



Department
for Education

International comparisons of post-compulsory education systems

Appendices: Country reports

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Appendix A: Country report, Australia

Overview of post-compulsory education

Australia's six states and two territories are in charge of delivering school and vocational education and training (VET).

The age at which schooling becomes compulsory is six years in all states and territories, except Western Australia and Tasmania, where it is five years. In practice, most children start the preparatory year of primary school at between four and a half and five and a half years. All states and territories require young people to participate in schooling until they complete Year 10 and to participate full time in education, training or employment, or a combination of these activities, until the age of 17.

Upper secondary education in years 11 and 12 is not compulsory in Australia and examinations taken in that phase vary across the states and territories. In Australia, 84 per cent of 25-34-year-olds attained upper secondary level education (above the OECD average of 82 per cent) (OECD, 2013). In most cases, Australian general and vocational programmes are offered in upper secondary schools. Successful completers are awarded a Senior Certificate of Education, giving access to both general and vocational programmes.

Vocational education and training (VET) in Australia is provided at the general secondary and tertiary education levels, in Technical and Further Education institutes and private Registered Training Organisations. VET in schools enables upper secondary students to study units toward a recognised VET qualification while completing a Senior Certificate.

The national apprentice system is constitutionally and operationally the responsibility of the states and territories, albeit working together with the very significant support of the Commonwealth through the Australian Apprenticeship Support Network and employer subsidies.

The Australian system of apprenticeships has seen much change in recent decades. Principal among these changes was the introduction of traineeships in the 1980s which extended the traditional apprenticeship model to non-trade occupations under the banner of 'traineeships'. As the skill requirements were usually much less than in traditional trades the duration of the training contract for traineeships was correspondingly lower - six months to two years but typically a year - and the level of training was lower, usually the equivalent of Australian Qualifications Framework (AQF) certificate II (although certificate III has become dominant in recent years). In other respects, traineeships operated in much the same way as traditional apprenticeships, including government funding for the off-the-job training and reduced wages even for older adults undertaking this form of training.

Australian Apprenticeships cover all apprenticeships and traineeships which can be full-time, part-time or school-based. An Australian Apprentice can be a student or school-leaver, a person re-entering the workforce or an adult worker simply wishing to change careers. They are available in a variety of qualification levels in more than 500 occupations including traditional trades and a diverse range of emerging careers in most sectors of business and industry. Apprentices can study for all certificate levels up to Advanced Diploma. Off-the-job training is provided by Registered Training Organisations (RTOs) with the State or Territory Training Authority. Businesses can vary the mix of training and working time (providing certain conditions are met). There are a range of financial incentives on offer for eligible employers.

Recent reforms have aimed to shape a more demand-driven VET system, introducing more flexibility in the length of apprenticeships and ensuring support through a common procedure for assessing them. (OECD, 2013).

In tertiary education, Australia's attainment is higher than the OECD average. It has the sixth highest graduation rate among OECD countries in academic programmes and the eighth highest graduation rate in vocational tertiary level. Australia also has the highest rate of overseas tertiary students among OECD countries (OECD, 2013). The participation of Aboriginal and Torres Strait Islander people in higher education is below that of the Australian population as a whole. A Review of Higher Education Access (2012) highlighted the need for co-operation between different stakeholders to widen access to university education.

Education systems

Provision

Higher education provision consists of:

- 43 universities
- 127 non-university higher education providers.

In 2016, a total of 1931 training organisations delivered government-funded VET (NCVER 2017b). They consisted of:

- 40 Technical and Further Education (TAFE) institutes
- 13 other government providers
- 381 community education providers
- 1558 other training providers.

Academic institutions

Entry criteria

In Australia, the primary selection method for school leavers is ranking based on academic achievement. In most states, this ranking is known as the Australian Tertiary Admission Rank (ATAR). To be eligible for an ATAR, students must satisfactorily complete subjects based on syllabuses approved by the relevant state education authority.

The ATAR provides a measure of a student's overall academic achievement in relation to that of other students. An ATAR of 80.00 indicates that a student has performed well enough in the Higher School Certificate (or equivalent) to be placed in the top 20 per cent of their cohort. ATARs are calculated in each state to reflect a student's rank against other students in their state. Universities then use this rank to help with selection. The ATAR is not an average mark; it is a rank that indicates a student's position. Therefore, the same marks in the same course in different years will not necessarily produce the same ATAR (University Admissions Centre [UAC], 2018).

Eligibility scores determined by each hosting institution are the lowest ATAR at which a student is eligible for consideration for a course, excluding special entry. More commonly known and publicised is the cut-off for each course. Every applicant with a rank above that year's course cut-off receives an offer.

With the introduction in Australia of demand-driven funding from 2012, public universities can now determine the number of undergraduate student places they will offer and in which disciplines. For Blyth (2014) this raised the question of whether this entry scheme would remain the predominant indicator for entry in courses where demand may no longer exceed supply (Blyth 2014). In fact, in 2017, 60 per cent of undergraduate university offers were made on a basis other than ATAR (Pilcher and Torii, 2018).

The growth in numbers means that tertiary institutions need, and often want, to make admissions decisions on the basis of an applicant's demonstrated experience, aptitude and suitability, or to facilitate equity of access (Pilcher and Torii, 2018). Many students with ATARs below the published cut-off are offered places through special schemes or alternative pathways. Special schemes have legitimate purposes to assist certain types of student with special dispensation or to improve diversity, but special schemes can reduce transparency and cause confusion when cut-offs are published (Blyth, 2014).

Vocational/technical institutions and providers

Entry criteria

Publicly funded higher level VET requires approved course providers to assess whether the applicant is academically suited to undertake the approved course on the basis of either:

- the Australian Year 12 Certificate; OR
- evidence of successful completion of an Australian Qualifications Framework Certificate IV or higher qualification (where the language of instruction is English); OR
- displaying competence at Exit Level 3 in the Australian Core Skills Framework in both reading and numeracy through an approved Language, Literacy and Numeracy test.

In addition, the approved course provider must reasonably believe that applicants have the capacity to complete the course.

Apprenticeship providers

Entry criteria

Australian Apprenticeships and traineeships are available to anyone of working age. There are no formal entry requirements.

Flexibility

The introduction of the demand driven system in 2012 saw a removal of caps on Commonwealth supported undergraduate university places. Australia's tertiary education sector has seen immense change since then, growing significantly and becoming more diverse and accessible. There is now a flexible system, with multiple pathways to entry and more students applying directly to institutions (Pilcher and Torri, 2018).

While OECD (2013) found that, in Australia, "there is a well-established flexible qualification system that provides autonomy and innovation, underpinned with data and research", Fowler (2017) sees a blurring of the boundaries between the VET and Higher Education streams at AQF levels 5 and 6 with the AQF Council itself providing only limited clarity on the differences between diplomas (AQF 5) and advanced diplomas and associate degrees (AQF 6).

Some colleges specialise in diploma-level courses with the purpose of preparing students for entry into the second year of a university course, rather than for a qualification leading to employment. Typically, they have a relationship with a particular university, and the diploma curriculum will match that taught in the university in first year. For example, students who successfully complete a Diploma of Business at the South Australian Institute of Business and Technology can enter the second year of a University of South Australia Bachelor of Business (Norton & Cakitaki 2016, p.13, quoted in Fowler, 2016).

The Australian Government has committed \$16.7 million over 2018–19 to 2021–22 to assist in the establishment and operation of up to eight community-owned, regional study hubs across regional Australia. Regional Study Hubs (RSHs) will provide infrastructure such as study spaces, video conferencing, computing facilities and internet access, as

well as pastoral and academic support for students studying via distance at partner universities.

Provision to support low attainers

The AUS\$13.5 million (£7.6 million) Engaging Early School Leavers initiative, started in January 2016, forms part of the Youth Employment Strategy and is intended to strengthen the chances of early school leavers finding and keeping a job. Early school leavers who are not on a further education track will be supported to look for work and can be required to do so. This includes seeking opportunities such as apprenticeships or traineeships.

The measure comprises three elements:

1. Compulsory job search. Early school leavers will be expected to look for work if they are not undertaking full-time education or a combination of education and paid work for at least 25 hours a week (or 15 hours for principal carer parents and people with a partial work capacity).
2. Year 12 Equivalency. Early school leavers will now have to attain Year 12 or a Certificate III (up from Certificate II), in order to no longer be subject to the 25 hours per week participation requirement.
3. Extending eligibility for Education outcome payments. Early school leavers will continue to be given tailored assistance in their search for a job through jobactive. Under the changes, the \$1000 (£562) payment to jobactive providers when an early school leaver achieves Year 12 (or Certificate III), will be extended from 15-17 years olds to 15-21-year olds.

The initiative is part of the Australian Government's Youth Employment Strategy, announced in the 2015-16 Budget and is one in a range of programmes the Government is running to help young people get into work, including:

- AUS\$322 million (£180.9 million) Transition to Work service to help those aged 15 to 21 who are out of work and not engaged in education with intensive, pre-employment support to improve their work readiness, including apprenticeships, traineeships or education.
- AUS\$50 million (£28) Empowering YOUth Initiative to support young people at risk of welfare dependency into work by inviting not-for-profit community organisations to put forward proposals for innovative ideas that offer a different approach to those currently available.
- Work for the Dole, part of jobactive, helps people aged 18 and over gain the skills they need to become work-ready.

- The National Work Experience Programme which aims to build confidence and real-life work experience of job seekers and prepare them to meet expectations of employers by undertaking volunteer work experience with for-profit, not-for-profit and Government organisations for up to 25 hours per week for a maximum of four weeks per placement.

The Australian Apprenticeships Access Program provides pre-vocational training linked to an apprenticeship pathway for vulnerable jobseekers.

Role of government

While universities are autonomous and VET is under the aegis of the individual states and territories, the Council of Australian Governments and the Standing Council on Tertiary Education, Skills and Employment work together to develop a shared national policy framework. Despite this, OECD (2013) found that the policy and funding responsibility for VET could benefit from a clearer administrative division for consistency. Decision-making in higher education is shared between the Australian Government and higher education providers. While the Australian Government has policy responsibility, Australian universities have the authority to accredit their courses and are also responsible for their academic and quality assurance standards.

Australia has been working on multiple initiatives to improve the quality of post-secondary education, particularly in vocational education and training, to meet the demands of the labour market. In 2009, the Council of Australian Governments set VET targets to be achieved by 2020, including to increase to more than three-quarters the share of working age Australians with a Certificate III level qualification or higher (up from around half in 2009) and to double the number of Diploma and Advanced Diploma completions.

Take up

Student numbers in all course levels in tertiary education have grown strongly over the past decade from around 718,000 domestic students in 2005 to just over one million in 2014. Enrolments in enabling courses have also increased from 6,000 in 2003 to 24,000 in 2014. The majority of students at universities and non-university FEE-HELP providers are enrolled in bachelor degrees. Twenty-five per cent of students at non-university FEE-HELP providers are undertaking diploma qualifications. The majority of students at non-FEE-HELP providers are enrolled in graduate diplomas (Department of Education and Training 2015).

In 2014, indigenous students made up 1.5 per cent of domestic undergraduate students, and low socio-economic status students (SES) made up 17.5 per cent. Regional and outer metropolitan universities typically have higher proportions of low SES (socio-economic status) students.

