years.⁶
4. Apprenticeships and traineeships combine time at work with off-job training and can be full-time, part-time or school-based. Apprenticeships and traineeships are:
 - available to anyone of working age (school leavers, those re-entering the workforce and those wanting to change career)
 - do not require any entry qualifications
 - available in a variety of certificate levels in over 500 occupations.

² Australian Bureau of Statistics. Projection is based on the estimated resident population at 30 September 2010 and assumed growth since then.

³ Source: <http://stats.oecd.org/Index.aspx?DataSetCode=DECOMP>.

⁴ Source: p8, *A shared responsibility: apprenticeships for the 21st century, final report of the expert panel*, Commonwealth of Australia, January 2011.

⁵ Source: *Profile and Trends 2010*, Ministry of Education, 2011.

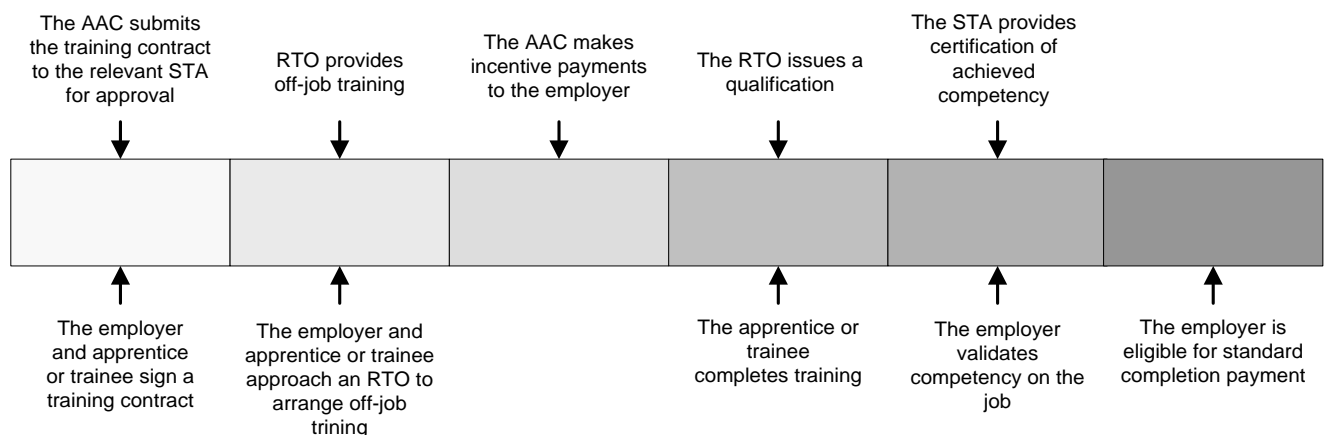
⁶ Source for definitions of apprenticeships and traineeships: *A shared responsibility: apprenticeships for the 21st century, final report of the expert panel*, Commonwealth of Australia, January 2011.

- As in New Zealand, there are no age restrictions on who can enter into the Australian industry training system. The Australian Apprenticeship system includes both training for entry into trades occupations, entry qualifications for non-trades occupations, and training for existing workers in non-trades occupations. In this way the Australian system is more similar to the New Zealand system than European models of apprenticeship, which involve training towards entry level qualifications only. The Australian system incorporates qualifications from Certificate II up to advanced diplomas.

Life-cycle of an Australian Apprentice

- The steps in the Australian Apprenticeship process are illustrated in figure 1 below. An apprenticeship or traineeship begins when the employer and employee sign a training contract.
- Employers are responsible for meeting the cost of supervision, providing on-the-job training and verifying that an employee has attained on-job competence. Apprentices and trainees contribute through the opportunity cost of training wages and may have to cover the cost of tools and equipment. Apprentices and trainees are paid a wage that increases as they progress. The rates of pay are determined by the award or agreement under which the apprentice is employed. Governments meet the management costs of the system, cover most of the costs of off-job training, and pay employers incentives.

Figure 1: life-cycle of an apprentice



AAC = Australian Apprenticeship Centre

STA = State Training Authority

RTO = Registered Training Organisation

Source: Appendix E, A shared responsibility: apprenticeships for the 21st century, final report of the expert panel, Commonwealth of Australia, January 2011

- The Australian Apprenticeship Centre (AAC) is a non-profit organisation contracted by the Department of Education, Employment and Workplace Relations (DEEWR) to provide support services for employers and apprentices. The Australian Apprenticeship Centre facilitates the execution of the training contract, provides advice on accessing training and government funding, makes payments to employers, and contacts or visits the employer and apprentice during the apprenticeship.
- State Training Authorities (STA) approve training contracts, fund off-job training, provide certification of competency in the trade or occupation, and confirm the completion of apprenticeships.

10. Registered Training Organisations (RTOs) can be either public providers (institutes of Technical and Further Education (TAFEs)) or private tertiary providers. Employers and apprentices approach RTOs directly to arrange off-job training. The number of places at RTOs may be limited by caps on state funding.
11. There is very little workplace delivery for industry training in Australia, in comparison to New Zealand's industry training system. The off-job training for apprenticeships is mainly provided by TAFEs, while private providers tend to deliver the off-job training for traineeships.

Statistical profile of Australian Apprentices

12. The number of apprentices and trainees is at a historically high level. The number of apprentices and trainees has increased by 12% since 2006 (see table 2 below). Australia has not had the fluctuation in apprenticeships that New Zealand has experienced in recent years; this is partly attributable to Australia's more rigid industrial relations environment, which means that Australian employers are less able to lay off apprentices.
13. Young people aged under 25 make up 55% of people in apprenticeships and traineeships. The most common occupation areas for study are automotive trades, construction trades, and clerical work (see table 3 below). With the exception of hairdressing, traditional trades are predominantly male.
14. Around 90% of apprentices in the trades are studying towards a Certificate III qualification.⁷ The non-trades is more diverse in terms of qualification levels: around 18% are studying at Certificate II, just over 50% are at Certificate III, around 20% are at Certificate IV, and the remainder are at diploma level and above.⁸

Table 2: Number of apprentices and trainees by age group, 1 March 2006 to 1 March 2011

Age	2006	2007	2008	2009	2010	2011	Change 2006-2011	
							No.	%
19 years and under	138,999	142,538	149,976	144,100	139,999	137,486	-1,513	-1%
20 to 24 years	107,852	110,690	112,870	110,656	111,302	116,112	8,260	8%
25 to 44 years	113,384	113,260	116,691	121,987	128,816	142,424	29,040	26%
45 years and over	47,823	47,340	47,468	51,566	55,791	62,873	15,050	31%
Total	408,058	413,828	427,005	428,309	435,908	458,895	50,837	12%

Source: National Centre for Vocational Education Research (www.ncver.edu.au)

⁷ Source: p11, *Australian vocational education and training statistics: apprentices and trainees annual 2010*, NCVET, 2011.

⁸ Source: p11, *Australian vocational education and training statistics: apprentices and trainees annual 2010*, NCVET, 2011.

Table 3: Number of apprentices and trainees by occupation group as at 1 March 2011; Number of commencements in 2009 by occupation group and gender

Occupation Group	Total in March 2011		Commencements in 2009		
	Number	% of total	Number	% male	% female
Trades					
Engineering, ICT and science technicians	7,699	2%	3,740	73%	27%
Automotive and engineering	53,372	12%	16,796	98%	2%
Construction trades workers	56,135	12%	17,216	99%	1%
Electrotechnology & telecommunications trades workers	35,836	8%	9,536	98%	2%
Food trades workers	19,193	4%	9,764	73%	27%
Skilled animal and horticultural workers	8,764	2%	3,858	70%	30%
Hairdressers	11,652	3%	5,423	9%	91%
Printing trades workers	1,673	0%	637	77%	23%
Textile, clothing & footwear trades workers	263	0%	131	69%	31%
Wood trades workers	4,525	1%	1,492	97%	3%
Miscellaneous technicians & trades workers	13,363	3%	2,956	53%	47%
Non-trades					
Managers and professionals	23,464	5%	13,939	57%	43%
Community & personal service workers	51,172	11%	43,333	29%	71%
Clerical and administrative workers	69,371	15%	56,354	36%	64%
Sales workers	45,165	10%	40,224	38%	62%
Machinery operators and drivers	31,008	7%	24,938	89%	11%
Labourers	26,240	6%	21,106	69%	31%
Total	458,895	100%	271,443	56%	44%

Source for March 2011 data: National Centre for Vocational Education Research (www.ncver.edu.au).

Source for 2009 data: NCVET Report 1: Overview of the Australian apprenticeship and traineeship system, Commonwealth Government, 2011.

Industry Skills Councils

15. Industry Skills Councils (ISCs) were first formed in 2004, to inform the development of training products, which is still their primary role. ISCs develop the training package qualifications and units of competency that form part of apprenticeship and traineeship programmes.
16. There are 11 national ISCs, which are reflective of the major industry groupings in the Australian economy. The ISCs are the most similar bodies in the Australian system to New Zealand's ITOs. The Commonwealth Department of Education, Employment and Workplace Relations (DEEWR) funds the ISCs.
17. ISCs do not have a quality assurance role – ISCs are not responsible for assessment and moderation in the way that New Zealand's ITOs are. ISCs have moved into a funding role with the establishment of Skills Australia⁹ and the National Workforce Development Fund. ISCs will be the gateway for that fund (AUS\$558 million over four years), which has been allocated to support training and workforce development in areas of current and future skills need.

⁹ Skills Australia is an independent statutory body, which was established in 2008 to provide advice to the Minister for Tertiary Education, Skills, Jobs and Workplace Relations on Australia's current, emerging and future workforce skills needs and workforce development needs.

18. Funding to each ISC varies and is determined through consideration of the size of each ISC's industry sectors, numbers and distribution of enterprises, workforce size and the scope of occupations covered. The agreement covers the fundamental role of the ISCs to support skills and workforce development in their respective industries.

19. Core priorities include:

- provision of industry intelligence and advice to Skills Australia, government and enterprises on workforce development and skills needs
- actively supporting the development, implementation and continuous improvement of high quality training and workforce development products and services, including the national endorsed Training Packages
- provision of independent skills and training advice to enterprises, including matching identified training needs with appropriate training solutions
- working with enterprises, employment service providers, training providers and government to allocate training places.

20. Each ISC's key annual task is to produce an industry environmental scan through gathering and synthesis of industry intelligence. These inform ISC work plans, and are used by other stakeholders such as Skills Australia, funding bodies and training organisations.

Government support for Australian Apprenticeships

Subsidies for employers

21. Australia provides relatively generous incentives and subsidies for employers to take on apprentices. In 2008/09, the federal Government spent AU\$906 million in total on apprenticeship incentives.¹⁰

22. The Commonwealth pays incentives to employers on commencement of an apprenticeships or traineeship, for retention or recommencement of apprenticeships at Certificate III and IV level, and for completion of apprenticeships. The Commonwealth pays additional incentives to employers who employ apprentices in skill shortage areas, in drought affected areas, or in target groups. The incentive payments are detailed in the tables below. The Commonwealth also pays a wage subsidy for an apprentice or trainee with a disability (\$104.30 a week in 2009).¹¹

Table 4: Standard government incentive payments for employers of apprentices and trainees

Qualification level	Standard commencement incentives	Re-commencement incentive	Standard completion incentives
Certificate II (equity groups)	\$1,250		\$2,500
Certificate III and IV	\$1,500	\$750	\$2,500
Diploma & advanced diploma	\$1,500	\$750	\$2,500

Source: Employing an Australian Apprentice – a smart business decision, *Australian Government, May 2011*

¹⁰ Source: p 53, *NCVER Report 1: Overview of the Australian apprenticeship and traineeship system*, Commonwealth Government, 2011.

¹¹ Source: p 53, *NCVER Report 1: Overview of the Australian apprenticeship and traineeship system*, Commonwealth Government, 2011.

Table 5: Additional government incentive payments for employers of apprentices and trainees

Qualification level	Priority group	Additional commencement incentives	Additional completion incentives
Certificate II	Drought affected areas	\$1,500	\$1,500
Certificate II	Group Training Organisations supporting apprentices in equity groups		\$1,000
Certificate III and IV	eligible rural & regional areas	\$1,000	
All qualification levels	Mature aged worker*	\$750	\$750
All qualification levels	Endorsed school-based apprenticeships	\$750	

* Mature-aged workers are defined as a disadvantaged person aged 45 years or over.

Note: a retention incentive payment of \$750 is also available for continued employment of endorsed school-based apprentices who have completed school and have moved into the workforce.

Source: Employing an Australian Apprentice – a smart business decision, Australian Government, May 2011

23. State governments also provide incentives for employers of apprentices and trainees, which vary from state to state. For example, New South Wales provides a payroll tax exemption for wages and superannuation of apprentices and trainees, an exemption from worker compensation premiums for apprentices, and a rebate on vehicle registration for small business owners for each apprentice employed. Victoria's incentives include progress and completion payments (i.e. additional to the payments from the federal Government).

State subsidies for apprentices and trainees

24. State governments provide incentives for trainees and these vary between states.¹² Victoria, Queensland, Western Australia, Tasmania, Northern Territory and ACT provide accommodation and travel allowances for apprentices and trainees attending off-job training that occurs away from home.

25. New South Wales provides apprentices with a \$200 clothing allowance, \$100 rebate on car registration, and travel concessions on public transport. The Northern Territory also provides a workwear payment of \$300 (or \$1,000 in skills shortage areas), payable after three months of employment.

26. Victoria pays trade apprentices with a \$250 bonus on completing the first 6 months and on commencement of the second year. Queensland pays a \$300 start-up payment and a \$1,000 early completion bonus for apprentices in skills shortage occupations. Western Australia pays up to \$400 per year to the parents of VET students aged 16 and 17.

27. Tasmania caps TAFE fees for traditional trades at \$990 and for apprenticeships in skill shortage areas at \$495. TAFE Tasmania provides a grant of up to \$60 for books and safety gear.

¹² Information on state government incentives sourced from Appendix B, *NCVER Report 1: Overview of the Australian apprenticeship and traineeship system*, Commonwealth Government, 2011.

Funding for off-job training

28. A little over 20% of funding for VET provision is directed towards formal training for apprentices and trainees. Total public funding for VET provision was 4.9 billion in 2009¹³, the majority of which comes from states and territories (approximately 68.1% of funding¹⁴). The specific contributions vary from state to state from approximately \$1.4 billion in NSW to \$104 million in the Northern Territory¹⁵. Commonwealth funding, approximately \$1.5 billion in 2009, is provided as general grants to states and territories, to states and territories for specific programs, and directly to RTOs and other bodies for other programs.
29. Currently, most Commonwealth funding is allocated to states and territories as a general grant. This is governed by the National Agreement for Workforce Development (\$6.7 billion over four years to July 2012).
30. Although this National Agreement contains reference to broad policy reforms, competition, regulation and governance, the funding is not conditional upon particular arrangements.
31. Commonwealth funding is also provided to states and territories for specific programs, such as the National Partnership Agreement on the Productivity Places Program (\$1.9 billion over four years to July 2012). This National Partnership includes detailed outputs and specified reporting requirements. It also requires states and territories to agree additional funding. States and territories manage the allocation of this funding, including determining how much will be allocated through open competition between public and private RTOs.
32. The Commonwealth also offers some funding for accredited training directly to RTOs and to other bodies, such as Industry Skills Councils, separate from its funding to states and territories. Over the last three to five years, the Commonwealth has diverted more and more funding from states and territories grants to third parties and intermediaries. For instance, over the last two years, the Commonwealth has provided funding to Industry Skills Councils and to Skills Australia (first as the Critical Skills Investment Fund and now as the \$558 million National Workforce Development Fund) to be allocated directly to enterprises, in preference to this funding being provided through state/territory agencies to RTOs (public and private).