Statistics for VET programmes are more recent. National Centre for Vocational Education Research (NCVER,2017b) reports that, in 2016, there were 1.3 million students enrolled in the government-funded vocational education and training system (defined as all Commonwealth and state/territory government-funded training delivered by TAFE institutes, other government providers [such as universities], community education providers and other registered providers).

In 2016, compared with 2015:

- Student numbers increased by 3.3 per cent.
- Subject enrolments decreased by 3.1 per cent.
- Hours and full-year training equivalents (FYTEs) decreased by 4.2 per cent.
- An estimated 7.8 per cent of the Australian population aged 15 to 64 years participated in the government-funded VET system in Australia in 2016.
- An estimated 21.3 per cent of the Australian population aged between 15 and 19 years participated in the government-funded VET system in 2016.

In 2016, students in the government-funded VET system comprised:

- 43.7 per cent aged 24 years and under
- 52.3 per cent males, and
- 81.3 per cent studying part-time.

Estimated participation in the government-funded VET system by students aged 15 to 64 years increased from 7.6 per cent to 7.8 per cent between 2015 and 2016. The estimated participation rate for 20–24-year olds increased from 13.8 per cent to 13.9 per cent, 25–44-year olds increased from 6.5 per cent to 6.9 per cent and 45–64-year olds increased from 3.6 per cent to 3.8 per cent. In contrast, the estimated participation rate for 15–19-year olds declined from 21.8 per cent to 21.3 per cent and for students aged 65 years or more estimated participation declined from 0.6 per cent to 0.5 per cent.

Skill sets are groupings of units of competency which are combined to provide a clearly defined statement of the skills and knowledge required by an individual to meet industry needs or a licensing or regulatory requirement. They may be either a nationally recognised skill set, which are endorsed in a national training package, or a locally recognised skill set. The number of students enrolled in nationally and locally recognised skill sets increased by 299.5 per cent to 89 400 students in 2016. Students undertaking skill sets now represent 7.1 per cent of all government-funded students.

Engineering and related technologies was the most popular field of education in 2016, with 16.5 per cent of all government-funded students.

Fowler (2017) argues that, at least as far as student choice of courses is concerned, there is significant overlap between popular AQF 5 VET diploma courses and those of the AQF 6 associate degrees offered by higher education providers. Both qualification levels are used to cover similar fields of education and vocational purpose, therefore, “the factors that become points of choice for students might include institutional prestige,

relative costs of the course, access to funding/loans, and easier articulation to university bachelor study.”

Trade and non-trade apprenticeship and traineeship numbers have been falling in Australia since the middle of 2012. Data from NCVET shows there were 291,000 apprentices and trainees in training in December 2015 (in seasonally adjusted terms)—down on the most recent peak of 490,000 in June 2012.

When separated out over the longer term, it is evident that apprentices and trainees in non-trade occupations have fallen dramatically from their peak of 300,000 in June 2012 to 104,000 in December 2015. Non-trade occupations for trainees include farm managers, sales workers, clerical and administrative workers, community and personal service workers and drivers and machine operators.

The fall in the number of apprentices and trainees in trade occupations during the same interval is significant but not as dramatic—down from 216,600 to 175,000.

A briefing for the Australian Parliament speculates that “declining numbers of commencements could be driven by changes to incentive payments made in mid-2012; the decline in demand for skills associated with a softening labour market, and the uncapping of university placements.”¹

Adult learning

The National Foundation Skills Strategy for Adults², which is a 10-year strategy aimed at improving ‘foundation skills’, defines them as English language, literacy and numeracy, which includes listening, speaking, reading, writing, digital literacy and use of mathematical ideas; and employability skills.

- The Australian Government’s Education for All (EFA) 2015 Review lists several strategies put in place for improving adult literacy. These include:
- National Foundation Skills Strategy for Adults
- Adult Migrant English Program (AMEP)
- Skills for Education and Employment Program (SEE)
- Australian Apprenticeship Access Program (AAP)
- Incorporating new language literacy and numeracy elements into VET certificates for VET trainers.

¹ https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BriefingBook45p/Apprenticeships

² <https://www.education.gov.au/national-foundation-skills-strategy-adults>

The minimum age for an Australian Apprenticeship varies across State and Territory. There is no upper age limit. 24.8 per cent of apprentices were under 19 in 2013 and a further 18.3 per cent were aged between 20 and 24 meaning that 46.9 per cent of apprentices were aged 25 plus. Australian Apprenticeships are thus not viewed as predominantly for school/college leavers transitioning to work.

As noted above, more than half of the participants in government funded VET programmes are 25 years or older in age.

Funding

Spend by route

The Australian Government is the major funder of higher education. Total funding provided by the Government in 2014 was around AUS\$15.4 billion (£8.6 billion) – with grant payments of approximately AUS\$10 billion (£5.6 billion) and HELP student loan payments of approximately AUS\$5.5 billion (£3.1 billion). Higher education earned just over two thirds of Australia’s AUS\$18 billion (£10.1 billion) in education export income in 2014-15. Education has been Australia’s largest service export for a number of years and it continues to grow (Department of Education, 2015).

The 2015 VET FEE-HELP statistical report (Department of Education and Training 2016a) indicates that around 320,703 course enrolments by 272,026 unique students accessed VET FEE-HELP, all financed by about \$2.9 billion in loans. It follows that about half of the diplomas are then funded by means other than VET FEE-HELP and, in the context of all vocational education and training, such diplomas are about ten per cent of the 3.5 million VET AQF programme enrolments.

Australia spent significantly more than the OECD average on degree level education per student, but less than the average on short cycle courses. Excluding R & D activities, spend was only slightly higher than the OECD average.

Table 1: Annual expenditure per student by educational institutions for all services (2014) [OECD, 2017: 177]

	Tertiary (including R&D activities)			All tertiary (excluding R&D activities)
	Short cycle tertiary	Bachelor’s, master’s and doctoral degrees	All tertiary	
Australia	9,299 (£6,999)	19,772 (£14,882)	18,038 (£13,577)	11,434 (£8,606)
OECD Average	10,423 (£7,845)	16,674 (£12,550)	16,143 (£12,150)	11,056 (£8,321)

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

The following table demonstrates that Australia spends over ten per cent more than the average on research and development on a per student basis.

Table 2: Annual expenditure per student by (tertiary) educational institutions for core educational services, ancillary services and R&D (2014)

	Educational core services	Ancillary services (transport, meals, housing provided by institutions)	R&D	Total
Australia	10,701 (£8,054)	733 (£552)	6,603 (£4,970)	18,038 (£13,577)
OECD average	10,348 (£7,789)	710 (£534)	5,084 (£3,827)	16,143 (12,150)

While expenditure on core services, which includes the cost of staff, is broadly in line with the OECD average, the compensation of staff – especially teachers – forms a smaller proportion of the total in Australia compared with the average.

Table 3: Current expenditure by resource category (2014) [OECD, 2017:231]
Distribution of current expenditure by public and private educational institutions as a percentage of total current expenditure

	Compensation of all staff			Other current expenditure
	Compensation of teachers	Compensation of other staff	Total	
Australia	34	29	63	37
OECD average	41	26	67	33

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

Apprentices

The funding system for Apprenticeships in Australia is complex and includes contributions from the national Government as well as from states and territories, the amount and nature of which varies considerably. The largest amount of funding is for off-the-job training, followed by incentives (for employers and apprentices) and administration. In 2009, it was estimated that the total annual public cost of apprenticeships was around AUS\$2.9 billion (£1.63 billion), or a little over AUS\$7,000 (£3,934) per apprentice or trainee in training per year (NCVER, 2011). More recent figures have not been found.

Government funding is available at State and Federal level to support apprentice employers and apprentices. However, *'there are no clear and simple rules on entitlement to funding' and 'tangled state and Commonwealth (Federal) responsibilities linked to complex funding arrangements require unravelling'* (OECD 2008). The most widely available Federal benefit to employers who take on apprentices was a one-off payment to an employer taking on an apprentice plus a possible completion bonus. One of the reasons for the decline in non-trade occupation commencements was the change in incentive payments offered by the Federal Government which took effect from 1 July 2012. The changes included:

- the discontinuation of the AUS\$1,500 (£843) standard employer commencement incentive payment and
- an increase in the standard completion incentive from AUS\$2,500 (£1,405) to AUS\$3,000 (£1,686) for existing worker apprentices and trainees in non-National Skills Needs List occupations (NCVER, 2016).

Maintenance

Australian students benefit from means-tested scholarships and grants (the amounts depend on the recipient's income). First, there are a number of subsidised student places (Commonwealth supported places). Also, low income individuals of age 16 to 24 who are studying full time, in apprenticeship or training, looking for a job, or sick are entitled to a Youth Allowance. In addition, students receiving a Youth Allowance are entitled to a student start-up scholarship twice a year, at the beginning of each semester to buy textbooks and specialised material (del Rey and Schiopu, 2015).

The Australian Government's website lists the following as being currently available to higher education students:

- Australian citizens, permanent humanitarian visa holders and students can access Government loans including HECS-HELP, FEE-HELP, SA-HELP and OS-HELP to assist them in paying for their tuition fees, overseas study expenses, student services and amenities fees, providing they meet all the eligibility requirements.
- A Commonwealth supported place (CSP) is a subsidised place at University. The Government subsidises a Commonwealth supported place by paying part of the fees directly to the provider and the Commonwealth supported student pays the remainder of the fees through a 'student contribution'.
- Australian citizens and permanent humanitarian visa holders enrolled in a Commonwealth supported place can access a HECS-HELP loan to pay their student contribution amount, providing they meet all of the eligibility requirements.
- Australian citizens and permanent humanitarian visa holders enrolled in full fee-paying places at approved higher education providers may access a FEE-HELP loan to pay their tuition fees, providing they meet all the eligibility requirements.
- Australian citizens and permanent humanitarian visa holders can access a SA-HELP loan to pay their student services and amenities fee.

In 2015/16, 59 per cent of Australia's students benefitted from both public loans and scholarships or grants, with only 12 per cent benefitting from neither. At master's level, all students benefitted from these.

**Table 4: Distribution of financial support to students (2015/16) [OECD, 2017: 223]
National students, based on full-time students**

Bachelor's or equivalent level				
Distribution of financial aid to students				
Percentage of students who:				
	...benefit from public loans only	...benefit from scholarships/ grants only	...benefit from public loans and scholarships/ grants	...do not benefit from public loans or scholarships/ grants
Australia	29	0	59	12
Master's or equivalent level				
Australia	0	24	76	0

Source: OECD (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

Apprentices

Australian Apprentice personal incentives include:

- Living Away from Home Allowance. Australian Apprentices undertaking a Certificate II or higher-level qualification may be eligible for the Living Away from Home Allowance if they have to move away from their parental/guardian home for the first time to commence or remain in an Australian Apprenticeship or are homeless.
- Employer Incentive/Australian Apprentice Personal Benefit. Australian Government financial support is available for adult workers (aged 25 years or over) to upgrade their skills through an Australian Apprenticeship at the Certificate III or IV level in an occupation on the National Skills Needs List. The payment is made to either the employer or the Australian Apprentice depending on the actual wage paid to the Australian Apprentice. Where the actual wage paid to the Australian Apprentice is less than the National Minimum Wage, Support for Adult Australian Apprentices payments are directed to the Australian Apprentice.
- Trade Support Loans. Australian Apprentices may be eligible to receive financial support through Trade Support Loans. Assessment of eligibility is undertaken by an Australian Apprenticeships Centre. Eligible Australian Apprentices will have access to loans totalling up to AUS\$20,000 (£11,240) over the course of their apprenticeship to assist with the costs of undertaking an apprenticeship. This is available for eligible trades and repayment is triggered when apprentices earn

AUS\$53,000 (£29,786). A 20 per cent discount is applied if apprentices successfully complete the programme.