Additional funding to increase supply in target areas

33. The Australian Government is focused on addressing skills and labour shortages in specific areas of current high demand, such as aged care, child care, mining and construction. For example, the Australian Government opened the Ausgrid Learning Centre in Sydney in May. The Centre, funded under the Australian Government's Education Investment Fund (EIF), will enable around 400 students (Electrical Apprentices) to be trained in an area of skill shortage within the electricity supply industry.

¹³ Source: p52, *NCVER Report 1: Overview of the Australian apprenticeship and traineeship system*, Commonwealth Government, 2011.

¹⁴ Productivity Commission, *Report on Government Services 2009*, chapter 5.9
http://www.pc.gov.au/data/assets/pdf_file/0007/105298/018-chapter5.pdf

¹⁵ *Ibid*, table 5A.1

The Australian Government has contributed \$25 million towards the Learning Centre under the EIF.¹⁶

34. Both the Australian Government and state governments provide additional support for indigenous apprentices and trainees.

Quality assurance arrangements

35. The Australian Skills Quality Authority (ASQA) is the national regulator for Australia's vocational education and training sector. ASQA regulates courses and training providers in line with nationally approved quality standards.¹⁷

Performance of Australian Apprenticeships

Completions

36. Low completion rates are considered a problem in the Australian Apprenticeship system. The completion rate for the cohort that started in 2005 is 46% for trades and 52% for non-trades (see table below). Food trades workers had very low completion rates (27% for those starting in 2006). Construction workers, hairdressers, textile workers, woods trades workers, and sales workers also had completion rates consistently below 50%.
37. Approximately a third of all apprentices and trainees drop out in the first year of their training contract. Overall, trades workers had a one-year attrition rate of 32% in 2008. Food trades apprentices had the highest one-year attrition rates (47% in 2008), followed by hairdressing apprentices (42% in 2008). Labourers had the highest one-year drop out rate amongst the non-trades (39% in 2008).

¹⁶ <http://www.deewr.gov.au/HigherEducation/Policy/Pages/Newapprenticeshipcentre.aspx>

¹⁷ Registered Training Organisations based in Queensland and South Australia are temporarily the responsibility of these respective states until their State Governments refer power to the ASQA.

Table 6: cohort completion rates by occupation and year commenced for apprentices and trainees

Occupation	Year commenced				
	2004	2005	2006	2007	2008
Trades					
Engineering, ICT & science technicians	57.9%	61.7%	57.8%	-	-
Automotive & engineering trades	52.0%	51.7%	50.8%	-	-
Construction trades	45.0%	45.9%	45.3%	-	-
Electrotechnology & telecommunications trades	57.3%	55.6%	54.7%	-	-
Food trades workers	28.1%	27.8%	27.3%	-	-
Skilled animal & horticultural workers	49.2%	48.6%	46.8%	-	-
Hairdressers	37.6%	36.7%	37.5%	-	-
Printing trades workers	57.3%	54.5%	57.1%	-	-
Textile, clothing & footwear trades workers	46.3%	46.5%	47.6%	-	-
Wood trades workers	45.8%	46.0%	42.6%	-	-
Miscellaneous technicians & trades workers	48.4%	52.5%	52.7%	-	-
TOTAL	45.9%	46.2%	45.4%	-	-
Non-trades					
Managers	48.2%	51.2%	51.6%	50.3%	45.5%
Professionals	59.8%	56.0%	59.7%	57.0%	57.7%
Community & personal service workers	54.7%	55.3%	55.2%	55.2%	54.1%
Clerical & administrative workers	56.2%	56.5%	55.9%	55.3%	56.5%
Sales workers	43.2%	43.7%	44.1%	46.4%	48.5%
Machinery operators & drivers	57.0%	56.2%	56.5%	57.6%	56.4%
Labourers	47.7%	48.6%	49.7%	50.8%	49.6%
TOTAL	51.8%	52.2%	52.5%	53.1%	53.1%

Note: trades apprenticeships generally have a longer duration than non-trades traineeships, and therefore the latest completion data available for trades is from 2006.

Source: pp 15-16, Australian vocational education and training statistics: apprentices and trainees annual 2010, NCVET, 2011.

38. Some occupations require a specific qualification to gain employment, and these occupations tend to have above average completion rates. These occupations include aged care workers and child care workers (in the community and personal services grouping) and machinery operators and drivers.

39. Other factors affecting completions include: age (those aged 20-24 are least likely to complete, those 45 and over are most likely to complete); school level completed (the likelihood of completing increases with the level of schooling completed); and location (those in capital cities are least likely to complete, rural apprentices are most likely to complete).¹⁸

40. Qualitative research has found four recurrent factors contributing to non-completion: workplace or employer problems; lack of support; low wages; not liking the work.¹⁹ A significant proportion of drop out stems from problems in the workplace, such as excessive overtime, too few hours, not being paid correctly, unsafe work practices, bullying, being treated as an inferior, and not being provided with meaningful work.

¹⁸ Source: p23, *A shared responsibility: apprenticeships for the 21st century, final report of the expert panel*, Commonwealth of Australia, January 2011.

¹⁹ Information on qualitative research into non-completion drawn from the discussion in: *A shared responsibility: apprenticeships for the 21st century, final report of the expert panel*, Commonwealth of Australia, January 2011.

41. Apprentices and trainees in arrangements that include pastoral care and more personalised selection tend to have higher completion rates. Accessible support in the first six months is considered important to prevent drop out.
42. The effect of low wages on completions is contested in the research. Some researchers argue that low wages are a major disincentive to entering and completing an apprenticeship, while other research suggests that it is rarely the primary reason for dropping out of an apprenticeship. Large workplaces with union representation are more likely than small to medium enterprises to pay their apprentices over the minimum award rate.
43. An apprentice having a strong interest in their chosen field is seen as critical to successful completion of an apprenticeship. Good career guidance and high quality recruitment that matches candidates interests and aptitudes with employer needs are therefore considered important.

Wage returns

44. Almost all apprentices in the trades (96%) receive a wage premium on completion of an apprenticeship (see table below). In some trades the premium is significant – for example, electrotechnology and telecommunications trades workers achieve a mean wage premium of over \$23,000 on completion of an apprenticeship. Hairdressers have the lowest wage premium of trades workers (a mean of \$632), and over a quarter of hairdressers do not achieve a wage premium on completion of their apprenticeship.
45. Non-trades workers were less likely to achieve a wage premium as a result of completing an apprenticeship – 60% of male and 68% of female non-trades workers received a wage premium on completion. No non-trades occupation commands as high a premium as the trade occupations with the highest premium. This in part reflects the higher opportunity costs in foregone earnings associated with undertaking a trades apprenticeship. Modelling suggests that the bulk of trades apprentices forego annual earnings of \$10,000 to \$15,000 (with some foregoing up to \$25,000), while in non-trades occupations the bulk were foregoing earnings in the range of \$5,000 to \$10,000.²⁰
46. Some non-trades occupations have negative wage premiums for those who have completed a traineeship, most notably sales workers, where the wage premium is negative for both males and females. This suggests that there are traineeships for which there is apparently little skills acquisition during the traineeship, or if there is skills acquisition, it is not valued by the labour market over the general work experience obtained during the traineeship. It is possible that many employers in these occupations participate mainly in order to access the incentive payments.

²⁰ Source: p15, Karmel, T & Rice, J (2011), *NCVER Report 4: The economics of apprenticeships and traineeships 2010*, Commonwealth of Australia.

Table 7: Wage premium on completion of an apprenticeship or traineeship

	Trades		Non-trades (male)		Non-trades (female)	
	Mean (\$)	% above zero	Mean (\$)	% above zero	Mean (\$)	% above zero
Trades						
Engineering, ICT & science technicians	6,329	100.0	-	-	-	-
Automotive & engineering	13,724	100.0	-	-	-	-
Construction trades workers	16,868	100.0	-	-	-	-
Electrotechnology & telecommunications trades workers	23,232	100.0	-	-	-	-
Food trades workers	6,229	94.5	-	-	-	-
Hairdressers	632	73.4	-	-	-	-
All other trade occupations	6,159	100.0	-	-	-	-
TOTAL	12,105	96.4	-	-	-	-
Non-trades						
Managers & professionals	-	-	7,938	91.7	5,364	93.3
Community & personal service workers	-	-	-833	46.4	6,428	92.7
Clerical & administrative workers	-	-	4,911	82.9	6,007	95.9
Sales workers	-	-	-5,088	8.6	-4,427	6.5
Machinery operators & drivers	-	-	1,319	54.6	6,453	100.0
Labourers	-	-	2,552	70.2	-12,667	0.0
TOTAL	-	-	1,624	59.8	2,404	68.2

Note: excludes part-timers and existing workers.

Source: Karmel, T & Rice, J (2011), NCVET Report 4: The economics of apprenticeships and traineeships 2010, Commonwealth of Australia.

OECD review of Australian VET – strengths and weaknesses

47. In 2008, the OECD reviewed the Australian VET system and identified a number of strengths and challenges, as summarised below.²¹

Strengths

48. The OECD found that Australia has a well developed VET system, which has a high degree of confidence. In particular, it determined that engagement of employers with the system is strong, and the national qualifications system is well established and understood.

49. The system is flexible for users, and can satisfy many different needs at many different life stages for people, whether they are preparing for a first career, seeking additional skills, or catching up on educational attainment.

50. The regional flexibility of the system was found to be an advantage. Consensus-building at the state level allows for local innovation and adaption. For instance, a few years ago Western Australia reduced most apprenticeships from four to three years, which may have assisted with meeting the needs of a tight local labour market.

²¹ Hoeckel, K. et al (2008), *Learning for Jobs: OECD Reviews of Vocational Education and Training – Australia*, OECD.

Weaknesses

51. The Australian system is complex. The interaction between the Federal Government and the state and territory authorities in terms of administration and funding of the VET system adds many layers of complexity that the New Zealand system does not have. The division of responsibilities between the Commonwealth and state and territory governments is unclear. One of the issues with Australia's system is the duplication of responsibilities at different levels of government (state and federal) and the number of bodies and funding structures. This creates confusion among industry, providers and students, and generates a need to constantly renegotiate responsibilities.
52. Consensus-building with VET stakeholders is important to maintain buy-in to the system by industry, however it can be a slow process that results in variation in regulation and provision of training between states and territories. The OECD review recommended that some system elements could be standardised, which may also reduce costs for government and stakeholders that are being generated by a more fragmented system. For example, larger employers working across state boundaries can face increased administrative costs, in order to operate different apprenticeship systems.
53. Competition on a national level among providers is unbalanced by different degrees of autonomy and regulations in the different states. However, the new Australian Skills Quality Authority (ASQA), established in 2011, may mitigate some of these issues with enhanced national-level regulation. ASQA is the national regulator of the vocational education and training sector.
54. The principles underpinning funding are not clear. The OECD study found that from the point of view of a VET student, fees, and the different options for obtaining help with those fees, may appear bewilderingly variable and complex. For example, different states have varying policies on exemption from tuition and concession rates.
55. The study also found that training package development and implementation processes were inefficient. The OECD recommended that training packages should be replaced by simpler statements of skills standards.

Apprenticeships for the 21st Century Expert Panel – findings and recommendations

56. In July 2010, the Minister for Education appointed an expert panel to advise the Government on reform options for the Australian Apprenticeship system.²² The panel identified the following challenges:
 - skill shortages in engineering and traditional trades, which are forecast to worsen
 - apprenticeships are sensitive to the economic cycle, with commencements dropping markedly in economic downturns
 - low completion rates are a significant economic cost
 - the rates and patterns of investment in training by employers is not likely to address skill shortages
 - the system is complex and the structures remain unclear to many users

²² *A shared responsibility: apprenticeships for the 21st century, final report of the expert panel*, Commonwealth of Australia, January 2011.

- Australian Apprenticeships are not well integrated with the workplace relations system, with inconsistencies in apprenticeship and traineeship wages and conditions.

57. The panel came up with a suite of recommendations, which are summarised in themes below.

A system that is responsive to the economy

58. The Government should review its investment in Australian Apprenticeships and only invest in apprenticeships that support equity objectives or that are priorities for the Australian economy. This is because the return on investment is not evident in some Australian Apprenticeships compared to others.

59. The Government should facilitate flexible approaches to enable the continuation of training through periods of economic downturn. These could include a reduction in work hours off-set by additional training, increased off-job training, placement with other employers within the industry, and increased mentoring and support. Additional assistance should be available to employers that make an effort to retain apprentices and provide training through an economic downturn.

Quality training and support

60. Poor experiences in the workplace are a large factor in non-completion of apprenticeships and traineeships, and the current system of broad-based incentives for employers does not ensure the quality of on-the-job training or support for apprentices and trainees.

61. The panel therefore recommended restructuring the support for employers into two schemes: an accreditation scheme for employers to become eligible to engage an apprentice or trainee; and an excellence in employment scheme to recognise those employers who consistently provide high quality training, mentoring and support for their apprentices and trainees. The panel also recommended structured support for employers to provide high quality employment experiences as well as mentoring and pastoral care.

Shared investment with industry

62. The apprenticeship system is a 'shared responsibility' and therefore should be funded jointly by Government and industry. The panel recommended establishing an Employer Contribution Scheme in which employer contributions will be matched by the Australian Government. The Employer Contribution Scheme would be managed by industry. Note that the background papers provided to the panel stated at several points that employer levies would be very unpopular in Australia.

A simpler, more user-friendly system

63. The panel noted that multiple jurisdictional contexts, coupled with a lack of clear distinction of the responsibilities of service delivery organisations, have contributed to a confusing and complex experience for participants. This contributed to a perceived lack of effective overall governance arrangements. The panel recommended establishing an independent taskforce to work with the eight jurisdictions to align their systems. Eventually a National Custodian should be established to oversee reforms to Australian Apprenticeships.

64. The quality and effectiveness of Australian Apprenticeships should be enhanced by clarifying the roles and consolidating the number of stakeholders in the system, reducing duplication of service delivery, and streamlining administrative processes.

Consistency in wages and conditions

65. The panel recommended facilitating arrangements for competency-based training progression, including wage progression, for apprentices and trainees. The increased number of mature age apprentices means that improving implementation of recognition of prior learning and recognition of current competencies is important.

66. Fair Work Australia should conduct a review of apprenticeship and traineeship provisions in modern awards. This could look into disparities including adult Australian Apprentice rates of pay, recognition of pre-apprenticeship training, and part-time arrangements for Australian Apprentices. A large number of Australian Apprentices are paid at above award wage rates, suggesting that the wage rates in the awards do not reflect the current market rates for apprentices and trainees.

Appendix 3: England

Country context

1. England has one of the world's largest economies. It has a population of 51 million, and dominates the United Kingdom, which has a GDP per capita of approximately US\$35,900.²³ England has a labour force of nearly 30 million, 80% of whom work in service industries. It is part of the wider European economy, which is itself the largest economy in the world (as at 2010), and therefore has access to a very large market for goods and services and a fluid labour market via internal European migration.
2. Strategically, the United Kingdom as a whole is seeking to increase the amount of high-value-add sectors in its economy because it is unable to compete internationally in industries based on low-skill labour.