- Youth Allowance, Austudy or ABSTUDY. Australian Apprentices may also be eligible to access fortnightly payments delivered by Centrelink (the Australian Government department for Human Services who deliver social and health-related payments and services).

Source of funding

Compared with the OECD average, Australia spent more on tertiary education as a proportion of GDP.

Table 5: Expenditure on educational institutions as a percentage of GDP, by level of education (2014) [OECE, 2017: 187]
From public and private sources of funds

Tertiary (including R &D activities)			
	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary
Australia	0.3	1.6	1.8
OECD Average	0.2	1.4	1.5
EU22 Average	0.1	1.3	1.4

Private sources make up a significantly larger proportion of educational expenditure in Australia compared with other OECD countries.

Table 6: Relative proportions of disaggregated public and private expenditure on educational institutions, by level of education (2014) [OECD, 2017: 198]

	Public sources	Private sources		
		Household expenditure	Expenditure of other private entities	All private sources
Australia	39	48	14	61
OECD Average	70	22	10	30

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

The Tertiary Education Quality and Standards Agency (TEQSA) published key financial metrics for the higher education sector in 2017. It reported that:

Revenue

- Total revenue generated by the sector continued to grow in 2016. This represented a growth of 2.8 per cent over the last 12 months period.
- The key drivers behind the growth in revenue were international student revenue (up by 12 per cent) followed by domestic student revenue (up by four per cent). Although government grants and programmes continue to account for the majority of revenue generated by the sector, this revenue source declined by AUS\$144 million (£81 million) to AUS\$14.4 billion (£8.1 billion) in 2016.
- The sector continues to be profitable, posting an aggregate net surplus/profit in 2016 of AUS\$1.3 billion (£0.73 billion). This represented 3.7 per cent (2015: 5.2 per cent) of total sector revenue. The aggregate result represented a 1.5 percentage point decrease from 2015.
- Total sector expenditure increased by 4.4 per cent to \$34.0 billion, outpacing the growth in revenue of 2.9 per cent. Spending on staff continued to account for the largest area of sector expenditure, while finance costs (including interest) and marketing and promotion costs declined slightly.

Exploring differences in revenue sources since 2014, TEQSA found that government grants and programmes contributed 41 per cent, down from 45 per cent in 2014, and revenue from international students contributed 17 per cent, up from 15 per cent.

Each provider type had a different mix of revenue sources:

- Universities generated the most revenue. Key revenue sources were government grants and programmes (41 per cent) followed by domestic students (25 per cent).

Revenue from international higher education students represented approximately 19 per cent of total revenue.

- TAFE providers relied heavily on government grants and programmes (55 per cent) and non-higher education activities (36 per cent). TAFE providers earned very little revenue (1 per cent) from both international and domestic higher education students.
- For-Profit providers had the most diversified mix of revenue sources, with fees from higher education international students being the largest revenue source, accounting for 35 per cent of total revenue.
- Not-For-Profit providers' key revenue sources were government grants (47 per cent) and programmes followed by donations (included in other sources – 26 per cent). Both revenue from international and domestic higher education students represented approximately ten per cent of total revenue.

Expenditure

- Spending on staff was the largest expense for all provider types, except for For-Profit providers where other expenses (such as occupancy, administration, travel and IT) accounted for the largest area of expenditure.
- Marketing and promotion expenditure accounted for 13 per cent of For-Profit providers' expenditure. In comparison, marketing and promotion accounted for one per cent of the expenditure of other provider types.
- Total expenditure for two provider types exceeded total revenue generated:
 - TAFE providers incurred total expenditure of AUS\$3.4 billion (£1.9 billion) but only generated AUS\$3.2 billion (£1.8 billion) in total revenue.
 - Not-For-Profit providers' total expenditure of AUS\$2.1 billion (£1.18 billion) exceeded total revenue of AUS\$1.7 billion (£0.95 billion).

Table 7: Tertiary Sector Summarised sector financial performance

\$M	2014	2015	2016
Revenue			
Government grants and programmes (including Commonwealth Grant Scheme, Commonwealth research grant, state and territory government grants)	14,521 (£8,162)	14,588 (£8,200)	14,444 (£8,119)
Higher education domestic students (including FEE-HELP, HECS-HELP, full-fee paying student revenue)	6,961 (£3,913)	7,485 (£4,2017)	7,793 (£4,380)
Higher education international students	4,844 (£2,722)	5,425 (£3,049)	6,086 (£3,420)
Non-higher education (including VET, ELICOS, non-award)	1,574 (£885)	2,110 (£1,186)	2,098 (£1,179)
Other sources (including donations, HE third-party delivery, commercial activities)	4,354 (2,447)	4,717 (£2,650)	4,862 (£2,713)
Total revenue	32,254 (£18,120)	34,325 (£19,282)	35,282 (£19,819)
Expenses			
Staffing	(18,084) (£10,158)	(18,974) (£10,658)	(19,460) (£10,929)
Depreciation	(1,794) (£1,008)	(1,918) (£1,077)	(2,123) (£1,192)
Finance costs	(169) (£95)	(216) (£121)	(203) (£114)
Marketing and promotion	(403) (£226)	(526) (£295)	(525) (£294)
Other expenses	(10,174) (£5,713)	(10,902) (£6,122)	(11,662) (£6,549)
Total expenses⁵[6]	(30,624) (£17,197)	(32,537) (£18,271)	(33,973) (£19,077)
Total net surplus/profit⁶	1,630 (£915)	1,788 (£1,004)	1,309 (£735)

Sources: TEQSA analysis, 2014-2016 Provider Information Requests, Department of Education and Training, and provider financial statements.

Much of the funding provided by the Australian Government is directed at teaching and learning in higher education through a range of initiatives. These initiatives assist with infrastructure, student support, increasing equity and improving quality in higher education. The majority of funding is administered under the Higher Education Support Act (HESA) 2003.

Measures that are funded under HESA include:

- the Commonwealth Grant Scheme (CGS), which provides funding to higher education providers to help subsidise students' tuition costs;
- the Higher Education Loan Program (HELP) arrangements which provide income contingent loans to help students meet their study costs;
- Commonwealth Scholarships, to assist Aboriginal and Torres Strait Islander students with costs associated with higher education;

HESA also makes other grants available to higher education providers for a variety of purposes. These include:

- the Disability Support Program (DSP) provides funding to eligible higher education providers to improve access for students with disabilities;
- the Indigenous Support Program provides grants to higher education providers to assist them to meet the needs of their Aboriginal and Torres Strait Islander students;
- the Structural Adjustment Fund, which provided funding to assist universities to operate more competitively in the demand driven funding environment;
- the Higher Education Participation and Partnership Program (HEPPP) supports universities efforts to increase participation of people who are from low socio-economic status backgrounds to attend university;
- grants to a limited number of National Institutes to support ongoing operations;
- the Promotion of Excellence in Learning and Teaching in Higher Education provides funding for initiatives to improve and recognise teaching and learning;
- the Superannuation Program provides supplementary funding to eligible higher education providers to cover certain superannuation expenses for staff;
- the Australian Maths and Science Partnerships Program (AMSPP) to improve student engagement in maths and science courses at university and schools, through innovative partnerships between universities, schools, and other relevant organisations.

Determinations are made each year confirming the grant amounts or advance amounts paid to each higher education provider in respect of grants made under HESA.

Apprentices

As in the UK, employers normally outsource the management of apprenticeship to Registered Training Organisations (RTOs). Most off-the-job apprenticeship training is outsourced to publicly-funded Further Education colleges (TAFE). Very large employers

may constitute themselves as RTOs and directly receive government funding available to support apprenticeships. Group Training Companies (GTCs) which manage approximately 14 per cent of all apprenticeships directly employ apprentices and hire them out to very small companies for work experience while also outsourcing training to TAFE.

The main costs to the employer are wages and supervision/on-the-job training, although a range of incentives can, at least partially, off-set these. For Apprentices the investment comes mainly through the accepting of a training wage, although there may also be the cost of paying back a loan. For the Government and States/Territories, there is the funding of the off-the-job training through RTOs along with the provision of various incentives and benefits to employers and apprentices.

User Choice is a national policy which governs the flow of public funds to Registered Training Organisations in order to make the vocational, education and training sector more responsive to the needs of industry and employers and to promote choice in how training services are provided to employers and Australian Apprentices. The specific allocation of User Choice funding is the responsibility of state and territory governments, and is applied differently in each state and territory, with the State and Territory Training Authorities having responsibility to determine which Australian Apprenticeships are eligible for User Choice funding and level of funding contribution or the training.

Eligibility for user choice funding varies by jurisdiction but is generally based on assessment of skills required. In some cases, employers may fund the full cost of off-the-job training where such training is not eligible for User Choice funding.

In addition to user choice funding, the Australian Government provides subsidies through the Australian Apprenticeship Incentive Program (AAIP). The AAIP supports both traineeships and apprenticeships with a system of financial incentives. The programme encourages employers to offer genuine opportunities for skills-based training and development of employees that will encourage people to acquire and expand their working skills. It also encourages people to enter into skills-based training through an Australian Apprenticeship.

The AAIP for 2013-14 was AUS \$821.4 million (£461.2 million) which comprises AUS\$544.9 million (£306 million) for employer incentives and AUS\$276.4 million (£155.1 million) for personal benefits. The AAIP is administered by the national network of Australian Apprenticeship Centres on behalf of the Australian Government.

States have their own incentive schemes, which vary by jurisdiction, but may include measures such as tax incentives for employers to take on an apprentice.

Australia operates a Construction Levy scheme which varies by State/Territory but is a percentage of building project costs paid by the project owner and is used to support workforce training and development and associated activities, including supporting employers to employ apprentices.

In 1990, Australia implemented an employer training levy, the Training Guarantee Scheme. The Training Guarantee was abolished by the incoming Coalition federal government in 1996 after much negative publicity about its impact, particularly on small business.

Student debt

Australia was the first country to introduce, in 1989, an income-contingent loan programme for the payment of university fees, the Higher Education Contribution Scheme (HECS). The programme has been known since 2005 as the Higher Education Loan Program (HELP). Administered by the government, the loans bear no real interest, but are indexed to the Consumer Price Index. By 2010-11, 77.1 per cent of students had a loan (OECD, 2014). The Australian Taxation Office (ATO) calculates the individual HELP repayment income (HRI) and publishes regularly the income thresholds and corresponding repayment rates. Below AUS\$51,309 (£28,807), no payment is due. This provides incentives to work on low paid jobs, or to work part-time according to del Rey and Schiopu (2015) who cite evidence of a small, but significant, degree of concentration of earnings (bunching) below the minimum repayment threshold.

The maximum yearly payment is eight per cent of HRI. Based on 2011 Census data, Go8 (a coalition of leading Australian universities) reports that more than one fifth of graduates in full time employment earned incomes less than the HELP repayment threshold. This group consists mainly of graduates in the early stages of their careers, since most graduates do not begin to make repayments until their third year of full time work.