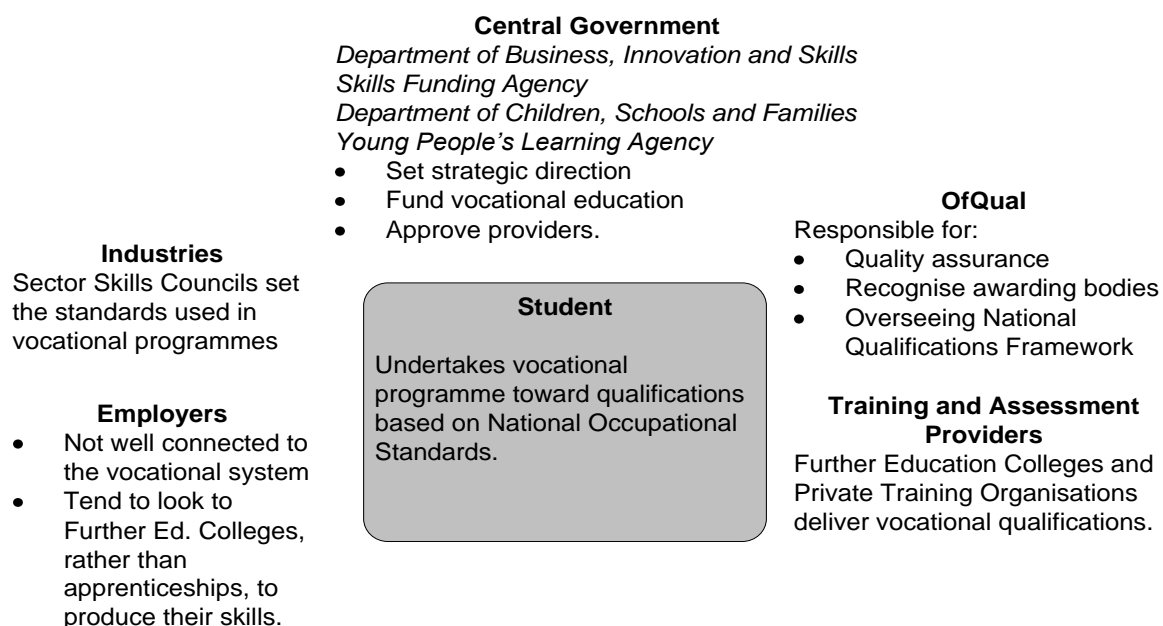
Vocational education in England

3. Apprenticeships in England are regarded as producing good outcomes and superior industry links in comparison to other vocational training, but are a relatively minor part of England's vocational education and training system.
4. In 2008, there were 271,000 apprentices in England. By contrast, Further Education Colleges, which provide the bulk of trade-level vocational education and training, generally account for 4-5 million students. The relatively minor participation in apprenticeships compared to other training options has been identified as a weakness.²⁴
5. The administration and funding of vocational education in England is complex, partly due to the almost constant reforms that the sector has undergone over the last decade or so, and also to devolution of some responsibilities to more local levels.
6. The key roles in the provider-based vocational education system are illustrated in the diagram overleaf.

²³ Source: <http://stats.oecd.org/Index.aspx?DataSetCode=DECOMP>. The figure provided for the UK includes England, Wales, Scotland and Northern Ireland.

²⁴ For example, Wolf, Alison (2011), *Review of Vocational Education – the Wolf report*.

Figure 1: key roles in the provider-based vocational education and training system



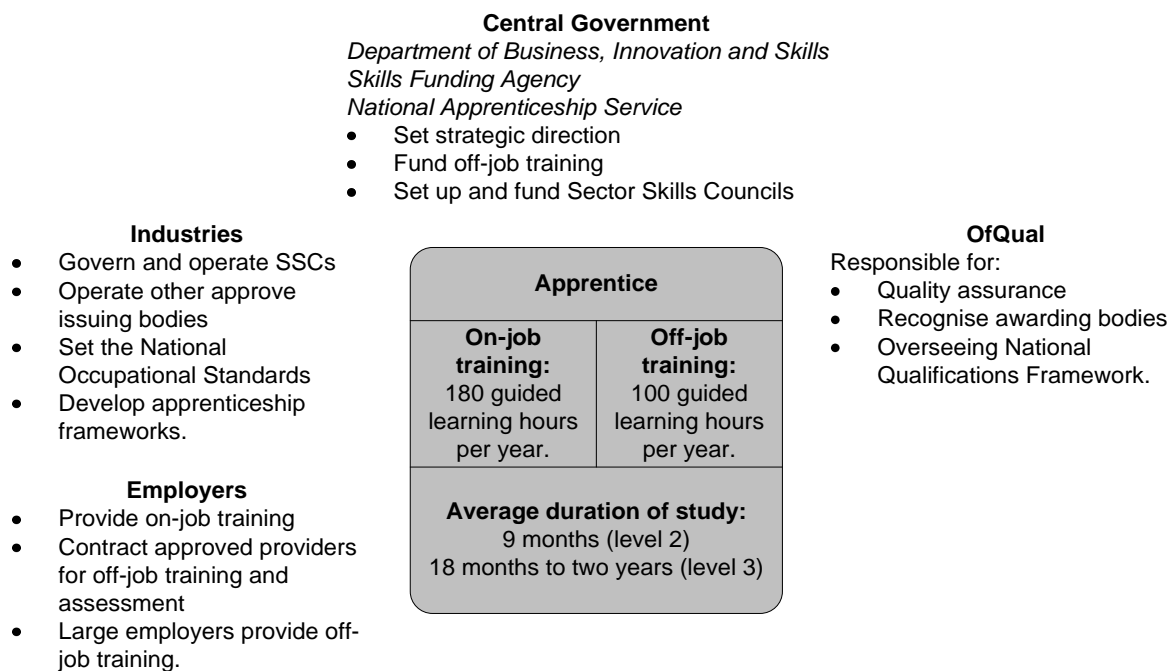
7. Sector Skills Councils (SSCs) are Government-funded, employer-led bodies designed to ensure industry input into training and qualifications. The 25 current SSCs have the role of approving all vocational qualifications offered by Further Education Colleges.
8. Alison Wolf, who recently reviewed vocational education for the British Government believes that the 25 SSCs have an impossible task in a country the size of the UK. A weakness of the SSC model identified by Wolf is that they conceive their role as one of meeting the needs of current employers, which means that general (and therefore more transferrable) education is often not prioritised.
9. Vocational qualifications, even those delivered by colleges, can be required to incorporate substantial workplace learning elements. Wolf suggests that this has made achieving credible qualifications difficult for young learners, who are too often undertaking qualifications with very little labour market value. She also suggests that SSCs' dual roles as designers and approvers of qualifications has meant they are more focussed on regulation of vocational delivery than meeting needs of learners and employers.
10. Funding for provider-based vocational education depends on priorities and the track record of providers. There is a complex funding formula that takes into account various elements of costs (e.g. number of students, type of courses, location, social deprivation and prior student achievement). This formula is criticised by Wolf as being overly complex compared to other jurisdictions, and incentivises placing students on programmes that are unlikely to produce good outcomes.²⁵
11. The Young People's Learning Agency provides funding to education providers for learners up to 19 years of age, including working with the National Apprenticeship Service on apprenticeships for 16-19 year olds. It also has a role in some direct financial support (e.g. grants and free childcare) for young learners, who would find it difficult to remain in education without it.

²⁵ p58-59, Wolf (2011).

Apprenticeships

12. Apprenticeships in the UK are based on apprenticeship frameworks, which are designed and approved by SSCs. Frameworks are made up of one or more qualifications, which in combination lead to an apprenticeship. The SSCs are responsible for 85 apprenticeship frameworks in England, covering 190 occupations. SSCs develop apprenticeship frameworks separately in the different countries of the UK, according to the requirements of each country's government. The key roles in the English apprenticeship system are set out in figure 1 below.

Figure 2: key roles in the English apprenticeship system



13. Providers receive Government funding from the National Apprenticeship Service for off-job training, although large employers with more than 5,000 employees can receive direct funding for training. Employers must invest in the costs of on-job training themselves. As in New Zealand, England has a minimum apprenticeship wage set by statute.

14. England has apprenticeship schemes at levels 2 and 3 (which are GCSE and A-level equivalents, approximately equivalent to levels 2 and 3 in New Zealand). The level 3 apprenticeship is regarded as an advanced apprenticeship and is the more prestigious of the two.

15. Government funding for apprenticeships varies according to the make-up of the apprenticeship and the age of the apprentice.²⁶ The number of apprentices grew considerably during the 2000s, but growth was in older apprentices and level 2 apprenticeships. Wolf expressed concern that apprenticeships for young people were

²⁶ Training costs are 100% funded for 16 to 18 year olds, while apprentices that are 19 and over are 50% funded. Funding rates are defined for each learning aim", or component qualification that makes up the apprenticeship framework. Each learning aim is given a value according to its size. The funding rate also includes an explicit contribution to the overheads of the off-job training provider and additional learning support for learners with literacy or special education needs. Source: pp58-59, Wolf (2011).

not expanding sufficiently in the context of high youth unemployment, compared to those for existing employees and people over the age of 25.²⁷

16. In addition, progress from apprenticeships at level 2 to level 3 is between 30% and 40%, and level 2 apprenticeships are not suitable for educational advancement other than to level 3 apprenticeships. Level 2 apprenticeships also appear shorter in duration on average than level 3 apprenticeships.²⁸
17. Despite the wide range of apprenticeships in England, the system is not strongly utilised by employers. This may be because of the high level of recognition of higher education options, and a low level of information about options for apprenticeships among the English public.
18. However, apprenticeship training was identified in the recent Wolf report as the part of the English vocational education system with the best connections with employer needs²⁹. There has been a focus on increasing apprenticeship numbers in England over the last five to 10 years, to address low participation rates that date from the early 1980s.
19. The quality of new entrant apprentices is a function of Higher Education participation, which diverts many well-qualified students into alternative options. This means that apprentices have lower prior attainment at school than many countries. This makes apprentices a riskier proposition for employers³⁰.

Qualifications development and quality assurance

20. National Vocational Qualifications, which are broadly equivalent to New Zealand's national qualifications, are based on National Occupational Standards set by SSCs. The qualifications are broadly competency based, and are achieved through training and assessment.
21. Quality assurance and qualification approval in England are administered by OfQual (Office of the Qualifications and Examinations Regulator). In the case of apprenticeships, SSCs must satisfy the relevant awarding body that a proposed qualification is the appropriate level of difficulty to be included in the apprenticeship framework. There are 120 registered awarding bodies although not all of them are responsible for National Vocational Qualifications³¹.
22. Awarding bodies are regulated by OfQual via recognition requirements. Qualifications that are approved by awarding bodies are eligible to be put on the National Qualifications Framework.
23. Quality assurance for training is determined by the relevant issuing authority. Generally this is the SSCs, but more recently some other industry skills organisations have been invited to issue apprenticeship frameworks. The ways in which quality assurance is undertaken is a matter for the framework documentation for each apprenticeship, which

²⁷ Wolf, p.165.

²⁸ Steedman, Hilary (2010), London School of Economics and Political Science, The State of Apprenticeships 2010, p.16.

²⁹ See, for example, Wolf, pp34-35.

³⁰ Steedman, 2010, p16.

³¹ Examples of the 120 awarding bodies include the Chartered Institute of Building, the Glass Qualifications Authority, the Institute of Export, "Kaplan Professional Awards", McDonalds and Regional Open College Networks

is quality assured by an independent reviewer nominated by the framework developer. Quality assurance for theory components in apprenticeships must be undertaken by an independent party.

24. Firms often recruit trainers for their apprentices, and providers undertake on-job assessments of apprentices. Providers generally seek to engage employers in this process so that robust evidence is collected on time.

England - strengths and weaknesses

25. The English vocational education and training system was recently heavily criticised by Professor Alison Wolf in a report commissioned by the British Government. Wolf found that large parts of the vocational system, especially as they pertain to learners at some risk of not achieving a successful transition into the labour market, failed to achieve outcomes for students.
26. In addition, the administration of the English system is very complex and difficult to understand. This is partly due to the repeated reforms that the British Government has undertaken over 15 years, and partly due to devolution of responsibilities, both to the Governments of Scotland, Wales and Northern Ireland, and also to a large group of local bodies who have partial responsibility for the education of young people.
27. The UK's system is relatively flexible, resembling New Zealand's in that licensed industry bodies (SSCs) develop frameworks for a wide range of industries and occupations. These frameworks have some set elements and entry standards, but are not as prescribed as, for example, the Irish model. The system is therefore not as easy to understand, and is less comprehensive than Ireland's.
28. The SSCs ensure that apprenticeship frameworks address the needs of employers, and are able to be adjusted relatively easily to meet changing needs. England's apprenticeship system appears to have good completion rates.
29. Wolf considers that the English apprenticeship system, while having good connections to employer needs compared with the other parts of the vocational education and training system, needs to have more of a focus on general skills for young people. SSCs see their role as focusing on the needs of current employers rather than the development of industries as a whole. Wolf notes that high-quality apprenticeships offered by Rolls Royce and British Telecom are in great demand among apprentices, and feature a strong base of general skills.
30. Although SSC-developed frameworks combined with on-job training appear to result in good completion rates, Wolf raises questions about how well connected to industry needs college-based vocational education is.

Appendix 4: Scotland

Country context

1. Scotland has an estimated population of 5.2 million and a GDP per capita slightly lower than the UK average.³² Scotland's economy has transitioned in recent decades from one based on heavy industry to a service-based economy, particularly banking and financial services and tourism. North Sea oil extraction and manufacturing are also key industries for the Scottish economy. Scotland's economy is closely linked to the economy of the wider United Kingdom, and to Europe.

Overview of vocational education

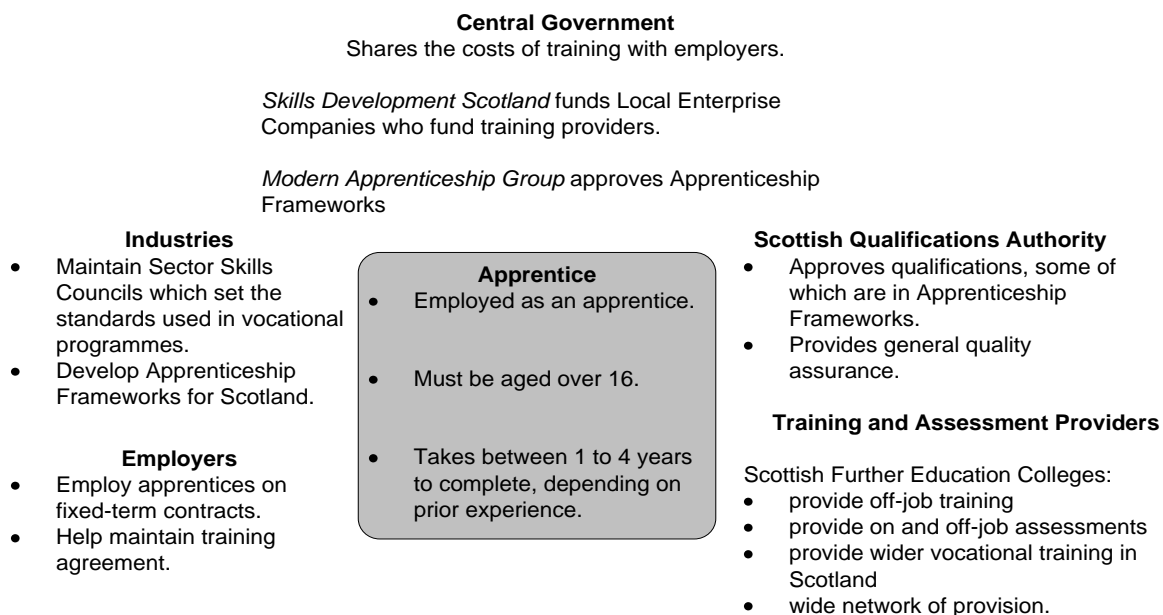
2. Scotland features three major types of post-secondary education: higher education, further education, and training. Training and further education overlap. Training includes a number of pathway programmes into employment, including Modern Apprenticeships (the Scottish apprenticeship training system). Vocational programmes, available through apprenticeships and through Further Education Colleges, are well-defined and include theoretical and practical work.
3. Further education in Scotland is delivered with wide coverage by 43 Further Education Colleges, which construct programmes to suit the needs of specific industries or local employers. Employers are represented on College boards of management. These colleges are similar in principle to the English Further Education Colleges, but appear to have a more specified role of working with employers in order to meet skill needs in the economy.
4. In addition, there is a diverse network of private and voluntary training providers that help to cover remote areas.

Modern Apprenticeships

5. Modern Apprenticeships are an important and credible part of the vocational education system in Scotland. Historically they are based on the English system, but Scottish apprenticeships have not been reformed in line with the reforms of the English system in the past ten years. In 2010, there were 36,156 Modern Apprentices, compared with 347,336 students in Further Education Colleges in 2009/10.
6. The key roles in the Scottish Modern Apprenticeship system are set out in figure 1 overleaf.

³² Office of National Statistics (UK), 2009: Regional, sub-regional and local gross value added 2009 statistics.gov.uk

Figure 1: Key roles in the Scottish Modern Apprenticeship system



7. Modern Apprenticeships are free to those in employment 16 years and over, with the costs of training are shared between employers and the Scottish Government (for off-job training). Most apprentices are 16-24 years old, although age restrictions on the funding of Modern Apprenticeships were removed in response to the recession³³. Modern Apprenticeships use the apprenticeship frameworks developed by the UK SSC network.
8. Local Enterprise Companies, which are public sector organisations (there are 10 covering the Highlands and one other with 12 branch offices that covers the rest of Scotland), provide funding support for training providers for apprenticeship training and assessment, or firms if firms do the training.
9. Each apprentice has a personalised training agreement, which is maintained by the employer and the Local Enterprise Company. Training providers in turn are overseen by Skills Development Scotland.
10. As in New Zealand, apprentices must be employed. However, unlike in New Zealand (where an industry training agreement can be part of a permanent employment agreement), Scottish employers hire an apprentice on a fixed-term contract that lasts until the end of the apprenticeship. There is little information about what affect this has, although such arrangements should focus both parties on making progress through an apprenticeship. Apprentices may then take up permanent employment at the business where they trained (if they are offered a job there), or move to another workplace.
11. Apprenticeships consist of a mixture of workplace and College delivery. There is a focus on recruiting apprentices capable of achieving the more advanced level 3 qualification, as covered by the SSC framework apprenticeships, although there are no formal entry-

³³ Previously a restriction on public funding applied to all apprenticeships over the age of 20. This was lifted for those in priority industries in the Scottish Government's Economic Strategy, and at Small and Medium Enterprises.

requirements. Skills Development Scotland offers services to employers and prospective employees to assist with recruitment and to promote a base level of skills³⁴.

Qualifications development and quality assurance

12. Scotland has a unified system of post-16 National Qualifications for schools, Further Education Colleges and training centres. Scottish Vocational Qualifications are based on National Occupational Standards, which are set by the wider UK SSC industry-led network.
13. Scottish qualifications incorporate five key skill areas: working with others; problem solving; communication; information technology; and numeracy.
14. The Scottish Qualifications Authority (SQA) works in partnership with different business sectors and educational practitioners in devising, developing and reviewing qualifications. The SQA is a partner in the Scottish Credit and Qualification Framework, which brings together all the mainstream Scottish qualifications from access to degree-level, and covers schools, further education, higher education and workplace learning.

Scotland - strengths and weaknesses

15. Scotland has a strong apprenticeship culture and its apprenticeship system has considerable credibility among employers and young people in Scotland. It has a reasonably flexible structure provided minimum generic content requirements are met, which is typical of systems where the frameworks are designed by industries themselves.
16. A wide range of industries participate, and participation rates are significantly higher than in England. There is a focus on quality in apprentice recruitment, induction and training, and on outputs and quality in contracts. This appears to have resulted in improved completion rates in recent years. There is a comprehensive network of vocational education colleges and private provision in addition to apprenticeships.
17. Although Modern Apprenticeships have good participation and a good reputation, their focus on quality at the initial stages may introduce complexity from employers' point of view. Employers, during a 2009 apprenticeship summit, expressed a view that this issue may make it harder than necessary for small businesses to participate. Employers at the same apprenticeship summit also felt that the system was not flexible enough to respond to the demands of the recession, although this is a feature of apprenticeships in general, as retaining such jobs is likely to require subsidisation of employment.³⁵
18. Many Scottish apprenticeships have significant off-job involvement, which makes apprenticeships places moderately more expensive than New Zealand Modern Apprenticeships, and significantly more expensive than general industry training in New Zealand.

³⁴ For example, via Skills Development Scotland's "Get Ready for Work" programme, which is aimed at young people aged 16 to 19 who need a little help in preparing to enter the world of work.

³⁵ The Scottish Government's Apprenticeship Summit Report
<http://www.scotland.gov.uk/Publications/2009/06/08142017/1>

Appendix 5: Republic of Ireland

Country context

19. Ireland has GDP per capita of US\$39,800.³⁶ Ireland has a labour force of 2.15 million, and its key economic sectors are high technology and services. Ireland has relatively high labour participation in the primary sector compared to the UK (although it is lower than New Zealand). Ireland is a member of the European Union, so it has a very large trading market available to it.

Overview of the vocational education system

20. Ireland's system of post-secondary education separates higher tertiary education from further (vocational) education. Apprenticeships are part of the Irish vocational education system, although in practice the apprenticeship system and other vocational education in Ireland do not operate as an integrated system. Off-job training is the main area where apprenticeships and the wider vocational education system overlap, due to the phases of off-job training that take place in Ireland's college system.
21. Apprenticeships and second-chance learning are currently administered by the national education and training authority Foras Áiseanna Saothair (FÁS), which is equivalent to a New Zealand Crown entity. FÁS administers apprenticeships by defining the apprenticeship trades, approving employers, approving the apprenticeship curriculum developed with industry input and arranging and funding training. In addition to its administrative and funding roles, FÁS operates training centres that provide approximately a third of apprentice training and training for job-seekers. FAS also houses a National Skills Database, which collates and publishes information about the supply and demand for skills in Ireland.
22. The remaining training is undertaken by for-profit providers and Colleges of Further Education.
23. Vocational Education Committees (VECs) are local statutory bodies which fund colleges, second-chance learning and other adult education. They also administer post-school leaving certificate courses and community education (as well as some secondary education).
24. Post-leaving certificate courses are broadly trades-level qualifications including for occupations that do not offer apprenticeships, such as tourism, multimedia production, culinary/catering and textiles. Higher-level vocational education is delivered by technical institutions and is considered to be part of the higher education system, rather than the vocational education system.
25. All third level (tertiary or higher) and further education systems are overseen by the Department of Education and Skills.

New further education and training authority

26. In July 2011, the Irish Government announced that FAS will be disbanded and a new further education and training authority, Seirbhísí Oideachais Leanúnaigh agus Scileanna

³⁶ Source:<http://stats.oecd.org/Index.aspx?DataSetCode=DECOMP> (accessed 7 September 2011)

(SOLAS) established³⁷. SOLAS is expected to co-ordinate and fund the wide range of training and further education programmes in Ireland, and set skills strategy for the country.. The focus of the changes is on improving the quality and relevance of vocational education, including a shift away from skills provision mainly for traditional occupations like construction, and focusing instead on training and education programmes for occupations in growth areas: the services, ICT, medical devices, food and biopharmaceutical sectors. SOLAS also has a mandate to emphasis generic and transferrable skills, including digital literacy .

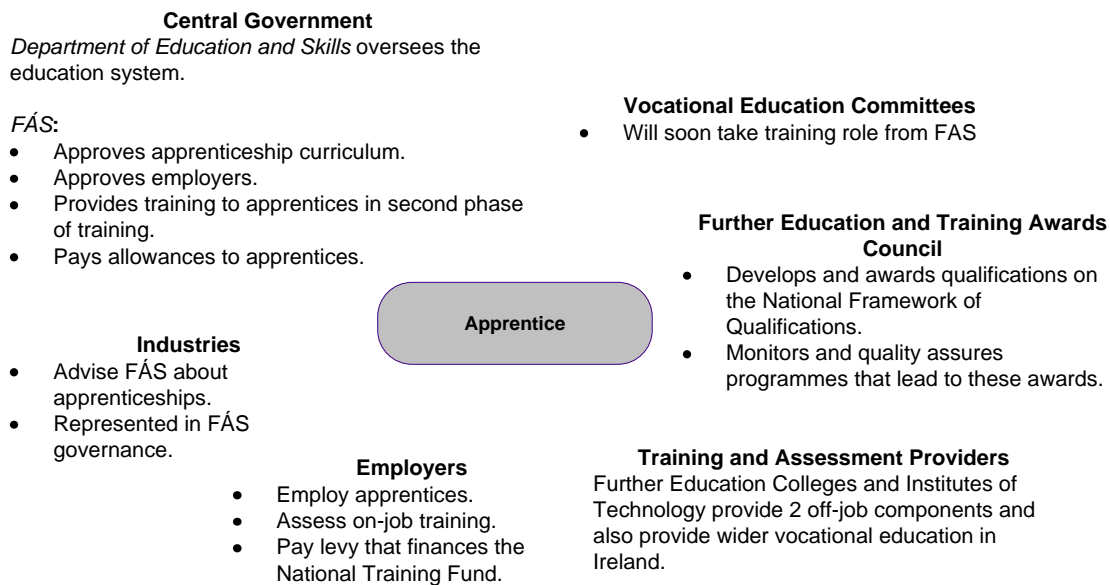
27. FÁS's role in purchasing and providing training services will be transferred to the 33 Vocational Education Committees, and SOLAS will perform FAS administrative and oversight role. A possible implication of these changes could be that the Irish apprenticeship system will more closely resemble those of Scotland and England over time.

Apprenticeships

28. In 2009, there were 23,000 apprentices in Ireland, compared to 154,000 full-time vocational students in institutions. However, the number of new apprentices in Ireland has declined significantly since 2008 due to the economic downturn.

29. The key roles in the Irish apprenticeships system are set out in figure 1 below:

Figure 1: Key roles in the Irish Apprenticeship system

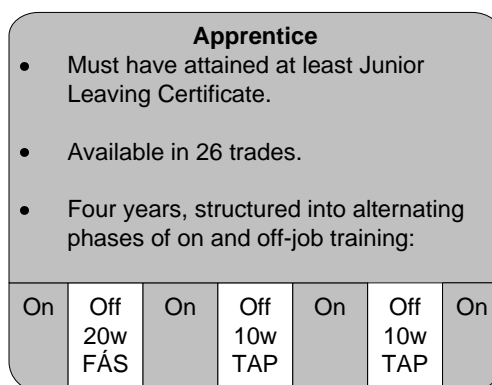


30. Apprenticeships are structured, well-defined, and standards-based (although an element of time-served remains in the system). The stages of the apprenticeship are illustrated in the figure overleaf. There is no publicly available data on the age of apprentices, however it appears that most apprentices are (and are expected to be) young people. This focus seems to be the result of tradition rather than design.

³⁷ See

<http://www.education.ie/home/home.jsp?maincat=&pcategory=10861&ecategory=10876§ionpage=12251&language=EN&link=link001&page=1&doc=54506>

Figure 2: structure of apprenticeship training in Ireland



Note: TAP = training and assessment providers.

31. To become an apprentice, a candidate must have passed 5 or more subjects at the end of junior high school (out of 9-12 subjects usually studied). Alternatively, prospective apprentices can complete a pre-apprenticeship course at a college of further education. In practice apprentices have often completed a senior high school qualification prior to their apprenticeship.
32. Apprenticeships are currently available for 26 trades in five industry sectors in which apprenticeships are currently available, this is a narrower range than in the UK or New Zealand and remains concentrated in traditional trades occupations.³⁸
33. Apprentice wages are only paid by employers during the on-job phases, and apprentices qualify for an allowance while they attend their off-job phases. The off-job training is funded by FAS while employers are responsible for completing the on-job requirements, in which a set of required activities must be covered.
34. Apprentices have three attempts to reach any given skill standard, after which the apprenticeship is terminated if they do not succeed.
35. Within the prescribed parameters of apprenticeships, the system is driven by employer demand. The regulation of apprenticeships (in terms of level, prescribed length, and mixture of on and off-job training) is designed to ensure training is robust and meets the long-term skill and qualification needs of the core apprenticeship industries.
36. Apprenticeships are funded through the National Training Fund, which is financed by a levy on employers (calculated as a percentage of payroll). The National Training Fund also funds pre-employment training for job-seekers and information on skill needs.³⁹
37. The Irish apprenticeships model is highly prescribed compared to those of New Zealand and the UK in terms of its length, structure, and the industries and employers that can

³⁸ The five industry sectors are: Construction, Electrical, Motor Vehicle, Engineering and Printing. The crafts that are covered by the apprenticeship system are: Agricultural Mechanics; Aircraft Mechanics; Brick and Stonelaying; Cabinetmaking; Carpentry and Joinery; Construction Plant Fitting; Electrical; Electrical Instrumentation; Electronic Security Systems; Farriery; Fitting; Floor and Wall Tiling; Heavy Vehicle Mechanics; Industrial insulation; Instrumentation; Metal Fabrication; Motor Mechanics; Painting and Decorating; Plastering; Plumbing; Print Media; Refrigeration and Air Conditioning; Sheet Metalworking; Toolmaking; Vehicle Body Repairs; Wood Machining.

participate. Investment by central Government (via the National Training Fund) is significantly higher than in New Zealand. This results in training that is reported to be of high quality.

38. Irish apprentices are recognised as skilled craftspeople across the European Union.⁴⁰ However, the OECD notes that the model results in comparatively low levels of workplace based training in Irish vocational qualifications.

Qualifications development and quality assurance

39. Apprenticeship qualifications in Ireland (usually a National Craft Certificate) are based on standards written by industry subject matter experts who have been nominated by employers, trades unions, FÁS and the Department of Education and Skills. Other vocational qualifications are developed by providers using guidelines issued by the Further Education and Training Awards Council (FETAC). FETAC itself sets some skill standards for lower level qualifications.
40. Apprenticeship qualifications include skills requirements in three general areas: core skills; specialist skills; and personal skills. All qualifications are lodged on a 10-level national framework of qualifications.

Ireland – strengths and weaknesses

41. Ireland's system is more prescriptive than many modern systems, with significant Government involvement in the administration, purchase and even delivery of vocational education and apprenticeships. It has the advantage of a well-understood and defined structure and administrative system, which provides for substantive training that is reported to be of high quality, and which meets requirements for recognition as skilled craftspeople across EU states.
42. This structure is likely to be possible in part because apprenticeships are available in only a small number of industries and occupations that have long-standing apprenticeship traditions. The focus this provides leads to good completion rates (67%)⁴¹ under normal economic conditions, and the provision of an appropriate range of skills rather than just-in-time, just-enough skills. Other industries and occupations can take advantage of a strong network of further and higher education colleges and other providers.
43. However, by being relatively prescriptive and focussed, the system features comparatively low participation among employers and comparatively low levels of workplace-based training in VET overall. Employers do not appear very interested in getting involved in FÁS at local and regional levels despite the opportunity to do so.
44. Unlike more flexible systems such as New Zealand's in which industry has more of a role in defining training arrangements, Ireland's system does not as easily self-adjust to ensure relevance over time. This is because industry input into apprenticeships is indirect and/or ad-hoc. The OECD notes that the narrow range of apprenticeship industries results in insufficient formal workplace training in Ireland⁴².