Recent figures suggest that average debt upon graduation in Australia has been increasing significantly over recent years: even full-time undergraduates, who in other respects appear to have changed little from the 2006 cohort, also had higher estimated levels of debt: from AUS\$28,861 (£16,204) in 2006 (plus CPI) to AUS\$37,217 (£20,895) in 2012. Undergraduates from a low socio-economic status (SES) estimated higher levels of debt on completion of their studies than others, and particularly part-time low SES students, with an estimate of AUS\$54,938 (£30,845) compared with AUS\$45,397 (£25,488) for others (Kirby, 2016). It should be borne in mind that these are estimated levels of debt.

Universities Australia suggest that just under 80 per cent of student debt is held through the HECS-HELP and FEE-HELP schemes; for those from lower socio-economic backgrounds, though, the proportion of their debt held by lenders other than the government is greater, with HECS-HELP and FEE-HELP accounting for just under 70 per cent of all debt.

Funding and fees by subject area

Higher Education

In Australia, tuition fees vary between universities and the type of course on which the student is enrolled. Student contribution amounts are capped by the Government, the level of which is determined by the unit of study being undertaken. While providers can charge less than the capped amount, few (if any) do so and this makes the cap the effective price for students. Students undertaking degrees in band 1 subjects, including law, dentistry and medicine, are required to contribute up to AUS\$10,440 (£5,854); band 2 subjects, including computing, engineering and mathematics, up to AUS\$8,917 (£4,999); and band 3 subjects, including humanities, psychology and foreign languages, up to AUS\$6,256 (£3,507) (Kirby, 2016).

According to the Australian government, the average tuition fee charged across Australian higher education institutions is AUS\$7,900 (£4,429).

The majority of Australian students are enrolled on Commonwealth supported places (CSP), which are subsidised by the Australian government. Eligibility for CSPs is determined by several citizenship and residency requirements. If awarded a CSP place, students can apply for the HECS-HELP scheme, which provides a tuition fee loan up to the value of the course undertaken (see above). While the Australian Government sets the maximum student contribution amount for CSPs, it does not place restrictions on maximum fees for domestic students that are not subsidised by CSPs (i.e. those students in full-fee paying places). There are also no restrictions on maximum fees for international students in any course. It is at the provider's discretion to determine the level of tuition fees it will charge for their courses provided they don't charge less than Commonwealth supported students.

Forty-four higher education providers (HEPs) (including all 37 public universities) currently offer CSPs to domestic students. The Government subsidises a CSP by paying part of the fees for the place directly to the HEP and the student pays the remainder of the fees through a 'student contribution' amount, mostly deferred through HELP loans (see above). Currently, the Government subsidises, on average, around 60 per cent of the actual cost of higher education and the student pays the remaining amount (student contribution amount) to the approved provider.

Since 2012 public universities have been able to enrol unlimited numbers of students in CSPs, except in medicine. CSPs for sub-bachelor and postgraduate course work qualifications and medicine courses are allocated by the Government.

Table 8: Government and student contributions for a Commonwealth-supported place in 2015

Discipline	Contribution per Equivalent Full-Time Student Load (EFTSL)			
	Student maximum	Government	Total	Per cent paid by student
Humanities	\$6,256 (£3,513)	\$5,539 (£3,111)	\$11,795 (£6,634)	53%
Law, accounting, administration, economics, commerce	\$10,440 (£5,864)	\$1,994 (£1,120)	\$12,434 (£6,985)	84%
Mathematics, statistics,	\$8,917 (£5,010)	\$9,800 (£5,506)	\$18,717 (£10,518)	48%
Behavioural science, social studies	\$6,256 (£3,515)	\$9,800 (£5,507)	\$16,056 (£9,024)	39%
Education	\$6,256 (£3,516)	\$10,196 (£5,730)	\$16,452 (£9,248)	38%
Clinical psychology, foreign languages, visual and performing arts	\$6,256 (£3,517)	\$12,053 (£6,775)	\$18,309 (£10,292)	34%
Allied health	\$8,917 (£5,013)	\$12,053 (£6,776)	\$20,970 (£11,788)	43%
Computing, built environment, other health	\$8,917 (£5,013)	\$9,800 (£5,509)	\$18,717 (£10,523)	48%
Nursing	\$6,256 (£3,517)	\$13,456 (£7,565)	\$19,712 (£11,083)	32%
Science	\$8,917 (£5,013)	\$17,136 (£9,634)	\$26,053 (£14,649)	34%
Engineering, surveying	\$8,917 (£5,013)	\$17,136 (£9,634)	\$26,053 (£14,649)	34%
Agriculture	\$8,917	\$21,748	\$30,665	29%

Discipline	Contribution per Equivalent Full-Time Student Load (EFTSL)			
	Student maximum	Government	Total	Per cent paid by student
	(£5,013)	(£12,231)	(£17,246)	
Medicine, dentistry, veterinary science	\$10,440 (£5,871)	\$21,748 (£12,230)	\$32,188 (£18,101)	32%

Source: Department of Education and Training

VET

Course fees for VET programmes can vary widely depending on the course, institute and location. Different courses demand different tuition courses, but generally they lie between AUS\$4,000 (£2,249) annually up to AUS\$25,000 (£14,055). There are some higher-level courses (certificate or diploma courses) that may ask for higher tuition fees. Compared with undergraduates, VET students in the main have less access to information on price and any applicable subsidy and, hence, their out-of-pocket costs, as well as less ability to compare training providers when making choices. This was the case with VET FEE-HELP, with examples of wide variation in student costs for the same course (Fowler, 2017).

VET Student Loans commenced on 1 January 2017, replacing the VET FEE-HELP scheme. The VET Student Loans programme focuses on courses that address industry needs, creating better opportunities for employment. VET Student Loans offers income contingent loan support to eligible students studying certain diploma level and above vocational education and training qualifications. Eligible students are entitled to loans up to a capped amount.

To access a VET Student Loan, a student must be enrolled at a VET Student Loans approved training provider that is approved to offer the VET Student Loans approved course. Depending on the allocated course code, maximum loans are between AUS\$5,000 (£2,803) and AUS\$15,000 (£8,410) with the exception of a greater amount for particular courses with high costs.

The VET Student Loan must be paid back at the relevant repayment rate when an individual's repayment income is above the compulsory repayment threshold. The compulsory repayment threshold is adjusted each year. The compulsory repayment threshold for the 2016/17 income year was AUS\$54,869 (£30,763).

The VET loan is only available for approved courses at the diploma, advanced diploma, graduate certificate and graduate diploma level.

The future take-up and financing/repayments under the new VET Student Loans programme is expected to reduce the value of new student loans being issued by more

than \$2.4 (£1.35 billion) billion per annum by 2019—20 (Parliament of the Commonwealth of Australia 2016).

It is notable that the new VET Student Loans policy adopts an approach similar to that applying in higher education, with disclosures of subsidies; with three levels of funding specific to each of the 347 proposed courses (Fowler, 2017).

Apprentices

All qualifications that are the basis of Apprenticeships can be accessed outside an Apprenticeship contract, either through a private training provider or through a TAFE. Costs vary from provider to provider and also the duration of the course (which can vary once prior learning/experience is taken into account). The fees may be subsidised by the State/Territory depending on the qualification and eligibility criteria of the individual set at State/Territory level. The Government Skills portal provides average duration/costs for most qualifications.

Monitoring

The Tertiary Education Quality and Standards Agency (TEQSA) conducts an annual financial assessment of each provider, which analyses ten commonly-accepted financial metrics reflecting key business drivers critical to financial viability and sustainability. TEQSA consulted with the sector in developing these financial metrics in 2013 and received broad support for their adoption.

Assessing whether projections of higher education student numbers are realistic is an important part of TEQSA's financial assessment against the *Higher Education Standards Framework (Threshold Standards) 2015*.

The states and territories are responsible for regulating other providers including ensuring financial viability and probity and each has its own mechanisms for doing this.

Relationship with national economies

Skills Australia was established to provide independent expert advice and recommendations to Government about Australia's skills needs. In 2012, Skills Australia was renamed the Australian Workforce and Productivity Agency (AWPA) and its role and functions significantly expanded. These additional functions included developing sectoral workforce development plans, undertaking research and analysis and having responsibility for administering the National Workforce Development Fund, which was worth \$558.5 million over four years. The National Commission of Audit report recommended that AWPA be consolidated into the Department of Industry, as part of its overall recommendation of reducing the number of separate agencies and boards. In addition, it was announced in the 2014–15 Budget that the National Workforce Development Fund will cease from 1 January 2015.

The states and territories develop local skills strategies and funding allocations for VET reflect their priorities.

Outcomes

In this section we consider how countries assess student satisfaction, institutional performance and perceptions of value for money.

Performance

Student satisfaction

The Quality Indicators for Learning and Teaching (QILT) is an Australian Government programme which brings together data from higher education students and graduates around Australia, including international students studying in Australia. The QILT website, www.qilt.edu.au, allows students to compare provider performance at the study area level, across twelve key indicators of quality teaching and learning practices, including:

- overall satisfaction of current students
- overall satisfaction of recent graduates
- rates of students moving into full-time employment after graduation
- the median salary received by recent graduates.

NCVER (2017a) provides a summary of the outcomes of students who completed their vocational education and training in Australia during 2016. The figures are derived from the National Student Outcomes Survey, which is an annual survey of students awarded a qualification (graduates), or who successfully complete part of a course and then leave the VET system (subject completers). It found that, in 2017:

- 87.3 per cent of graduates were satisfied with the overall quality of training, up 1.3 percentage points from 2016. Proportions were similar for graduates from TAFE institutes and community education providers. Proportions were higher for graduates from TAFE institutes (87.8 per cent), compared with graduates from universities (86.1 per cent) and private training providers (87.0 per cent).
- 91.6 per cent of graduates would recommend the training, up 1.1 percentage points from 2016. A higher proportion of graduates from TAFE institutes (92.4 per cent) and community education providers (92.3 per cent) would recommend the training, compared with graduates from private training providers (91.2 per cent).

Institutional performance

The Tertiary Education Quality and Standards Agency (TEQSA) is Australia's independent national quality assurance and regulatory agency for higher education. All organisations that offer higher education qualifications in or from Australia, universities and other organisations, must be registered with TEQSA. Higher education providers that

have not been granted self-accrediting authority (almost all of the non-university providers) must also have their courses of study accredited by TEQSA. The *Tertiary Education Quality and Standards Agency Act 2011* (TEQSA Act) which established the agency, requires it to:

- register regulated entities as higher education providers and accredit their courses of study
- conduct compliance and quality assessments
- conduct re-accreditation assessments of courses developed by providers without self-accrediting authority
- provide advice and make recommendations to the Commonwealth Minister responsible for Education on matters relating to the quality and regulation of higher education providers
- cooperate with similar agencies in other countries
- collect, analyse, interpret and disseminate information relating to quality assurance practice and quality improvement in higher education.

The Australian Skills Quality Authority (ASQA) is the national regulator for Australia's vocational education and training sector. ASQA regulates courses and training providers to ensure nationally approved quality standards are met. As the national regulator for the vocational education and training sector, ASQA seeks to make sure that the sector's quality is maintained through the effective regulation of providers and accredited courses.

Through the work of Skills Service Organisations in developing training packages, industry defines the skills required by the labour market. ASQA ensures that registered training organisations are meeting the requirements of these industry-developed training packages, so that VET graduates have the required skills and competencies for employment.