⁴⁰ Steedman 2010, p28.

⁴¹ Steedman 2010, p28.

⁴² This is the view of Kis (2010) Learning for Jobs: OECD Reviews of Vocational Education and Training: Ireland

45. The focus on a narrow range of industries also means that participation and achievement statistics are vulnerable to significant changes when economic conditions change. For example, the recent recession resulted in many redundancies in the Irish construction industry, which had a significant downstream effect on apprenticeship numbers because construction is the largest apprenticeship industry in Ireland.
46. It is difficult to measure how the costs of Irish apprenticeships compare with industry training in New Zealand. The National Training Fund is sourced via a levy on employers, which pays training costs and an allowance to apprentices while they attend off-job training. The living allowance means that the overall cost per apprentice to the National Training Fund is much higher than the overall cost per trainee to New Zealand's industry training fund because employers in New Zealand pay all the wages for trainees and apprentices.

Appendix 6: France

Country context

47. France has a population of 65 million, and is the world's fifth-largest economy. Its GDP per capita is similar to that of Germany and the UK, at US\$33,800.⁴³ France has substantial agricultural resources, a large industrial base, and a highly skilled work force. The youth unemployment rate is similar to that in New Zealand (approximately 25% in 2009).⁴⁴
48. The economy is highly internationalised – France is both a major investor in other countries and a recipient of significant direct foreign investment. Key sectors of the French economy include agriculture, construction, tourism, food industries, pharmaceutical products and financial services. In recent years, employment has been shifting steadily away from agriculture and manufacturing to services.
49. French vocational training is clearly demarcated between initial vocational training (young people in full-time education or apprenticeships), and continuing vocational training.

Initial Vocational Education

50. Education is free in France from the age of two, and is mandatory between ages six and 16.
51. Initial vocational education is an integrated part of the education system. At the end of junior high-school (at about age 15), students pursue one of three educational streams: general, technical or vocational senior high schools. From 16 years, students also have the option of combining part-time vocational education with employment, through an apprenticeship. Students can earn the same level diplomas through all four paths.
52. More than 90% of students stay in full-time education or in an apprenticeship after the age of 16 years. At 18, just under 80% of young people are still in full-time education or apprenticeship.⁴⁵

Full-time vocational education

53. Vocational senior high schools offer a 3 year vocational diploma in 48 specialised fields. This allows direct access to employment, as well as to tertiary education. Vocational senior high schools also offer students intermediate qualifications that enable direct entry to the workforce in some sectors (eg. construction, hospitality, custodial services, electronics, secretarial work and accounting).
54. One-third of the curriculum at vocational senior high schools in the first two years is made up of core subjects (literature, science and arts) common to all senior high schools.
55. In 2008, 26% of senior high school students were enrolled in vocational senior high schools.⁴⁶

⁴³ Source: OECD StatExtracts: <http://stats.oecd.org/Index.aspx?DataSetCode=DECOMP>.

⁴⁴ Source: OECD Employment Outlook 2009: <http://www.oecd.org/dataoecd/61/52/43707170.pdf> (accessed 26 August 2011).

⁴⁵ Steedman, Hilary, 'State of the Apprenticeship in 2010, International Comparisons', London School of Economics (2010).

Apprenticeships

56. Apprenticeships allow students to gain the same qualifications as at vocational senior high schools, but on a part-time basis while employed. Participation is generally restricted to 16 – 25 year olds, and the average age of apprentices in 2009 was just under 19. In 2008 the top five occupations for apprentices were construction, process industries, engineering, social services, and business services. In 2008 there were 434,000 apprentices (1.7% of all employed people).⁴⁷
57. Apprentices train in the workplace as well as undertaking off-job courses at apprentice training centres. There are both public and private apprentice training centres. Off-job training is a minimum of 25% of work time (400 hours per year).
58. Off-job training is purchased by government. Employers are closely involved in the design and delivery of off-job training through professional associations. Central and regional government oversee course content, qualifications, and the administration and finances of apprentice training centres.
59. In 2008, the completion (pass) rate for final examinations was very similar for apprentices and students in full-time education (79%). In 2007, for apprentices who had completed their off-job training eight months before, 70% were employed and 24.2% were job seekers.⁴⁸
60. The state sets a minimum apprentice wage level (between 25% and 78% of the minimum wage depending on age). Businesses which employ a minimum number of apprentices are exempt from the apprenticeship levy, and are also eligible for regional government grants of up to NZ\$10,000 per apprentice, depending on local VET priorities. Despite these measures, employer demand for apprentices is tracking below supply of young people wanting to take this route.⁴⁹

Continuing Vocational Education and Training

61. Continuing vocational education and training (CVET) is for people already part of the workforce or embarking on working life. It is available for job seekers as well as those already in the work force.
62. In 2004, France spent €24 billion (1.46% of GDP) on CVET, of which 51% came from government (central and regional), 40% from business, and the remainder from other organisations and from individuals funding their own training.⁵⁰
63. Central government only allocates money to training programs in particular sectors of the economy, and for particular groups (jobseekers, people over 50, disabled people, immigrants, prisoners, and people with low literacy).
64. The 26 regional governments are each responsible for:
 - a. delivering training for jobseekers, and direct financial aid to individuals

⁴⁶ Loc. cit.

⁴⁷ Loc. cit.

⁴⁸ 'France: VET in Europe Country Report' CEDEFOP (2009).

⁴⁹ Steedman (2010).

⁵⁰ 'Vocational Education and Training in France: Short Description' CEDEFOP (2008).

- b. developing 5-year VET strategies based on local economic and industry priorities, following a broad, formal consultation process with industry and unions.
65. Employers fund most CVET undertaken by their employees. All private and government employers are required to pay a contribution towards employee CVET. Employers can choose to pay their contribution to one of several government-approved agencies. These agencies then account to government on compliance with payments, and reimburse organisations for their expenditure on training.
 66. In the private sector, the contribution rates are fixed by law (a percentage of payroll dependent on size of business), although some sectors jointly agree to make higher contributions.
 67. Employees can undertake continuing vocational education either using paid training leave, or as part of a training plan developed by the employer for their business or organisation.
 68. Since 2004, all employees have a legal right to paid training leave for continuing vocational training, up to a maximum of one year's leave, or 1,200 hours if the study is not full-time.⁵¹ Training undertaken by this path is off-job and generally leads to formal qualifications. In 2007, employees took an average of 754 hours of paid study leave.
 69. Training undertaken as part of a business-based training plan does not usually lead to formal qualifications. This training is purchased by the organisation and can be on or off-job. In 2007, employees averaged around 40 hours of training a year as part of business-based plans, usually in working hours.
 70. Overall participation rates are high: in 2005, 46% of employees were participating in CVET courses.⁵² France has also performed very highly in studies comparing participation, intensity and expenditure on employer-provided training across Europe.⁵³

Obtaining vocational qualifications

71. National vocational qualifications are managed and issued by central government. These can be obtained by:
 - a. sitting an external exam (one-off written, oral and practical tests) at the end of schooling, apprenticeship or part-time study, or
 - b. by recognition of existing skills and knowledge (based on evaluation of a candidate's portfolio and interview if required). This method is open to anyone who has been in paid or unpaid work for 3 years or more, and potentially allows the candidate to obtain any qualification from vocational to PhD level, based on their work experience.
72. Certain groups can receive government subsidies for the fees involved (job seekers, refugees, non-EU citizens, people with disabilities).

⁵¹ Self-employed can also access this entitlement if they make a lump-sum contribution.

⁵² CEDEFOP <http://www.cedefop.europa.eu/EN/statistics-and-indicators/continuing-vocational-training-and-adult-learning.aspx> (accessed 31 August 2011).

⁵³ 'Employer Provided vocational training in Europe' CEDEFOP (2010).

73. The qualifications are perceived by business to have the same worth whether they are acquired by study or by a validation of professional experience. Traditionally however, the route to work in certain sectors such as arts and crafts, construction and catering has favoured apprenticeships.
74. There are also 400 nationally recognised competency-based vocational qualifications, called 'Certificats de Qualification Professionnelle' (CQP). These are developed and managed by industry organisations and can be obtained by part-time study or by skills recognition.
75. Other than senior high schools, the largest provider of VET (including IVET and CVET) in France is the national network of Chambers of Commerce and Industry, which plays a role in company based training, continuing professional development courses and also runs many off-job training centres for apprentices.
76. In compliance with a 2006 European Union directive, all VET providers are exempt from charging GST. This provides a tax incentive of 15% for employers to purchase training.

Qualifications development and quality assurance

77. The content and standards of vocational qualifications (other than CQP) are set by central government, using formal consultation processes with industry, employer organisations and unions.
78. Government oversight, monitoring and quality assurance of VET is done at two levels.
- Implementation of regional training plans is monitored by Regional government, by reference to quality charters co-signed by industry groups. Regional governments are not able to evaluate the impact of their policies, but are currently working to gather better data on performance, spending and forecasting.
 - The National Lifelong Vocational Learning Council evaluates regional apprenticeship and VET policies, and has a mandate to oversee contributions and spending on CVET and apprenticeships.⁵⁴ It was established in 2005 and has only recently begun to produce cross-regional analyses.
 - All individuals or businesses that provide training services for payment are required to declare their activities, and submit an annual report of their performance and accounts. There is no single reporting body.
79. Many training private and public providers have obtained internationally recognised certificates (ISO 9001) for their quality management systems. A number of other labels are also used to certify the quality of organisations and individual trainers.⁵⁵ France has not yet implemented the voluntary European Quality Assurance Reference Framework agreed by European VET Ministers in 2009.

⁵⁴ The Council is a government entity established by legislation. Its governance body includes representatives from Central and Regional Governments, unions and employer organisations.

⁵⁵ These include quality labels issued by the OPQF (a qualifications body created by peak industry body for vocational training organisations), and AFNOR, the organisation tasked with standardising French and European standards more generally.

80. Central and regional government fund a range of business initiatives, consultative forums and non-government organisations to forecast and develop strategies regarding future vocational training needs.

Support for specific groups

81. At the European Union level, the key VET policy concerns are youth unemployment, poor attainment levels at senior high school, and low levels of adult qualification and training, especially for older and low-qualified workers.

82. By contrast, the main VET policy issues in France are youth unemployment, the ageing workforce, training for jobseekers and the high rate of illiteracy. Accordingly, initiatives for priority groups in France are as follows.

- Government-funded apprenticeships are usually limited to 16-25 year olds.
- Government incentives for employers to hire people under 25 and jobseekers using work-study contracts. These contracts are for a fixed-term of up to two years' employment, and require 15%-25% of the term of employment to be devoted to obtaining a vocational qualification. The advantage for employers is that their business is exempt from social security contributions and can pay young people on these contracts below minimum wage.
- Special measures for older workers have been in place since 2004, in recognition of France's ageing population. Employees over 45 years old or who have 20 years of work experience are automatically eligible for a skills audit (with a view to obtaining a qualification by equivalency) once they have been employed by their company for more than a year.
- There are also government-funded initiatives to encourage prisoners and migrants to obtain vocational qualifications and address illiteracy.

France – strengths and weaknesses

83. Key strengths of the French system are:

- the fact that the same national qualifications can be obtained through formal study, apprenticeships, CVET and skills equivalency. This creates very broad recognition of qualifications, leads to higher social status for the apprenticeship route, and allows more people to obtain core qualifications and access university education.
- the way in which government contributions to VET are focussed on national and regional priority groups and sectors, while business contributions are funnelled to firm- and employee-specific priorities.
- the breadth of the skills-recognition equivalency process in recognising and certifying existing competencies,
- the large amounts of funding available to Government and industry to support participation in CVET, and
- the broad social consensus on the importance of CVET.

84. A key disadvantage of the French system is the cumbersome way in which regional governments determine VET strategy for their region. Regional strategies allow government spending to be oriented towards particular skill-gaps or training for particular groups, however the consultation-based process to determine 5-year VET strategies is widely acknowledged to be both slow and resource intensive. It also means that the system overall may be slower to adapt to changing economic or market conditions.
85. Other disadvantages stem from decentralisation of government responsibilities, and the layering of regional, national and European government functions:
- a. The lack of a single reporting source and oversight body,
 - b. the number and variety of stakeholders and policy imperatives,
 - c. the number of quality assurance agencies (at least 7) which can certify VET programmes and providers.

Appendix 7: Germany

Country context

1. Germany has a population of approximately 83 million and a GDP per capita of US\$37,600.⁵⁶ Germany is an export-driven economy that is relatively poor in natural resources. The most important industries (mechanical engineering, chemistry, vehicles, electrical technology) derive most of their value-add from high quality work. This means that a highly skilled workforce is important for Germany to maintain its standard of living. Germany also has an ageing population, which is highlighted as a pressing problem for the education system.

Why look at Germany's VET system?

2. This paper focuses on the dual system of apprenticeship, which is the largest part of Germany's vocational education system. Apprentices in the dual system spend most of their week working at a training firm and part of their week in a vocational school. The dual system is quite different from the New Zealand system of industry training and therefore provides a useful comparison. Switzerland, Austria and Denmark also operate dual system apprenticeships.
3. The German system has a number of benefits: it is high quality, highly regarded within Germany, has a high level of employer buy-in, and results in positive labour market outcomes for participants. The high level of employer buy-in also means that Germany has low levels of youth unemployment. In 2010, the German youth (15-24 year olds) unemployment rate was 1.3 times the adult (25-54 year olds) unemployment rate – the lowest ratio of any OECD country. In comparison, the New Zealand youth unemployment rate was more than four times the adult unemployment rate.⁵⁷
4. The dual system is less expensive for Government than provider-based tertiary education, as most of the costs are borne by training firms. The dual system covers a large range of occupations that in other countries can only be accessed through tertiary education. This also results in savings for Government.
5. However, the German system is relatively rigid. Students with low or no qualifications have difficulty accessing the dual system, mainly due to a lack of willingness from employers to employ young people with low levels of foundation skills. Transition options for these young people are fragmented and relatively unsuccessful. In addition, students are expected to make career choices relatively early and transitioning to higher education at a later stage is difficult.
6. The industry-led model that New Zealand adopted in 1992 was in part inspired by the German dual system, which has a high level of industry engagement and input. However, the dual system has a long history⁵⁸ and requires compulsory employer associations to make it work. The German economy has a large manufacturing base and

⁵⁶ Source: OECD StatExtracts: <http://stats.oecd.org/Index.aspx?DataSetCode=DECOMP>.

⁵⁷ Source: The Economist, http://www.economist.com/blogs/dailychart/2010/12/youth_unemployment. Figures are for second quarter of 2010.