Perceptions of value for money

Higher Education

Following the change of government at the 2013 federal election, the National Commission of Audit was established to review the performance, functions and roles of the Commonwealth and make recommendations to achieve efficiencies, productivity improvements and savings across all areas of Commonwealth expenditure.

The Commission found that Commonwealth investment in higher education contributes to a more agile and productive workforce, resulting in higher tax revenues, reduced unemployment costs and improved international competitiveness. However, a large proportion of the benefits of higher education accrue directly to individual students through improved employment prospects and higher lifetime incomes. It estimated the Commonwealth pays 59 per cent of domestic bachelor degree tuition costs while

students contribute 41 per cent. It considered rebalancing the public and private contributions to higher education costs was warranted given the substantial private benefit.

The Commission judged that enhanced competition from allowing universities to determine their own prices should improve efficiency and drive innovation and quality improvements for students. However, questions around whether market forces in Australia are sufficient to yield distinct price differentiation between courses and universities were noted. Given current university behaviour, the lack of price sensitivity among domestic undergraduate students, and examples of international experience, the Commission noted there was a risk deregulation could lead to significant fee increases. This would result in the Government being worse off through increased HELP student loan liabilities and would potentially impact equity of access. It could also risk student outcomes if universities shift entry standards away from a focus on ability toward a focus on price.

The Commission believed the design of HELP passes on additional and unnecessary costs to the Commonwealth. As the interest rate on outstanding HELP loans is below the Commonwealth government borrowing rate, an additional subsidy is provided to students. Bad and doubtful debts make up around 17 per cent of HELP loans each year – as a result of people not earning enough to hit the repayment threshold, moving overseas, or dying before repaying the loan. The proportion written off in bad and doubtful debts may increase over time, given the growing number of students accessing HELP and the increasing average debt per student.

The Commission advised against the idea of selling off student HELP debt to the private sector as a means of easing budget pressures. Given the risk profile of HELP debt as an investment, it would need to be sold for less than it was worth, leaving the Government's financial position worse off. Additionally, this would reduce the flexibility of future governments to undertake further reforms of the student loan arrangements.

The Commission also found that the uncapping of bachelor places in 2012, whilst improving access for those who might otherwise not have pursued higher education, may have led to a decrease in entry standards. Uncapping places with open-ended HELP may provide a commercial motivator for universities to lower standards in order to enable an increase in student numbers.

The Commission made the following recommendations to better reflect the private benefits of higher education and improve performance of the sector:

- decrease the proportion of higher education costs paid by the Commonwealth through the Commonwealth Grants Scheme from 59 per cent to 45 per cent and increase the average proportion of costs paid by students from 41 per cent to 55 per cent;

- develop options for partial or full deregulation of fees for bachelor degrees, taking into account any relevant recommendations of the Review of the Demand Driven Funding System;
- change existing HELP arrangements to increase repayment rates by lowering the income threshold at which student loans are repaid and ensuring interest rates reflect the Commonwealth's full costs in making these loans, including the cost of bad and doubtful debts.

In the 2017 budget, the Australian Government announced the following changes:

- student fees will increase by 1.8 per cent next year and continue rising to a total of 7.5 per cent by 2021. The Government argues the changes would mean a price hike of between AUS \$2,000 (£1,124) and AUS\$3,600 (£2,024) for a four-year course. The most expensive course, a six-year medical degree, would cost AUS\$75,000 (£42,172).
- The HELP debt repayment income threshold was lowered. From July 2018, students will have to start paying back their loans when they reach an income level of AUS\$42,000 (£23,616) per year, down from the current level of about AUS\$55,000 (£30,926). However, the repayment rate will be on a sliding scale from one per cent to ten per cent depending on income.
- The Government abandoned a previously announced 20 per cent cut to university funding, but institutions will be hit with a 2.5 per cent efficiency dividend instead on Commonwealth Grant Scheme payments in 2018 and 2019.
- The Government will also make elements of university funding contingent on performance in priority areas. 7.5 per cent of a university's funding from the Commonwealth Grant Scheme will be contingent on universities meeting requirements for admissions and financial transparency. That will expand to include performance requirements for student retention and success from 2019.

The Government estimates the changes will save AUS\$2.8 billion (£1.57 billion) over four years and that taxpayers will contribute 54 per cent of average fee costs per student instead of the current 59 per cent.

VET

Mary Leahy of the Melbourne Graduate School of Education, in an article in 2015³ argued that the demand driven model for VET was leading to the exploitation of students with thousands being signed up to courses they have little or no chance of completing:

“The business model is fairly simple:

³ <https://theconversation.com/reforming-vocational-education-its-time-to-end-the-exploitation-of-vulnerable-people-51396>

- Register as a training provider and ensure your students have access to VET FEE HELP income-contingent loans.
- Sign up as many students as possible for single or double diplomas.
- The student takes on a VET FEE HELP loan to defer payment of course fees.
- The training provider receives the VET FEE HELP payment from the government.
- As long as the student is enrolled beyond the census date, the training provider is paid.
- Even if the course is never started, the provider will receive funds from the government and the student is liable for the debt.”

In response to these and similar concerns, the Government reformed the loan system (see above) and tightened admissions criteria to require providers to make a judgement about a student’s capacity to complete the programme (see above) which has had a positive effect on completion rates.

For government-funded VET programmes commencing in 2015:

- The national estimated completion rate for programmes at certificate I and above was 49.4 per cent, up from 44.7 per cent for programmes commenced in 2014.
- By level, programmes at diploma and above (56.8 per cent), certificate III (55.1 per cent), and certificate IV (52.3 per cent) had the highest national estimated completion rates.
- By field of education, programmes in natural and physical sciences (63.4 per cent), society and culture (59.6 per cent), and health (58.8 per cent) had the highest national estimated completion rates.
- For students in full-time study aged 25 years and under with no prior post-school programme completion, the national estimated completion rate for programmes at certificate I and above was 58.3 per cent, up from 54.9 per cent for programmes commenced in 2014 (NCVER, 2017a).

Disadvantage

The Government administers several programmes and initiatives to support student access and participation in higher education in Australia:

- The Higher Education Participation and Partnerships Program (HEPPP) aims to ensure that Australians from low SES backgrounds who have the ability to study at university have the opportunity to do so. It provides funding to assist universities to undertake activities and implement strategies that improve access to undergraduate courses for people from low SES backgrounds, as well as improving the retention and completion rates of those students.

- The Disability Support Program provides funding to universities to undertake activities that assist in removing barriers to access and participation in higher education for students with disabilities. The programme was evaluated in 2014-15 by KPMG. The evaluation findings are supportive of the programme and make suggestions for its ongoing operation. The Australian Government is currently considering its response to the report. The programme assists in providing educational support and/or equipment to domestic students with disability with high cost needs. Funding is also provided to encourage those providers to implement strategies to attract and support students with disabilities.
- The National Disability Coordination Officer (NDCO) Program supports a network of regionally based officers to work strategically to assist people with disability access and participate in tertiary education and subsequent employment. As part of a national network, NDCOs work at the local level to assist working age people aged between 15-64 with a disability who may wish to succeed in post school education, training and employment.
- The National Centre for Student Equity in Higher Education (NCSEHE) is funded by the Government and hosted by Curtin University. NCSEHE's purpose is to inform public policy design and implementation, and institutional practice, in order to improve higher education participation and success for marginalised and disadvantaged people.

The Australian Government has also set a target that by 2020, 20 per cent of higher education enrolments at undergraduate level will be people from low socio-economic status.

Blyth (2014) reports that, despite various strategies for participation, the proportion of low socioeconomic student participation in higher education has remained at around 14.5 per cent (compared to 25 per cent of the population) and suggests that, as higher education participation has grown in Australia, there is some suggestion of greater social inequity in participation.

Appendix B: Country report, Canada

Overview of post-compulsory education

In Canada, schooling is mandatory in most provinces up until the age of 16, with the typical age at high school graduation being 17-18. Depending on the province or territory in Canada, students attend four to six years of compulsory upper secondary education. In Canada, 92 per cent of 25-34-year-olds have attained at least upper secondary qualifications (OECD average of 82 per cent).

In each of the 13 jurisdictions, one or two ministries or departments are responsible for organisation, delivery and assessment of the education system. Education, outside of the largely autonomous university sector, is mostly delivered by publicly funded institutions maintained by the jurisdictions while the federal government provides some funding towards post-secondary education through the Canada Social Transfer (CST), a federal block transfer to provinces and territories in support of post-secondary education, social assistance and social services, and early childhood development and early learning and childcare calculated on an equal per capita cash basis⁴ and provides programmes that support skills development. At upper secondary level, only a small proportion of students – primarily in Québec – are enrolled in pre-vocational/vocational programmes (six per cent compared to 44 per cent on average in OECD countries in 2012). This rate reflects the structure of Canadian secondary systems which, in virtually all provinces and territories, do not have a prominent vocational track. Vocational education and training (VET) is primarily offered at the post-secondary level in public or private technical and vocational institutes or colleges (OECD, 2015).

In Québec students finish upper secondary education one year before students in other parts of Canada and then typically enrol in a CEGEP (collège d'enseignement général et professionnel)⁵. In the CEGEP they can choose between a pre-university programme in one of nine areas or one of 132 technical programmes for those intending to move into the job market. If successful, students are awarded a Diplôme d'Études Collégiales (DEC) regarded as the first rung of higher education.

Canada has a highly educated population:

- In 2016, 91 per cent of Canadians aged 25 to 64 had at least a high school diploma or postsecondary credential, well above the Organisation of Economic Co-operation and Development (OECD) average of 78 per cent (Statistics Canada, 2017). Only the Czech Republic (94 per cent) and Poland (92 per cent),

⁴ Source: Department of Finance Canada <https://www.fin.gc.ca/fedprov/cst-eng.asp>

⁵ <http://www.fedcegeps.gc.ca/english/what-is-a-cegep/>

posted higher proportions. The United States was comparable with Canada at 90 per cent.

- Just over two-thirds (68 per cent) of Canadians aged 25 to 64 had completed postsecondary education in 2016, well above the OECD average of 42 per cent but half of these, or around one-quarter of adults, have a college degree at tertiary 5B level (Alvarez-Galvan et al., 2015). 31 per cent had a bachelor's degree or higher which is closer to the OECD average of 29 per cent (Statistics Canada, 2017).
- Those attaining other types of postsecondary education, including at the college, trade or vocational level, comprised 36 per cent of Canadians aged 25 to 64. This is partly a reflection of Canada's extensive network of colleges, a system not seen in most other OECD countries, where the comparable average was 13 per cent (Statistics Canada, 2017).

Canada's high ranking is largely due to its high rates of vocational (tertiary-type B) college-based attainment rather than academic university (tertiary-type A) attainment (OECD, 2014).

The apprenticeship system plays an important role in Canada's post-secondary education system as a source of workplace training. Provinces and territories are responsible for apprenticeship training and trade certification. The Government of Canada works with the provinces and territories to manage the Interprovincial Standards Red Seal Program to promote mobility of qualified tradespersons across the country.

Vocational schools provide occupation-specific training, which can lead to an associate degree, diploma, certificate or other award. Vocational and technical schools in Canada are either public or private institutions that provide career training programmes, apprenticeship programmes, and much more. The majority of training options fall into one of four main categories, which include construction, manufacturing, service, and transportation.

Colleges and Institutes Canada (CICan) is a voluntary membership organisation representing publicly supported colleges, institutes, CEGEPs and polytechnics in Canada and was known previously as the Association of Canadian Community Colleges (ACCC). CICan's members work with industry and social sectors to train learners of all ages and backgrounds at over 420 campuses serving urban, rural, and remote communities across Canada. The association is committed to quality education and skills development

opportunities for all Canadians as a means to maximise labour market participation and support Canada's prosperity.⁶

Education systems

Academic institutions

Entry criteria

There are 96 universities in Canada. Specific entry requirements in Canada vary from one institution to another. There is no general entry exam for universities; each university has its own criteria.

For admission into bachelor-level programmes, students usually must have completed secondary school. There may also be course-content requirements or grade-point average minimums. As undergraduate schools have limited space, there is competition for admission. For most, the greatest competition comes from high school students, meaning the two most basic entrance criteria are the successful completion of high school and competency in one of the two official languages (predominantly English in most of Canada and French in Quebec) although L'Association des collèges et universités de la francophonie canadienne has in its membership 21 post-secondary institutions that are Francophone or bilingual outside Quebec including in Nova Scotia, New Brunswick, Prince Edward Island, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia.⁷

Vocational/technical institutions and providers

Entry criteria

Canada has 131 public and 25 private recognised institutions that offer postsecondary VET programmes. An additional 35 private institutions are authorised to offer specific postsecondary VET programmes. Most programmes in the colleges are offered on a first come first served basis. Some programmes have minimum requirements; however, these are not generally based on grades. In colleges, provincial and territorial governments have responsibilities in the areas of funding, fees, quality assurance and the introduction of new programmes. In publicly funded colleges, provincial and territorial government involvement can extend to admissions policies (OECD, 2015b).

⁶ <https://www.collegesinstitutes.ca/what-we-do/about/>

⁷ <http://www.acufc.ca/>

Apprenticeship providers

Entry criteria

Apprenticeships are not formally postsecondary in the sense that high school completion is not usually a condition for entering an apprenticeship. But apprentices without a high school diploma are increasingly rare as more trades require that an apprentice has completed high school.

Flexibility

Some community colleges offer university transfer programmes that allow students to take courses that are parallel to those offered for the first two years of a four-year university programme. Students intending to acquire a degree at a university can complete their first two years of study at a community college or university college and earn credits. Most of the credits earned in this type of programme may be transferred to universities as the first and second years of a degree programme. Community colleges and university colleges that offer transfer programmes usually have an established relationship with nearby universities. Students must still apply to the university to gain admission to complete the last two years of the four-year programme.

In Canada in common with other OECD countries, credit transfer is recognised as a challenge (OECD 2015b). It is a challenge both among colleges, and between colleges and universities. The signing by college and university leaders of a Framework for Collaboration in September 2014 to guide work towards improving credit transfer and pathways among postsecondary presents a promising initiative to address the issue of credit transfer.

A survey on on-line learning targeted over 200 public post-secondary institutions across Canada in 2017, with responses covering 78% of all university and college student enrolments.⁸ Key findings include:

- almost all Canadian colleges and universities now offer online courses; online enrolments have expanded at a rate of 10%-15% per annum over the last five years; online learning now constitutes between 12%-16% of all post-secondary teaching for credit;
- online learning is providing students with increased access and greater flexibility;

⁸ <https://onlinelearningsurveycanada.ca/news/press-release-on-launch-of-report/>

- two-thirds of Canadian post-secondary institutions see online learning as very or extremely important for their future plans.

Private career colleges (or training schools) can be found in all Canadian provinces and offer programmes that lead to a diploma or certificate. They can be not-for-profit institutions, though most are for-profit business operations (Li and Jones, 2015). They usually do not receive operating grants from provincial governments; however, students attending some registered private colleges can be eligible for government student financial assistance. According to Career Colleges Ontario,⁹ advantages of career colleges include:

- Small class sizes,
- Intensive training with short duration
- Flexible timetabling
- Multiple intakes throughout the year.

There seems to be no pan-Canadian information on enrolments or other information in this sector although Li and Jones (2015), citing multiple sources, concluded that they represent a comparative small sector compared with the public offer in Canada although could not arrive at comparative percentages. Regulations for private colleges differ between provinces, as do programmes offered, including degree-level. While there has been some concerns in the media about the extent to which some career colleges prepare students for the job market and their value for money¹⁰¹¹, we have not been able to find any systematic evaluation of their effectiveness (there are no national mechanisms for quality assurance and the extent to which this is undertaken in each Province appears variable). Li and Jones (2015) observe that “in terms of number of institutions, career colleges represent by far the largest sector of private higher education in Canada. However, the importance of the sector is more difficult to measure or analyse in large part because there is so little public data on the sector, and because the sector is both diverse (in terms of the size and programme focus of providers) and fluid (with businesses coming and going, expanding and contracting, as a function of the market).”

⁹ http://www.careercollegesontario.ca/w_what-are-career-colleges.aspx?

¹⁰ <https://www.theglobeandmail.com/news/national/students-at-ontarios-private-colleges-not-finding-jobs-provincial-numbers-show/article30117401/>

¹¹ https://www.casa-acae.com/private_career_colleges_forcing_students_to_take_on_more_debt_with_lackluster_results_and_poor_job_prospects

Provision to support low attainers

In 2016, 340,000 Canadians aged 25 to 34 had not completed high school. Regional governments have implemented a number of programmes to address the issue.

Examples include:

- In Nova Scotia, the Options and Opportunities programme (O2, 2006) targets high school students who may be disengaged from school and are not achieving their academic potential, offering them alternative options to traditional learning. The programme aims to provide students with the opportunity to pursue hands-on learning experiences with a career focus and prepare students for successful transitions from high school to a career path.

In Ontario, the Specialist High Skills Major programme (2006) is designed to help 42,000 senior secondary students (2013/14) meet high-school graduation requirements while focusing their learning on one of nineteen economic sectors with courses, certifications and workplace experience. The Dual Credit programme intends to support 22,000 students (2013/14) who may face challenges in graduating to earn credits toward both secondary graduation and a post-secondary diploma or apprenticeship certification (OECD 2015b).

Role of government

Education in Canada is decentralised to its 13 provinces and territories. These jurisdictions may have one or two ministries or departments involved with education, one responsible for primary and secondary education and the other for post-secondary education. Canada's ministers of education and advanced education collaborate on pan-Canadian educational priorities under the Council of Ministers of Education, Canada (CMEC), an intergovernmental body to discuss policy issues, undertake policy activities, liaise with the federal government, and represent Canadian education internationally on matters of common interest.

Employment and Social Development Canada provides information and support for post-secondary and VET education and for improving the literacy and essential skills of adults in Canada. The Canadian Education Statistics Council, a partnership between CMEC and Statistics Canada, that governs the Canadian Education Statistics Programme and produces a data framework to assist in policy making.

In colleges, provincial and territorial governments have responsibilities in the areas of funding, fees, quality assurance and the introduction of new programmes. In publicly funded colleges, government involvement can extend to admissions policies, programme approval and curricula (OECD, 2015b).

Apprenticeships are regulated by the provinces and territories but typically involve industry in determining the standards for training and certification. The government of Canada also plays a role, particularly in ensuring interprovincial mobility.

Take up

Post-secondary education

Statistics Canada statistics show that:

- About six in ten enrolments in Canadian postsecondary institutions in 2014/2015 were in programmes at the bachelor level or above at universities and degree granting colleges. More than 80 per cent of this group were in undergraduate programmes.
- About two in ten enrolments were in career, technical or professional training programmes. These programmes accounted for over 60 per cent of college enrolments.
- For the second consecutive academic year, the largest increase in the number of enrolments for 2014/2015 was in the field of architecture, engineering and related technologies (+9,810).
- There has been an upward trend in the number of graduates from 2000 to 2014. Almost half of these graduates had successfully completed a programme at the bachelor level or above, as 37.0 per cent received a bachelor's degree, 9.3 per cent graduated with a master's degree and 1.4 per cent obtained a doctorate.
- The number of students with a career, technical or professional training diploma increased significantly over the past 15 years. These students accounted for 18.3 per cent of all graduates in 2014, compared with 10.8 per cent in 2000.
- Over half of the college and university graduates received their qualification in one of the following three fields of study in 2014: business, management and public administration (21.9 per cent), social and behavioural sciences, and law (14.8 per cent) and health and related fields (14.5 per cent).

Apprenticeships

Strong economic growth through much of the period since 2000 and demographic pressures such as workforce ageing, have contributed to a robust demand for skilled tradespeople. Despite a decline following the economic recession in 2008 and 2009, new registrations in apprenticeship programmes have increased nearly 200 per cent since the 1990s. The majority of apprentices were under 25 years of age (52.8 per cent), men (86.3 per cent), Canadian-born (91.3 per cent) and had a high school diploma as their

highest level of education (55.7 per cent) when starting an apprenticeship (Statistics Canada, 2017a).

Table 9: Number and percentage distribution of registered apprentices by age group, Canada, provinces and territories

Age groups	Statistics	2011	2012	2013	2014	2015
Total age groups	Number	426,285	444,672	469,680	451,140	453,543
	Percent	100.0	100.0	100.0	100.0	100.0
Under 20 years	Number	29,574	29,511	29,157	28,497	25,473
	Percent	6.9	6.6	6.2	6.3	5.6
20 to 24 years	Number	120,021	122,985	124,266	121,251	117,195
	Percent	28.2	27.7	26.5	26.9	25.8
25 to 29 years	Number	100,152	103,449	109,548	105,828	108,762
	Percent	23.5	23.3	23.3	23.5	24.0
30 to 34 years	Number	60,870	64,677	70,110	67,152	69,057
	Percent	14.3	14.5	14.9	14.9	15.2
35 to 39 years	Number	37,992	40,977	44,949	42,837	44,562
	Percent	8.9	9.2	9.6	9.5	9.8
40 to 44 years	Number	26,781	28,464	31,011	29,022	29,694
	Percent	6.3	6.4	6.6	6.4	6.5
45 years and over	Number	50,580	54,240	60,216	56,139	58,320
	Percent	11.9	12.2	12.8	12.4	12.9
Age unknown ^z	Number	315	369	423	414	477
	Percent	0.1	0.1	0.1	0.1	0.1

In contrast to some other OECD countries, the strong apprenticeship model is applied only to a relatively limited set of occupations – primarily manufacturing and construction industries (OECD, 2015b). The Interprovincial Red Seal Program is the Canadian standard for skilled trades and allows tradespeople to have their skills recognised across the country. Apprentices are more highly represented among the Red Seal trades at 78.2 per cent. Over half of all apprentices were in the top ten Red Seal trades with about 12 per cent in the carpenter and construction electrician trades, respectively (Statistics Canada, 2017).

While the apprenticeship system is effective in training individuals for the trades, many individuals continue to enter the trade professions through means other than an apprenticeship programme. About 40 per cent of those who earned a Red Seal credential obtained it through the trade qualifier route – demonstrating the breadth of their experience by accumulating and documenting the requisite work hours and passing the Red Seal exam (Canadian Council of Directors of Apprenticeship, 2011).