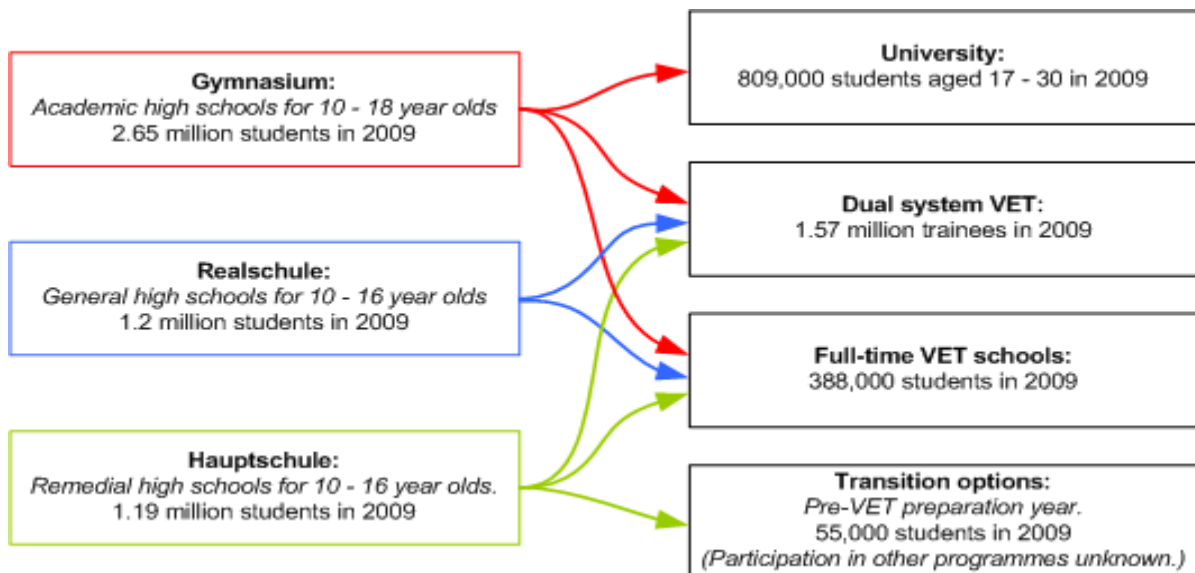
⁵⁸ Germany has had a tradition of craft education since the middle ages. The modern system can trace its origins to 1897 reforms that handed over the power to supervise and administer craft apprenticeships, including the power to control examinations, to trade corporations or guilds.

a higher proportion of large employers than the New Zealand economy. These things mean that exporting the dual system is not straight-forward.

Secondary-tertiary interface – outline of pathways

7. The diagram below illustrates the main pathways from high school to further education and training. Germany has three main high school types: academic high schools that prepare students for university study (Gymnasium); general high schools that provide solid academic skills (Realschule); and high schools that are aimed at students judged not able to cope with the academic programmes in either of the other school types (Hauptschule).
8. Only Gymnasium students can transition straight to university. The dual system and the full-time VET schools are open to students from all types of high school. Transition options are designed to prepare those with no school leaving certificate or poor school results for vocational education.

Figure 1: Main pathways from high school to further education and training



Note: excludes Gesamtschule (comprehensive, combined high schools). There were 434,000 students at Gesamtschule in 2009.

Some of the students at full-time VET schools are taking part in transition courses that do not lead to a vocational qualification. In total, an estimated 609,000 students took part in transition options in 2006.

Source: Numbers of students in the school system, at university, and in full-time VET schools sourced from the Federal Ministry of Education and Research (BMBF). Numbers of trainees in the dual system and in the pre-VET preparation year sourced from the Federal Institute of Vocational Education (BIBB).

Description of the dual system of apprenticeship

9. The dual system is called 'dual' because apprentices split their time between working in a recognised training firm (3-4 days a week) and attending a part-time VET school (approximately 12 hours a week). The central principle of the dual system is complementarity between school and workplace learning: theoretical learning at school facilitates a well-grounded approach to practical problems, while workplace experience provides real world examples and applications.
10. The quality of the system is ensured by a relatively high degree of regulation and oversight from federal and state governments. These checks and balances also ensure

that the short-term needs of employers do not distort broader educational and economic goals.

11. The dual system covers 348 state-recognised occupations⁵⁹. These include many occupations not covered by apprenticeship systems in other jurisdictions (for example optician, laboratory technician, jeweller, banker). Approximately 65% of school leavers opted for the dual system in 2009.⁶⁰ The majority of entrants to the dual system have a school leaving certificate (76% in 2009 - see table below). Very few school leavers with no qualifications are taken on as apprentices.

Table 1: Highest qualification of new entrants to the dual system by training area, 2009

Highest qualification	Total	%	Industry & Trade	Trades	Agriculture	Public service	Free professions	Home economics
No qualifications	19,642	4%	8,637	8,091	1,560	14	245	1,139
Hauptschule Certificate	185,757	33%	85,043	83,557	6,930	621	6,503	2,243
Realschule Certificate	241,316	43%	150,487	54,149	4,860	7,250	24,417	468
University entrance	114,485	20%	88,033	9,803	1,650	5,630	9,734	55
Total	561,200		332,200	155,600	15,000	13,514	40,900	3,904

Note: Students at Gymnasium are also able to gain a Realschule leaving certificate and leave Gymnasium early. Industry & trade includes the banking, insurance, hotel & restaurant, and the transport industries. Free professions are professions that are not covered by the Industrial Code and in general are characterised by a high proportion of self-employed people (eg midwives, photographers). Source: Federal Ministry of Education and Research (www.bmbf.de/daten-portal).

12. The requirements of the dual system apprenticeships are set down in the training orders. The development of the orders is a tripartite process between the federal government, the relevant chamber⁶¹, and the relevant union.
13. The orders define the length of the apprenticeship (between 2 and 3.5 years); the typical capabilities, knowledge and competencies of an occupation; the curriculum; and the examination requirements.⁶²
14. The final assessment of apprentices has three components, the most important of which is the final examination administered by the chamber. This examination, which allows apprentices to gain the national qualification, encompasses both practical components and a pen and paper examination.
15. Students receive a certificate from the part-time VET school based on an evaluation from the teachers on their performance. The training employer also provides a written evaluation of the apprentice's performance.
16. The diagram below illustrates the institutional roles within the dual system. The federal government has a strategic role. Employers, through the chambers, have a well-established role in preparing the curriculum, supervising the provision of workplace

⁵⁹ Source: Federal Institute for Vocational Education (<http://www2.bibb.de/tools/aab/aabberufeliste.php>). The number of recognised training occupations has declined over the last 60 years. In 1950, there were around 900 recognised training occupations. In 1971, there were over 606 training occupations.

⁶⁰ p36, *Germany: VET in Europe – country report*, Cedefop 2010.

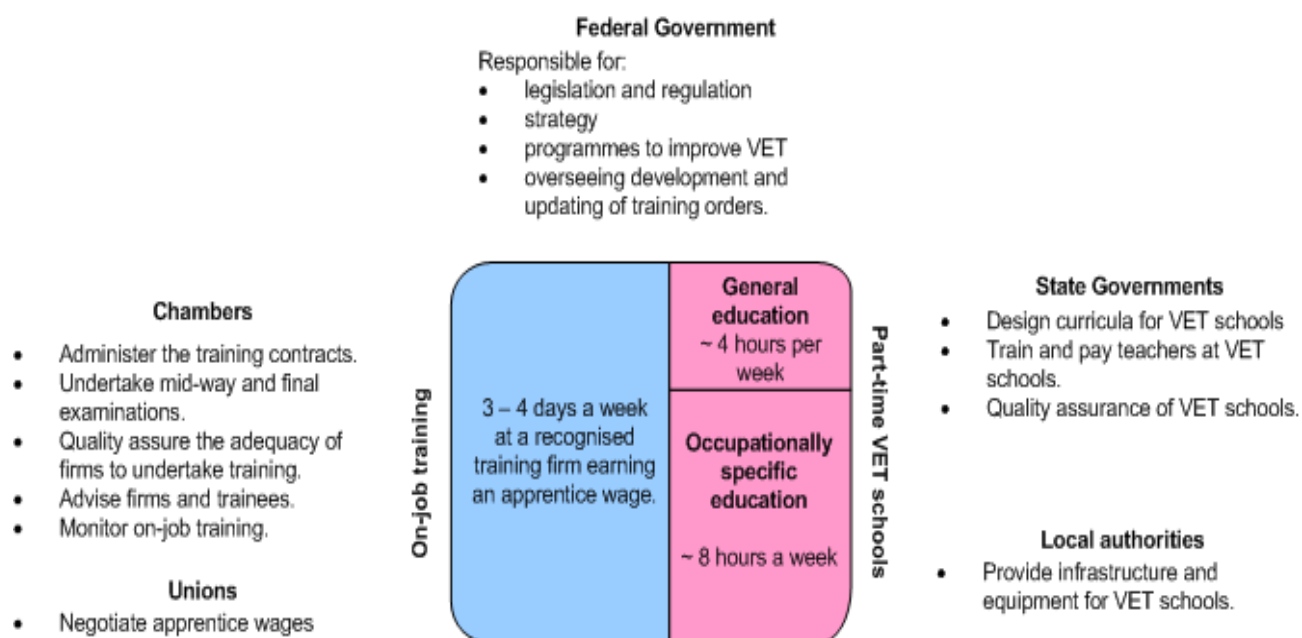
⁶¹ The chambers are compulsory employer associations: all firms must pay membership to their industry chamber.

⁶² Information on the training orders sourced from *Ausbildungsordnungen und wie sie entstehen...*, BIBB, 2007.

training, and devising the assessment regime. This role commits employers to the apprenticeship system and ensures that qualifications have a high level of currency with employers.

17. The chambers have a role in quality assuring workplace training. State governments are responsible for providing oversight of the regional chambers and how they perform their roles in the dual system. In addition, in-company trainers are required by federal regulations to be qualified in the training occupation and also to have knowledge of education theory.
18. State governments are largely responsible for the part-time VET schools, though the costs are shared between state governments and local authorities. The part-time VET schools have two types of teachers: university-trained teachers for general subjects; and teachers with a background in the training occupation for practical education.

Figure 2: Institutional roles within the dual system



19. Most of the cost of the dual system is borne by training firms. In 2007, employers spent EUR 14.7 billion on dual system apprenticeships (net costs including apprentice salaries but after productive gains), while the state governments spent EUR 2.9 billion on VET schools.⁶³ The breadth and relatively high status of the dual system means that Germany has lower tertiary participation than many other developed countries.⁶⁴ The dual system means that government expenditure on tertiary education is lower than it otherwise would be. Federal and state governments may provide financial incentives for firms to take on disadvantaged youth, which is not captured in the government costs referred to above.⁶⁵

⁶³ p11, *Learning for jobs OECD reviews of vocational education and training: Germany*, OECD, September 2010.

⁶⁴ In 2007, tertiary graduation rates of the cohort were 23% in Germany, compared to an OECD average of 39%. p9, *ibid*.

⁶⁵ The federal government provides a bonus of up to EUR 6,000 to companies employing a trainee who has been searching for a training place for one year or more. An internship programme is available for young people who have not found a training place by the end of September, are socially disadvantaged, or have a learning disability.

20. While workplace learning and formal learning through the VET schools should be mutually reinforcing, the OECD review of vocational education in Germany commented that coordination between the part-time VET schools and the training employers needed to be improved. Lack of coordination is most pronounced for small to medium employers.

Lack of flexibility is the key drawback associated with the dual system

21. The dual system is not designed to flexibly accommodate people with lower skill levels. The wider German education system does not allow people to easily transition between education sectors or to credit vocational qualifications towards university study, which is a barrier to social mobility. These are discussed briefly below.

Accommodating learners with no or low qualifications

22. The dual system does not accommodate young people with poor high school results, mainly because employers are reluctant to hire young people with low levels of foundation skills or with language difficulties. This has led to the development of transition options aimed to equip these students with the skills to enter mainstream VET.

23. Over 80% of students who leave compulsory school with no qualifications enter the transition system.⁶⁶ In 2006, an estimated 609,000 students took part in transition options at an estimated cost of EUR 3.7 billion to state governments.⁶⁷

24. The transition system is fragmented, inefficient and costly. The average participant attends 1.3 programmes, and only a third of those who participate subsequently find an apprenticeship place.⁶⁸ Those with no or low qualifications are at much higher risk of unemployment – 26% in 2005 compared to 10% for those with a vocational qualification.

Transitioning between education sectors

25. German students are expected to make career choices at an early stage in their lives and it is relatively difficult to transition to a different career path later on. Students who embark on an apprenticeship and decide later that they would like to study at university generally have to go back to school and gain university entrance, which involves considerable opportunity costs for individuals, particularly given that the standard qualification from a German university is a five-year masters degree.

26. The OECD review team also raised the problem that general academic skills do not appear to be valued in the dual system. This means that graduates, particularly those who enter the dual system with poor literacy and numeracy skills, may not be adequately prepared for university study if they later decide to transition.

27. In 2009, reforms were introduced to ease the restriction on access to university – those who have achieved master craftsman status now have full access to university, and those who have completed an apprenticeship and have three years of work experience can access university in fields relevant to their occupation. The federal government has also started a project to recognise competencies gained in vocational education for accredited

State governments may also offer incentives – for example, Bavaria offers loans at favourable rates to companies employing disadvantaged young people.

⁶⁶ p18, *ibid.*

⁶⁷ p21, *ibid.*

⁶⁸ p20, *ibid.*

bachelor studies in certain domains such as information technology, engineering, economics, and business administration.

28. The federal government is also in the process of developing the German Qualifications Framework (DQR), which is intended to bring about a shift towards more competence-based learning in the medium term and to enable the recognition of skills gained through informal learning situations. The principal aim of the DQR is to improve comparability of German qualifications with other qualifications across the European Union.

Germany – strengths and weaknesses

29. The main weaknesses are covered in the section above. Briefly, the dual system relies on employers offering students apprenticeship places. Employers are less willing to offer apprenticeships to students with low basic skills or no qualifications, which means these students do not have clear pathways to employment. The German education system generally is relatively rigid and this makes it difficult for people to transition to other parts of the system if they later decide to change career.
30. The key strengths of the German system are its breadth of coverage and its high status. The German system has a high level of buy-in from industry even though it is a highly regulated system. The high level of industry engagement ensures that qualifications have good labour market returns. The dual system provides thorough training in an occupation and has a high rate of participation. The apprenticeship system covers a wide range of occupations, which limits the Government's expenditure on tertiary education.

Appendix 8: British Columbia

Country context

1. British Columbia is the western most of Canada's provinces, and has a population of approximately 4.5 million. Canada's national GDP per capita is currently US\$38,891.⁶⁹ In recent years the per capita GDP for British Columbia (BC) has tracked a couple of thousand dollars below the national average.⁷⁰
2. The province's economy is based on resource-extraction, primarily logging but also mining and fishing. It is therefore highly exposed to changes in commodity prices. Tourism, film, hydroelectricity and technology are also important sectors. Employment has been shifting away from the resource sector to construction, retail and service sectors. Small businesses make up 98% of all businesses in the province.
3. The youth unemployment rate in BC was 6.9% in March 2008 but increased sharply due to the global financial crisis⁷¹ and has not reduced significantly since March 2009. In July 2011 it was 13.8%.⁷²
4. Education is mandatory until the age of 16, and free for residents. Initial vocational training can begin in high school, either at a specialised vocational high school, in a vocational trade stream within a normal high school, or as part of a Secondary School Apprenticeship program.
5. In 2006, 79% of young people 15-19 years old were attending high school, trade school or other educational institution. Of these, 35% were also in the labour force.⁷³
6. BC borrowed ideas from New Zealand when it restructured its vocational training system in 2004. However, in BC the number and role of industry training organisations is much more limited and there is much greater control of their activities and spending.

Initial Vocational Education and Training: apprenticeships

7. In 2011, there were over 440,000 enrolments in public post-secondary institutions in the province.
8. Apprenticeship is the predominant model for trades training in BC, and covers around 145 skilled occupations. In 2009/2010, there were about 42,000 registered participants in the BC industry training system, of which approximately 34,000 were apprentices. The remainder were:
 - 3,600 trainees in pre-apprenticeship foundation programmes, which are either classroom instruction or distance learning, and provide grounding in skills required for particular occupations. Foundation programmes are optional, but are popular

⁶⁹ Source:<http://stats.oecd.org/Index.aspx?DataSetCode=DECOMP> (accessed 7 September 2011).

⁷⁰ Economic activity table for British Columbia and Canada 1990-2009 at http://www.bcstats.gov.bc.ca/data/bus_stat/bcea/tab1.asp (accessed 7 September 2011).

⁷¹ 'Labour Force Statistics March 2008' BC Stats (2009).

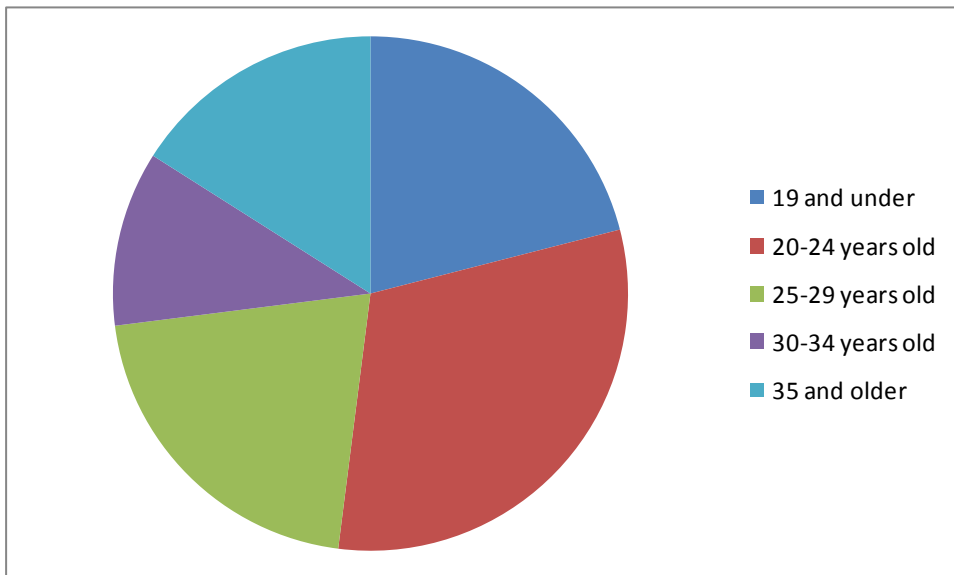
⁷² 'Labour Force Information - July 10 to 16 2011' Statistics Canada (2011).

⁷³ 'Labour market outcomes for young British Columbians – Census 2006' BC Stats (2009).

starting points for people with little or no experience, and can be credited towards an apprenticeship.

- 4,400 “Challengers”, who are approved to undergo assessments of their existing skills, as a basis for obtaining credentials without undergoing a training programme.
9. Most existing trades programmes involve post-secondary school education that combines paid work-based training with off-job technical training in a classroom (off-job training usually accounts for around 15% of the time spent in training).
 10. Successful completion of both components, along with examinations, is required to earn a certificate or “ticket”, and become a certified tradesperson. The length of an apprenticeship can range from one to five years, but most require four years to complete.
 11. In 2008, half of all apprentices were in one of five jobs: automotive mechanic, carpenter, cook, construction worker, electrician and plumber.

Figure 1: 2009/10 - percentage of registered BC apprentices in each age group



12. Completion rates (based on a six-year cohort) were around 43% in 2009/10. The Industry Training Authority believes that a factor contributing to low completion rates is lack of foundation skills such as literacy and numeracy. It has now developed an on-line training tool to assess skill gaps, and recommends remedial training to ensure beginning apprentices have the essential skills they need to complete.
13. Low completion rates are a national problem, to the extent that Federal funds have been allocated to encourage completion of certain apprenticeships. Apprentices in nationally recognised programs are eligible for cash grants of around CAD\$1000 when each level of training is successfully completed. Since 2009 people can also obtain completion grants of CAD \$2000 upon certification in a nationally recognised qualification.
14. Incentives for BC employers to hire apprentices include initial tax credits of CAD \$2000, and further training credits and completion credits. There are additional credits for hiring people with disabilities and Aboriginal people.

15. Census data from 2006 found that apprenticeships are associated with excellent labour market outcomes for young people. In 2006 the unemployment rate for 20-24 year olds who had completed an apprenticeship was much lower than for people of the same age with a university qualification or with high-school attainment only.
16. However, the effect of apprenticeships is not so marked for people aged 25 and over. In this group, unemployment rates in 2006 were similar for everyone who had completed high-school.⁷⁴

The Role of the Industry Training Authority

17. Apprenticeships are a three-way agreement between the employer, the apprentice, and the Industry Training Authority (ITA).
18. The ITA is a Crown agency that was established in 2004. It is funded primarily by the provincial government. The ITA is responsible for leadership within the industry training system, including:
 - a. working with industry to identify current and emerging skills requirements, and to explore training and certification options,
 - b. accrediting training providers to deliver particular types of training, and working with them to coordinate and maximise the efficiency of training,
 - c. purchasing off-job training (about 15% of industry training is delivered by private trainers and 85% is delivered by the public sector),
 - d. overseeing examinations and issuing credentials,
 - e. registering apprentices, employers and apprenticeship agreements, and tracking progress towards completion,
 - f. establishing the standards to which apprentices and tradespersons must perform in order to receive certification. These standards include credentialing, assessment and achievement criteria selected to ensure that BC's apprentices can demonstrate their performance at levels established by national and provincial industry groups.
19. The ITA's largest revenue source is the contribution it receives from the Province of British Columbia. The Government of Canada also provides some funding through the Canada-BC Labour Market Agreement for labour supply initiatives. Examination, assessment and designation fees also support the work of the organisation. The ITA's training budget for 2010/2011 was CAD \$82 million.⁷⁵
20. The Education Quality Assurance designation for post-secondary education is administered by an independent body set up for this purpose by the BC government. There is also a nationally recognised quality 'Red Seal' designation for around 50 trades qualifications.

⁷⁴ 'Labour market outcomes for young British Columbians – Census 2006' BC Stats (2009). More recent data on labour market outcomes is not available.

⁷⁵ Employers appear to be responsible for the costs of on-job training. They must also give apprentices work release for off-job training.

Industry Training Organisations

21. Industry Training Organisations (ITOs) are a mechanism to engage and coordinate particular industries to improve industry training in their sector. They are not-for-profit entities established by industry and co-funded by the ITA. Partnership Agreements between the ITO and ITA specify the services the ITO must provide as well as the quarterly funding allocated to each service. Services provided to the ITA by ITOs include:
- a. participating in strategic planning to develop priorities for their sector and for the training system more broadly,
 - b. developing (or updating) proposed standards for the ITA's approval,
 - c. liaison with employers to ensure current and future needs are being met,
 - d. engagement with employers to lift the number of potential places for apprentices,
 - e. liaison with education providers, to consult them on standards and ensure they are aware of strategic directions and industry requirements,
 - f. development of information materials.
22. There are currently seven ITOs: automotive, construction, residential construction, horticulture, tourism, transportation and a cross-sector ITO which includes mining, pulp and paper, shipbuilding and utilities sectors.⁷⁶

Support for specific groups

Young people

23. The ITA has developed a number of initiatives specifically for young people.
24. Through Secondary School Apprenticeships and the 'ACE IT programme', young people can begin their training while still in high school and earn dual high school and post-secondary credits as they study.
25. Meanwhile, the YES2IT initiative aims to increase awareness of trades amongst younger students (those between the ages of about 11 and 15), and their parents and teachers. It gives young people the opportunity to gain hands-on experience in a variety of trades, to create partnerships between schools and local tradespeople, to educate parents on trades, and to teach students about the benefits of trades. Organisations are eligible for funding of up to CAD \$5000 per activity.

Aboriginal people

26. The ITA has approximately CAD \$2 million available each year for 'Aboriginal initiatives'. The funds are used for specific projects in partnership with Aboriginal organisations, to provide additional support for Aboriginal trainees who are low skilled, lacking a high school diploma or essential skills, or unemployed and ineligible for other forms of support. Examples of projects include

⁷⁶ The seven ITOs are as follows: Automotive Training Standards Organisation; Construction Industry Training Organisation; HortEducationBC (Horticulture); PROPEL – go2 (Tourism); Residential Construction Industry Training Organisation; Resource Training Organisation; and Transportation Career Development Association.

- a. targeted foundation programs,
- b. brokerage of apprenticeship placements,
- c. post-completion 'top-up' courses to give Aboriginal trainees additional certification and a competitive advantage when applying for work, and
- d. development and delivery of new qualifications to respond to specific skills shortages and job opportunities in Aboriginal communities.
- e. The ITA also offers bursaries for Aboriginal students.

Women, migrants and internationally trained workers

27. The ITA also has two initiatives to support women and migrants and internationally trained workers to gain certification or to establish a trades career.
28. Those who are unemployed or underemployed are eligible for financial support towards tuition, childcare, transport, equipment, and books. The ITA also assists them to seek any necessary skills upgrades, and meet employers.
29. Migrants and overseas trained workers are assisted to enrol in English courses and safety courses as needed.

Continuing Vocational Education and Training (CVET)

30. CVET strategy is decentralised. It is developed by each of BC's 26 Regional Districts, using a variety of consultation processes with industry, unions and other stakeholders. Federal government funding for CVET is provided under Labour Market Agreements between Federal and Provincial governments. The funding is used for 'literacy and basic skills upgrading, wage subsidies and earnings supplements, skills enhancement and training, on-the-job training and workplace-based skills upgrading'.⁷⁷ Target groups include Aboriginal people, unemployed people, older workers and youth.
31. Although a higher skilled and more flexible workforce is a strategic priority for the BC government and for some regional governments, further information on the way CVET functions in BC is not easily available.
32. Across Canada, the principal sources of financial support for adult education and training are employers and self-financing. Employers contribute to the cost of 63% of training courses, while individuals finance their own studies in 29% of cases. For adults requiring high-school level education, support is through self-financing (42% of instances), government (37%) and only rarely through employers (4%).⁷⁸
33. Training courses are provided by public education institutions (25% of courses), employers (30%), commercial schools and providers (20%) and equipment producers and suppliers (10%).⁷⁹

⁷⁷ 'Canada's Economic Action Plan - 3rd Report to Canadians' Canadian Government (2009).

⁷⁸ Brisbois R and Saunders R 'Skills Upgrading Initiatives in Canada: Evidence from Alberta and the Northwest Territories' in *Skills Upgrading – New Policy Perspectives*, OECD (2006), p 266.

⁷⁹ Brisbois R and Saunders R 'Skills Upgrading Initiatives in Canada: Evidence from Alberta and the Northwest Territories' in *Skills Upgrading – New Policy Perspectives*, OECD (2006), p 267. 'Course' is used by the authors to refer to any formal learning episode to develop knowledge or skills.

British Columbia – Strength and weaknesses

34. It is not possible to assess the merits of the CVET system given the lack of available information on the way it functions in the Regional Districts.

35. In relation to apprenticeships, the ITA designed the ITO system in 2005 to help reform industry training in BC. The main strengths of the new system are:

- The breadth of trades for which apprenticeship is available. The consistency of the IVET format across so many trades makes it very simple for people to understand the process for accreditation.
- The potential for the ITA to have very strong quality control and system oversight capacity given its centralised responsibility for monitoring, assessment, standard setting and accreditation of trainers across all apprenticeships.
- The strong position of the ITA to develop IVET strategy to suit the economic and social needs of the whole province, given that the responsibility for development of strategy is at arm's length from any particular trade.

36. The key weaknesses of the system are:

- An apparent lack of clear pathways or integration between IVET and CVET, creating a risk of poor participation in CVET.
- The risk of poor alignment with and responsiveness to industry needs, and poor industry buy-in to the system. This risk is higher in the BC system than in New Zealand because strategy, purchasing and standards decisions are all performed by the ITA and therefore at greater distance from industry. In BC, good industry alignment, responsiveness and buy-in rely heavily on the quality of the relationship between the ITO and the ITAs.

37. This relationship appears to have started out badly in BC. The Office of the Auditor General of British Columbia audited the trades training system in 2008 to examine how well the new system was working. Their main criticism was poor communication and consultation with ITOs by the ITA along with a range of implementation issues.⁸⁰ It seems likely that the low rate of industry participation (less than 20% of eligible employers in 2009)⁸¹ can be attributed to the poor performance of the ITA with respect to relationship building, and a consequent failure to meet business needs. In 2007 the main complaints against the ITA by business related to the need for online and other alternate delivery models for training, and for additional support for small business to participate in ITO planning, priority setting and development of training programs.⁸²

38. Another weakness of the BC IVET system is its exclusive focus on apprenticeships, which has resulted in a lack of support for IVET in strategic occupations and sectors

⁸⁰ These included: a poor understanding by the ITA of ITO funding needs, and the lack of a) a clear definition of the roles and responsibilities of the ITOs, b) a comprehensive quality assurance program to support course development, c) proper monitoring of providers and employers to ensure effective delivery of training, d) adequate information to determine in-school funding allocations; and e) adequate disclosure of the basis on which reported performance measures are determined.

⁸¹ 'Strategic Plan 2009' British Columbia Industry Training Authority (2009).

⁸² 'Labour Supply Strategies for Small Businesses in British Columbia: Recommendations to the Government of British Columbia and Other Stakeholders' Coalition of BC Businesses (2007).

which have not traditionally trained or employed via the apprenticeship route, such as retail, tourism and trucking.⁸³

⁸³ 'Labour Supply Strategies for Small Businesses in British Columbia: Recommendations to the Government of British Columbia and Other Stakeholders' Coalition of BC Businesses (2007).

Appendix 9: Norway

Country context

1. Norway has a population of 4.9 million and a GDP per capita of US\$57,000⁸⁴, which is the second highest in the OECD. Norway has a large oil and gas sector, which is a significant export earner and has also enabled the development of power-intensive manufacturing industries.
2. The majority (70%) of the workforce is employed in small and medium sized enterprises, and 79% of companies in Norway have fewer than 5 employees.⁸⁵ Norway has very low unemployment – in 2010 the unemployment rate was 3.6% (compared to New Zealand's rate of 6.5%).⁸⁶ The youth unemployment rate is around four times as high as the adult unemployment rate.⁸⁷
3. Norway has centralised employment agreements. Labour conditions are nationally negotiated every four years and wage agreements are negotiated every two years. This means that the wage structure is compressed and the earning premia for higher education are smaller than in other OECD countries.

Overview of Norway's education system

4. The Norwegian education system is founded on the principles of equality and freedom of choice. This has led to a system with generous state support that emphasises the rights of individuals to access education. Compulsory schooling ends with lower secondary school at age 15.
5. All students who complete lower secondary education have the right to access three years of upper secondary education. Nearly all students who leave lower secondary progress to upper secondary.⁸⁸ As a result of recent reforms, adults also have the right to access free primary, lower secondary and upper secondary education and have the right to the same financial support as young people.⁸⁹
6. The diagram overleaf illustrates the pathways for students when they leave lower secondary school. There are 12 programmes at upper secondary level: three general programmes that lead to university entrance, and nine vocational programmes that can lead to apprenticeship. Students apply for three programmes of the 12 available. Most students (68% in 2006) are accepted into their first choice of programme. General and vocational programmes are available at the same school.
7. Norway's initial vocational education system is described as a 2+2 system: students spend the first two years in an upper secondary school and then two years as an

⁸⁴ Source: OECD StatExtracts: <http://stats.oecd.org/Index.aspx?DataSetCode=DECOMP>.