Table 10: Registered apprenticeship training, registrations in the top eleven red seal trades in 2014

Top eleven red seal trades	2011	2012	2013	2014	2015
Total trades	426,285	444,672	469,680	451,140	453,543
Construction electrician	48,318	49,611	52,653	53,595	55,566
Carpenter	50,235	48,870	49,494	45,837	45,228
Automotive service technician	22,809	22,536	26,526	25,062	24,858
Plumber	18,840	18,546	19,299	19,023	19,890
Welder	13,242	14,781	16,413	18,732	18,726
Hairstylist	18,465	18,993	18,486	16,767	16,437
Steamfitter/Pipefitter	15,150	16,077	17,868	15,525	15,270
Heavy duty equipment technician	10,071	11,085	11,868	12,603	12,495

Top eleven red seal trades	2011	2012	2013	2014	2015
Cook	11,304	12,228	12,585	11,616	12,216
Industrial mechanic (Millwright)	10,512	11,049	11,421	10,914	11,208
Industrial electrician	10,095	11,049	12,123	10,506	10,407
Other trades	197,238	209,841	220,938	210,954	211,242

Source: Canada Statistics, 2017

In 2012, the median age of entry of new registrants was 25, which suggests that apprenticeship is not a first educational choice of youth (OECD, 2015).

Adult learning

The participation rate of Canadians aged 25 to 64 in formal and/or non-formal education in 2012 was 58 per cent, a rate higher than the OECD average of 50 per cent. Across the provinces and territories, participation rates ranged from 44 per cent in Nunavut to 64 per cent in Alberta. Participation rates decreased with age, with 25 to 34-year olds having the highest rates at 70 per cent, and adults aged 55 to 64 having the lowest (41 per cent) (Statistics Canada, 2017).

Funding

Spend by route

Canada is a federation of ten provinces and three territories, each responsible for its own education system. Provincial governments provide on average over 80 per cent of direct public funding to tertiary education institutions (including colleges). While this gives the main lead role on postsecondary VET to the provinces, the government of Canada supports provincial funding through federal transfers and plays a relevant role in other fronts. The federal government provides funding in a number of ways, including through transfer payments to provinces and territories and through direct financial support to colleges and to students. It runs a national student loans programme.

The resources devoted to education, as measured by the share of gross domestic product (GDP), varied across OECD countries. In 2014, Canada spent 6.0 per cent of GDP on education compared with the OECD average of 5.2 per cent. The share of GDP devoted to educational institutions varied within Canada, from 4.4 per cent in Alberta (which had a relatively high GDP) to 8.8 per cent in Nunavut (Statistics Canada, 2017).

OECD data from 2014 shows that Canada spent considerable more than the OECD average on all forms of tertiary education.

Table 11: Annual expenditure per student by educational institutions for all services (2014) [OECD, 2017: 177]

	Tertiary (including R&D activities)			All tertiary (excluding R&D activities)
	Short cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	
Canada	14,377 (£10,821)	25,185 (£18,956)	21,326 (£16,051)	15,004 (£11,293)
OECD Average	10,423 (£7,845)	16,674 (£12,550)	16,143 (£12,150)	11,056 (£8,321)

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

The largest expenditure in 2014 was on educational core services, as was the case in all OECD countries.

Table 12: Annual expenditure per student by (tertiary) educational institutions for core educational services, ancillary services and R&D (2014)

	Educational core services	Ancillary services (transport, meals, housing provided by institutions)	R&D	Total
Canada	13,808 (£10,393)	1,196 (£900)	6,323 (£4,759)	21,326 (£16,051)
OECD average	10,348 (£7,789)	710 (£534)	5,084 (£3,827)	16,143 (£12,150)

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

Of that core spend, for Canada, as elsewhere, the largest proportion went on staff salaries and associated costs, although, in Canada, proportionately more of those costs were on staff other than teachers.

Table 13: Current expenditure by resource category (2014) [OECD, 2017:231]

**Distribution of current expenditure by public and private educational institutions
as a percentage of total current expenditure**

	Compensation of all staff			Other current expenditure
	Compensation of teachers	Compensation of other staff	Total	
Canada	38	29	66	34
OECD average	41	26	67	33

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

More recent data from Statistics Canada confirms the OECD findings:

- The largest proportion of universities' expenditures was for staff compensation (salaries, wages and benefits), accounting for CAN\$16.3 billion (£9.33 billion) in 2015/2016, up CAN\$159 million (£91 billion) from 2014/2015. Total compensation has increased as a proportion of total expenditures, from 55.5 per cent in 2010/2011 to 60.1 per cent in 2015/2016.
- Net capital expenditures by universities and degree-granting colleges was CAN\$2.3 billion (£1.32 billion) in 2015/2016, accounting for 8.6 per cent of total expenditure. Capital expenditures cover longer-term acquisitions like property, building, large renovations and equipment purchases. In the Financial Information of Universities and Colleges survey, capital expenditure is recorded when the expense takes place and amortization costs are not recorded over the life of the asset. Large annual fluctuations are common in capital spending.
- The largest proportion of colleges' expenditures (64 per cent) was for staff compensation (salaries and benefits), accounting for CAN\$5.5 billion (£3.5 billion) in 2015/2016, similar to 2014/2015 levels. However, from 2010/2011 to 2015/2016, total compensation increased as a proportion of total expenditures from 59 per cent to 64 per cent. The increase in compensation was mainly due to employee benefits (e.g. the institution's contribution to pensions, group life insurance, and workmen's compensation; also included here may be staff development costs paid for by the institution), the value of which increased by 17 per cent over this same period.
- Net capital expenditures by colleges increased slightly, from \$737.5 million (£422 million) in 2014/2015 to \$751.6 million (£430.1 million) in 2015/2016, and accounted for 8.7 per cent of total expenditures. Capital expenditures cover investment in property, building, renovations, and equipment.

Maintenance

Canada's student financial assistance programme includes Canada Student Grants and Canada Student Loans (CSL). Student grants provide up-front non-repayable grants for tertiary education to students from socioeconomically disadvantaged backgrounds. In 2011/12, about 336 000 students received federal grants. Students can also be eligible for federal loans. In 2011/12, about 447 000 full-time students received loans. With financial support from the federal government, Quebec, the Northwest Territories and Nunavut administer their own student financial assistance programmes. Other provinces and territories have student financial assistance programmes linked with the CSL programme (OECD, 2015).

There are lifetime limits on the amount of student financial assistance individuals can receive. This includes both loans and interest-free periods for each loan. Once a lifetime limit has been reached, interest starts to accumulate. Individuals will have to start paying back the loan six months after they graduate or leave their studies. Lifetime limits for Canada Student Loans vary:

- Full-time students who received loans on or after August 1, 1995, are eligible to receive student financial assistance for no more than 340 weeks.
- Full-time students enrolled in doctoral studies are eligible to receive student financial assistance for no more than 400 weeks.
- Students with either a permanent disability or who received Canada Student Loans before August 1, 1995, are eligible to receive student financial assistance for no more than 520 weeks.

Kirby (2016) notes that there is considerable variation both in fees charged, loans available and the extent to which those loans cover the fees between states.

There are also a number of grants available:

- Grant for Full-time Students. A grant for low-income and middle-income students enrolled in a full-time undergraduate programme at a designated post-secondary institution worth up to CAN\$3,000 (£1,712) (dependent on family income) per eight-month school year (up to CAN\$375 (£214) per month of study). for each year of undergraduate study.
- Grant for Full-time Students with Dependents. CAN\$200 (£114) each month for every dependent child of those receiving a low-income grant.
- Grant for Students with Permanent Disabilities. A grant for students with a permanent disability enrolled at a designated post-secondary institution.

- Grant for Services and Equipment for Students with Permanent Disabilities. A grant for students with a permanent disability to help pay for education-related costs.
- Grant for Part-Time Students. A grant of up to CAN\$1,800 (£1,030) for part-time students with financial need who are enrolled in a part-time degree, diploma, or certificate programme (at least 12 weeks long within a period of 15 weeks in a row) at a designated post-secondary institution.
- Grant for Part-Time Students with Dependants. A grant for part-time students who qualify for a Canada Student Loan and have dependent children.

The Canada Apprentice Loan is an initiative of the Government of Canada for apprentices in a designated Red Seal trade. Designated trades are governed by regulations under the Provincial and Territorial Apprenticeship Acts. Apprentices can get up to \$4,000 in interest-free loans per period of technical training. The money can be used to pay for tuition, tools, equipment and living expenses. The Canada Apprentice Loan is available in all provinces and territories except Quebec, where an alternate support is available.

The Canadian government promotes apprenticeships through the Apprenticeship Incentive Grant and Apprenticeship Completion Grant, both of which are small grants (CAN \$1,00 (£0.57) per year with a lifetime maximum of CAN \$2,000 (£1,141) for each grant) available to registered apprentices. In order to encourage people in industry to take on apprentices, the government also offers a business tax credit equal to ten per cent of the wages paid to apprentices.

Source of funding

The provinces and territories and the federal government provide financial support for higher education. The federal government provides indirect funding through transfer payments to the provinces and territories (the Canada Social Transfer); provinces and territories combine this federal funding with their own support for postsecondary education. About 42.6 per cent of expenditure for tertiary education in 2010 came from private sources (compared to the OECD average of 30.8 per cent), including 20 per cent from household expenditures (such as tuition fees). All jurisdictions and the federal government offer a combination of loans, bursaries, scholarships, grants and debt relief to support access and affordability. This support reduces the overall net private contribution to tertiary education. Funding for VET is complex and varies depending on the jurisdiction. Employment and Social Development Canada offers grants and other financial support directly to apprentices and funding for the Red Seal programme, which allows for the development of interprovincial standards and examinations for the assessment and certification of tradespeople. In all jurisdictions, post-secondary institutions charge tuition fees.

Statistics Canada provides detailed information on funding and expenditure by type of provider:

Universities (Statistics Canada, Released: 13-07-2017)

Canada's 150 public universities and degree-granting institutions spent CAN \$27.1 billion (£15.5 billion) in 2015/2016 against revenues of CAN \$27.2 billion (£15.56 billion).

Universities and degree-granting colleges receive most of their funding from government sources and tuition fees. The remaining funding comes from donations, private grants, investments and other minor sources of revenues. Governments are the single biggest source of revenue, accounting for CAN\$13.4 billion (£7.66 billion) or 49.1 per cent of all revenues in 2015/2016. The vast majority of government funding came through the provinces (CAN\$10.6 billion/£6.06 billion), while the federal government was the direct source of another CAN\$2.5 billion (£1.43 billion).

Almost all federal government funding (97 per cent) is directed towards sponsored research through research granting programmes, such as the Social Sciences and Humanities Research Council and the National Science and Engineering Research Council. Provincial funding is primarily directed towards operating costs and capital spending.

The proportion of provincial funding decreased from 41.5 per cent in 2010/2011 to 39.1 per cent in 2015/2016. The main factors for this decline were lower provincial funding, from CAN\$11.3 billion (£6.46 billion) to CAN\$10.6 billion (£6.07 billion) over this period, and increased revenues from tuition fees.

Institutions received CAN \$7.6 billion (£4.35 billion) in revenue from tuition and other fees in 2015/2016, up CAN \$328.8 million (188.19 billion) from 2014/2015. Revenue from tuition fees increased by 29.3 per cent, from CAN\$5.9 billion (£3.38 billion) in 2010/2011 to CAN\$7.6 billion (£4.35 billion) in 2015/2016. The proportion of revenues from tuition fees has grown from 21.5 per cent in 2010/2011 to 27.9 per cent in 2015/2016.