⁸⁵ Source: p10, *VET in Europe: Country report 2010 Norway*, Norwegian Directorate for Education and Training (part of Cedefop reference series).

⁸⁶ Source: OECD StatExtracts: <http://stats.oecd.org/Index.aspx?DataSetCode=DECOMP>.

⁸⁷ Source: The Economist, http://www.economist.com/blogs/dailychart/2010/12/youth_unemployment. Figures are for second quarter of 2010.

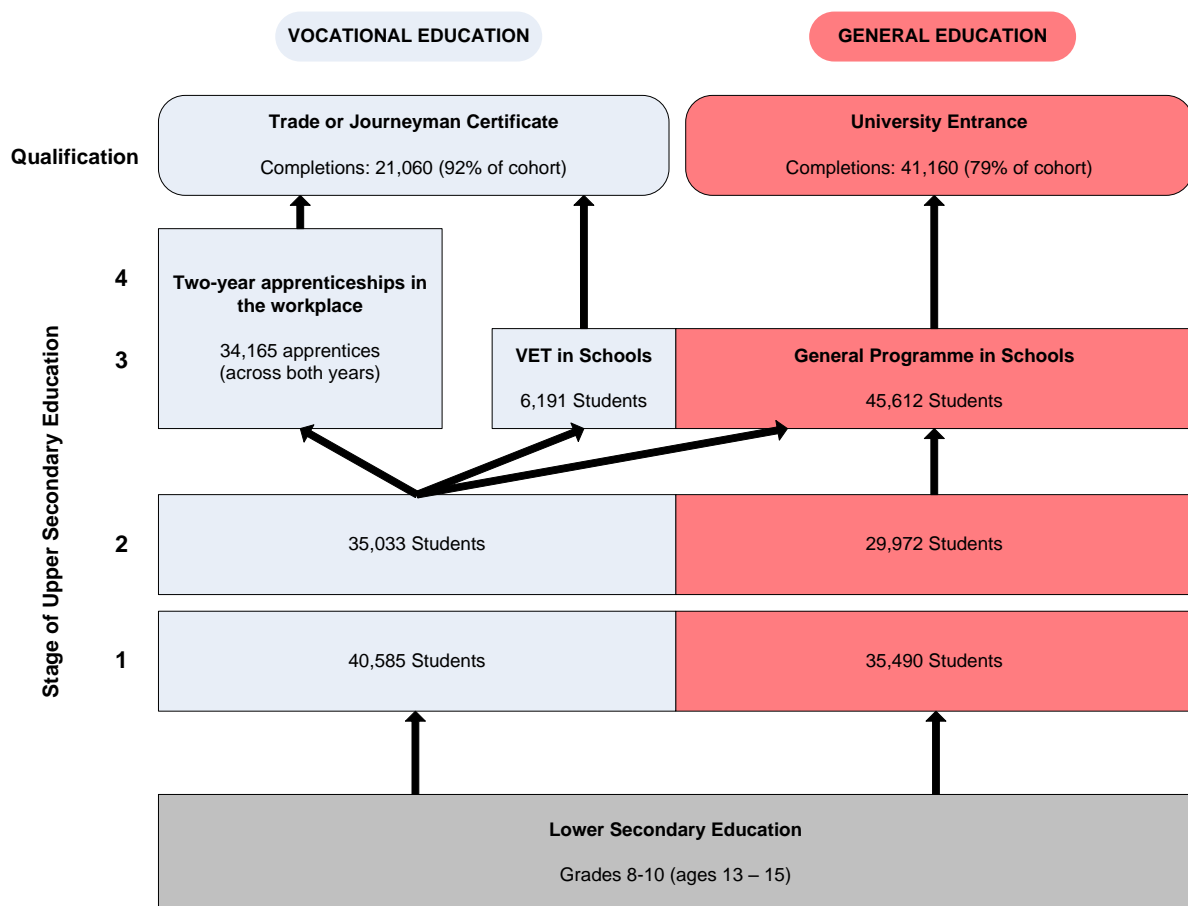
⁸⁸ p10, Kuczera, M. et al (2008), *Learning for jobs OECD reviews of vocational education and training: Norway*, OECD.

⁸⁹ The Competence Reform that increased access to education for adults occurred over five years (1999-2004). Source: p16, *VET in Europe: Country report 2010 Norway*, Norwegian Directorate for Education and Training.

apprentice in a firm. However, not all students in vocational programmes progress to apprenticeship at the end of the two years. It is not clear to what extent this is due to students not being able to find apprenticeship places and to what extent this reflects student choice.

8. Students who do not progress to an apprenticeship can complete either a third year of practical training at school, which leads to the same vocational qualification as apprenticeship, or the third year of the general programme leading to university entrance. Around one third of the students who finish the two-year vocational programme opt for a third year in the general programme.
9. Upper secondary education is the responsibility of the 19 county authorities. Each county receives a block grant from the Government for all the services they provide, including upper secondary education.

Figure 1: pathways from lower secondary school. Numbers of students as at 1 October 2010, number of completions relate to the 2009/10 school year.



Figures sourced from Statistics Norway (www.ssb.no).

Initial vocational education – the 2+2 system

10. The 2+2 system means there is a clear separation of theory and practice: the theory comes first and the practical experience comes later. This system is simple and easy to manage, provides employers with more mature apprentices, and means that rural

students are also able to benefit from attending formal schools. The vocational pathway is relatively well-regarded in Norway and has the support of industry and unions.

11. The number of students and apprentices in the Norwegian system is shown in the table below. In most programmes, the number of apprenticeship places is roughly proportional to the number of students in vocational programmes in schools. The exceptions are technical and industrial production, building and construction, and media and communication.

Table 1: Students in vocational education at school and apprentices by vocational programme, 1 October 2009

Vocational programme	Students		Apprentices	
	Number	% of total	Number	% of total
Technical and industrial production	12,541	16%	6,251	22%
Electrical trades	9,804	12%	4,242	15%
Building and construction	9,612	12%	5,994	22%
Restaurant and food processing trades	4,580	6%	1,921	7%
Agriculture, fishing and forestry	4,033	5%	635	2%
Health and social care	16,795	21%	4,203	15%
Design, arts and crafts	5,884	7%	1,881	7%
Media and communication	8,923	11%	168	1%
Service and transport.	7,214	9%	2,524	9%
Total	79,386	100%	27,819	100%

Source: Facts about education in Norway 2011: key figures in 2009, *Statistics Norway*.

12. The two-year apprenticeships are undertaken within enterprises and follow the national curriculum. Companies must be approved by county authorities as training companies to be able to take on apprentices. Training companies have to show that they are capable of meeting the training requirements for the relevant trade.
13. A trade-qualified training manager must be responsible for instruction of apprentices, though training for each apprentice may take place across a range of companies. Groups of small and medium enterprises often establish Training Offices that sign apprenticeship contracts on behalf of small companies and are responsible for completions. Training Offices also work to actively identify training companies and new apprenticeship places.
14. Employers taking on apprentices receive direct subsidies from the county. The basic subsidy for two years is equivalent to the subsidy for one year in vocational secondary school (approximately EUR 12,000). Top-up subsidies of approximately EUR 5,000 are available for small, traditional trades deemed worthy of preservation (e.g. goldsmithing). Additional subsidies are also available for companies taking on apprentices with special needs.
15. Apprenticeship contracts are agreements between employers, apprentices, and the county's vocational education office. Apprentices are paid an apprenticeship wage by their employer in accordance with the collective agreement. Apprentice wages increase from 30% to 80% of a skilled worker's salary during the two years of the apprenticeship.⁹⁰

⁹⁰ p52, *VET in Europe: Country report 2010 Norway*, Norwegian Directorate for Education and Training.

16. The apprenticeship culminates in a final examination (up to 5 days in duration) leading to a trade or journeyman certificate. The examination is set and assessed by a trade-specific examination board at each county. This examination is also open to students who have completed a third year of vocational secondary school and those with five years of work experience.
17. The pass rate for these examinations is high (see table below). Students who received a third year of vocational schooling were the least successful in these examinations. The trade or journeyman certificate provides graduates with the right to access further vocational education.

Table 2: People who passed trade and journeyman's examinations, in total and as a percentage of cohort, 2006-2009

School year	2006/2007		2007/2008		2008/2009	
	Number	% of cohort	Number	% of cohort	Number	% of cohort
Apprentices	12,868	93%	14,519	93%	15,377	92%
Experience-based	5,903	95%	6,300	94%	6,857	95%
Students from VET schools	509	74%	469	79%	308	76%
TOTAL	19,280	93%	21,288	93%	22,542	93%

Source: p32, VET in Europe: Country report 2010 Norway, Norwegian Directorate for Education and Training.

18. Employer associations and unions are actively involved in setting the conditions for apprenticeship through collective bargaining. Employer associations and unions influence the curriculum of vocational education through representation on advisory bodies, which include the National Council for Vocational Education and Training, the nine Vocational Training Councils, and the County Vocational Training Board.

Problems with the initial VET system

19. In 2008, the OECD review highlighted several key challenges for Norway's vocational education system: lack of responsiveness to labour market needs; high drop-out rates; and inadequate quality assurance mechanisms.⁹¹ These are outlined below along with Norway's policy responses to date.

Emphasis on student choice may limit responsiveness to the labour market

20. Counties make the final decision on what vocational education is offered at upper secondary level. In doing this, counties must balance the pressure from students and parents to satisfy student choice with the availability of apprenticeship places and the capacity of upper secondary schools to offer programmes. Upper secondary schools are limited in the short-term in what they can offer by facilities and available teachers.
21. Most students (88% in 2008) who apply for an apprenticeship are offered a place. However, one third of students who complete the two-year vocational path opt for a third year in general education, but only two-thirds of these students complete the third year of upper secondary. The OECD review suggests that at least some of these students opt for a third year of general education due to a lack of apprenticeship places. Some

⁹¹ The OECD review also highlighted two further problems that are not discussed here: the ageing of VET teachers at upper secondary level; data gaps and available data being insufficiently exploited; and weak basic skills of entrants into the VET system.

sectors also suffer from an inadequate supply of apprentices. The OECD review recommended providing better career guidance for students and reducing the provision of vocational education that results in few apprenticeship places.

22. Norway introduced new regulations, effective from January 2009, emphasising the right of every student to receive career guidance and personal counselling. All counties have introduced regional partnerships with the labour sector and stakeholders in career guidance to facilitate career guidance between levels of education. A digital career plan is being piloted in three counties.

High drop-out rates

23. Around 30% of the Norwegian population aged 20 to 24 have not completed at least upper secondary education, which is higher than the European Union average of 21%.⁹² Students from vocational programmes are much more likely to drop out than students in general programmes.⁹³
24. It is relatively easy to find a job in Norway without upper secondary education, and the well-developed adult education system allows students opportunities to re-enter education, so dropping out is not necessarily a negative outcome. However, drop-outs are more likely to be unemployed and less likely to access further education than people with higher levels of education. The OECD review recommended interventions at primary and lower secondary to address drop-out rates in upper secondary.
25. Norway is piloting a new subject at lower secondary called 'working life subject'. This allows students to choose a practical subject based on one of the nine vocational programmes instead of a new foreign language. The purpose is to improve motivation and to build students' basic skills. The Government has also allocated EUR 4.4 million per year to strengthen counties' work with pupils at risk of dropping out of school.
26. Norway has also been piloting a Certificate of Practice for students with low motivation and skill levels. The Certificate is a lower level qualification to the trade or journeyman certificate and is gained through a two-year programme primarily consisting of work-based learning. After completion, graduates can complete upper secondary education. Initial monitoring indicates that 65% of graduates show motivation to enrol for two more years to obtain the full trade or journeyman certificate.⁹⁴ The OECD review believed this Certificate could stigmatise students who opted for this route.

Quality assurance mechanisms

27. Norwegian employers receive comparatively generous state support for employing apprentices, but there are few quality controls on the training they undertake. Government authorities do not undertake regular inspections of workplaces, there are no minimum qualification requirements for apprentice supervisors, and there are limited arrangements ensuring that apprentices have obtained a standard set of competencies.
28. The decentralised responsibility for the final examination means that assessments vary between counties. The OECD review recommended a standardised national assessment

⁹² Source: Eurostat quoted on p10, *VET in Europe: Country report 2010 Norway*, Norwegian Directorate for Education and Training.

⁹³ A study cited in the OECD review found over 20% of students in vocational education dropped out before completing, compared to around 5% for students in general programmes.

⁹⁴ p26, *VET in Europe: Country report 2010 Norway*, Norwegian Directorate for Education and Training.

to provide a consistent method to assess that the same mix of competencies have been acquired to the same level. The review identified several ways other countries achieve this including periodic inspections of vocational education providers, inspection of examination bodies, and random evaluation of student performance. It suggested that local examinations could be subject to clear national guidelines.

29. Norway does not require apprentice trainers or supervisors to have any knowledge of teaching. Some counties offer training, but quality is variable and many companies do not see the value in such training. To better ensure the quality of on-job training, the OECD review recommended that training for apprentice trainers and supervisors be a requirement for the licence to take on apprentices.
30. In 2009, the Government allocated EUR 9 million to further education of vocational teachers, trainers and training supervisors in companies, and examinations boards. Improving the quality of assessment is one of the workstreams identified in the Government's white paper *The Education Strategy*.⁹⁵

Continuing Vocational Education and Training

31. Over half (54%) of the labour force aged 22-64 participate in some form of education and training each year. Some of this is provided and paid for by companies or employer associations.⁹⁶ The principle of equality of educational opportunities means that all public education in Norway is provided free of charge. Individuals can access continuing vocational education through adult education associations, distance education institutions or folk high schools.
32. People who hold a trade or journeyman certificate who have several years of experience and who wish to set up their own business or hold a managerial position in a firm can study to become a master craftsman. This is provided through one adult education association (Folkeuniversitetet or Folk University) that has 80 branches across the country. The course of study covers general business management, marketing and vocational theory. It is delivered part-time over two years, as it is usually combined with full-time work.

Norway – strengths and weaknesses

33. Norway's vocational education system is inclusive and there is little stigma attached to those who choose a vocational pathway (it is not used as a track for less able students, for example). The system has flexible entry points for learners. It also has a high level of input and buy-in from industry and unions, which is probably a function of the high level of trust between Government, industry and unions in Norway. The inclusion of business management within training to become a master craftsman is also a strength, as there is evidence that improving the business skills of managers has a positive effect on productivity.
34. The main weakness of the Norwegian system is that it does not have a direct connection to labour market needs. Systems that require learners to be employed before training begins are directly connected to the skill needs of employers; the connection between theory learning and practice is also clearer in these systems. The emphasis on student choice and the front-loading of the theory component in the Norwegian system means

⁹⁵ Source: *VET in Europe: Country report 2010 Norway*, Norwegian Directorate for Education and Training.

⁹⁶ A 2003 study found 210,000 employees annually participate in courses organised by the workplace or relevant employer association or union. Cited on p56, *ibid*.

that students may choose programmes where labour market demand is low and where they have little chance of finding an apprenticeship place.