Important factors for the total increase in the proportion of tuition revenues were higher tuition fees and more international students, who pay higher tuition fees than domestic students. For example, the number of full-time international undergraduate university students rose by 55 per cent from 2010/2011 to 2014/2015, compared with a five per cent increase for domestic students. International undergraduate students paid an average annual tuition of CAN\$22,346 (£12,792) in 2015/2016, while domestic students paid CAN\$6,201 (£3,549).

Tuition revenues can include payments received for tuition from students, as well as various forms of bursaries and financial aid to students that are channelled through institutions to support tuition fees. Not included in institutional revenues are other forms of direct assistance to students that are not administered through the institutions, such as

government contributions to Registered Education Savings Plans, tuition tax credits or some federal and provincial student financial aid programmes.

Funds to support sponsored research are revenues that are earmarked solely for research. The federal government is the primary source of this income, but it also includes other sources, such as private industry and private donors. Revenues for sponsored research increased by 0.9 per cent from 2014/2015 to CAN\$5.4 billion (£3.09 billion) in 2015/2016 and have been relatively stable in recent years. In 2015/2016, sponsored research comprised 19.9 per cent of total revenue, compared with 18.8 per cent in 2014/2015.

Colleges (Statistics Canada, Released: 15-01-2018)

The two main sources of revenues for public colleges in 2015/2016 were provincial governments (61 per cent) and student fees (26 per cent). The remaining funding came from other sources, including ancillary enterprise (5.5 per cent), the federal government (1.6 per cent), donations (1.3 per cent) and other miscellaneous sources. In 2015/2016, colleges received a small proportion of their funding from the federal government, accounting for CAN\$137.1 million (£78.4 million). Revenues for Canada's 179 public colleges were CAN\$8.7 billion (£0.57 billion) in 2015/2016 with expenditure totalling CAN \$8.6 billion (£4.9) in 2015/2016.

The proportion of college revenues from provincial governments is declining. In 2010/2011, provincial funding accounted for 65.2 per cent of college revenues, or CAN\$5.4 billion (£3.09 billion) in spending. In 2015/2016, it represented 60.7 per cent of college revenues, or CAN\$5.3 billion (£3.03 billion) in spending.

The distribution of funding sources for public colleges is very different from that of universities. For example, provincial government funds accounted for 39 per cent of revenues for universities, while federal government funds accounted for nine per cent of revenues during the same time period.

While revenues from provincial governments have been declining, college revenues from tuition and fees have been increasing. Institutions received CAN \$2.2 billion (£1.26 billion) in revenue from fees in 2015/2016, up from CAN\$2.1 billion (£1.2 billion) in 2014/2015. Revenue from fees increased 30.9 per cent over a five-year period, from CAN\$1.7 billion (£0.97 billion) in 2010/2011 to CAN\$2.2 billion (£1.26 billion) in 2015/2016. As a result, the proportion of revenues from tuition fees grew from 20.6 per cent in 2010/2011 to 25.8 per cent in 2015/2016. A similar increase in the importance of tuition fees as a source of revenue was also observed for universities over the same period.

In colleges, revenues for sponsored research made up less than one per cent of total revenue in 2015/2016. In contrast, sponsored research in universities accounted for 19.9 per cent of total revenue in 2015/2016.

A portion of VET at the postsecondary level takes place in the private career college sector, which does not receive public funding. The primary source of revenue for these institutions is tuition fees, which are considerably higher than in the public sector (OECD 2015b).

Apprenticeships

Apprentices' training is largely funded through the on-the-job portion of an apprenticeship, where employers are the primary source of income. Nevertheless, many apprentices tapped into available grants, tax credits, and Employment Insurance (EI) benefits to help pay for their training expenses. More than one-third of apprentices, meanwhile, claimed a tax credit for expenses such as tuition or tools.

Student debt

About 50 per cent of graduating students in Canada hold some kind of debt related to their studies. Among all graduating students, the average education-related debt at the time of the Graduating University Student Survey was about CAN\$13,331 (£7,609). When considering only those who report having any debt, the average amount doubles to about CAN\$26,819 (£15,307) (Canadian University Survey Consortium, 2015). About 40 per cent of graduating students hold government student loans, 15 per cent hold loans from financial institutions, 13 per cent hold loans from parents and family and five per cent hold loans from other sources (Kirby, 2016).

Table 14: Higher education fees and funding (2015/16)

Undergrad. tuition fee, per annum (2015/16)	Loans/grants available to all, per annum	Loans/grants available to low-income students/others, per annum	Summary of loan repayment terms	Typical borrower debt at graduation (2015)
Canada				
CAN\$6,200 [£3,538 (2015/16) Tuition fees for undergraduate programmes for Canadian full-time students was, on average, CAN\$6,571 (£3,750) in 2017/2018, up	CAN\$ var. (Canada student loan; dependent on state and cost of school attendance)	Grant for students from low-income families - CAN\$250 [£143] max. per month. (Grant for undergraduate students from middle-income families - CAN\$100 [£57] max. per month.	CAN\$6,200 [£3,538 (2015/16) Tuition fees for undergraduate programmes for Canadian full-time students was, on average, CAN\$6,571 (£3,750) in 2017/2018, up	CAN\$ var. (Canada student loan; dependent on state and cost of school attendance)

Undergrad. tuition fee, per annum (2015/16)	Loans/grants available to all, per annum	Loans/grants available to low-income students/others, per annum	Summary of loan repayment terms	Typical borrower debt at graduation (2015)
3.1 per cent from the previous academic year.		<p>Grant for full-time low-income and middle-income undergraduate students - up to CAN \$3,000 (£1,712) (dependent on family income) per year.</p> <p>The Canada Apprentice Loan – up to CAN \$4,000 (£2,283) in interest-free loans per period of technical training. The money can be used to pay for tuition, tools, equipment and living expenses.</p> <p>Apprenticeship Incentive Grant and Apprenticeship Completion Grant, - (CAN \$1,00 (£0.57) per year with a lifetime maximum of CAN \$2,000 (£1,142) for each grant) available to registered apprentices.</p> <p>Other grants (inc. dependants' grant, part-time studies grant,</p>	3.1 per cent from the previous academic year.	

Undergrad. tuition fee, per annum (2015/16)	Loans/grants available to all, per annum	Loans/grants available to low-income students/others, per annum	Summary of loan repayment terms	Typical borrower debt at graduation (2015)
		disabled students' grant)		

According to the Canadian University Survey Consortium, who conduct three-yearly graduate surveys, in 2015:

- About 92 per cent of graduating students reported they having at least one credit card, including 31 per cent who say they have two or more.
- On average students used about three sources to fund their education, most commonly parents, family or spouse (60 per cent), with many also using earnings from current (49 per cent) or summer (44 per cent) employment and government loans or bursaries (41 per cent).

Funding and fees by subject area

Statistics Canada conducts a number of surveys of providers and students from which the following information is derived. The data shows that fees vary significantly, not only by subject area but also by province.

In general, the tuition fees associated with postsecondary degree programmes increased in 2017/2018. The actual cost that students pay, however, depends on their programme of study, and the grants and assistance they may receive. Tuition for undergraduate programmes for Canadian full-time students was, on average, CAN\$6,571 (£3,750) in 2017/2018, up 3.1 per cent from the previous academic year. The average cost for graduate programmes was CAN\$6,907 (£3.954), a 1.8 per cent increase over 2016/2017 (Statistics Canada, 2018).

While postsecondary institutions receive the majority of their revenue from government funding, according to the Financial Information of Universities and Colleges, and the Financial Information of Community Colleges and Vocational Schools surveys, tuition fees represent a growing source of revenue for universities and degree-granting colleges.

Across Canada, the increase in undergraduate average tuition fees for 2017/2018 ranged from 0.1 per cent in Alberta to 5.5 per cent in Nova Scotia.

Tuition fees for Canadian graduate students were unchanged in Alberta and Newfoundland and Labrador, and rose in the remaining provinces, with increases ranging from 0.8 per cent in British Columbia to 2.8 per cent in Nova Scotia.

The tuition fees reported by the survey on Tuition and Living Accommodation Costs reflect both the variety of degree programmes offered by institutions and the proportion of students enrolled in these programmes. This survey does not necessarily reflect the cost students will pay as there is an assortment of non-repayable financial support available, and this can vary across institutions and provinces. For example, scholarships, bursaries, government grants and tax credits can decrease the actual amount that students pay.

The most costly average tuition fees for Canadian undergraduate students were in dentistry (CAN\$22,297/£12,725) in 2017/2018, followed by medicine (CAN\$14,444/£8,242), law (CAN\$13,642/£7,785) and pharmacy (CAN\$10,279/£5,866). Among all Canadian undergraduate students, just over three per cent were enrolled in one of these four programmes.

Almost 60 per cent of Canadian undergraduate students were enrolled in one of four fields of study—social and behavioural sciences, and legal studies (not including law); business, management and public administration; physical and life sciences and technologies; and humanities. Tuition fees across these fields of study varied by province. At the Canada level and across most provinces, tuition fees in humanities were lower than or similar to the tuition fees for the other three fields of study.

In social and behavioural sciences, and legal studies (not including law), the average tuition fee for full-time Canadian students was CAN\$5,721 (£3,265) and ranged from CAN\$2,550 (£1,455) in Newfoundland and Labrador to \$6,860 (£3,915) in Nova Scotia. Undergraduate tuition fees in business, management and public administration were lowest in Quebec (CAN\$2,731/£1,558) and highest in Ontario (CAN\$10,024/£5,720). In physical and life sciences and technologies, undergraduate tuition fees were above the Canadian average of CAN\$6,191 (£3,533) in four provinces (Nova Scotia, New Brunswick, Ontario and Saskatchewan).

At the graduate level, the most expensive programmes remained the executive and regular masters of business administration (MBA) programmes. Average tuition for an executive MBA was CAN\$51,891 (£29,710) in 2017/2018, while the fee for a regular MBA averaged CAN\$29,293 (£16,771). These averages at the Canada level reflect the variety and broad range of fees among the provinces that offered MBA programmes. Average tuition fees for the nine provinces offering regular MBA programmes varied, from CAN\$1,361 in Newfoundland and Labrador to CAN\$11,760 (£6,733) in Alberta, CAN\$26,623 (£15,243) in British Columbia and CAN\$41,924 (£8,545) in Ontario.

Table 15: Weighted average undergraduate tuition fees for Canadian full-time students, by field of study

	2016/2017	2017/2018	2016/2017 to 2017/2018
	current dollars	current dollars	per cent change
All fields of study	6,375 (£3,654)	6,571 (£3,767)	3.1
Education	4,571 (£2,620)	4,676 (£2,680)	2.3
Visual and performing arts, and communications technologies	5,680 (£3,256)	5,842 (£3,349)	2.9
Humanities	5,460 (£3,130)	5,595 (£3,155)	2.5
Social and behavioural sciences, and legal studies	5,573 (£3,194)	5,721 (£3,279)	2.7
Law	13,115 (£7,518)	13,642 (£7,820)	4.0
Business, management and public administration	6,810 (£3,904)	7,068 (£4,051)	3.8
Physical and life sciences and technologies	6,022 (£3,452)	6,191 (£3,549)	2.8
Mathematics, computer and information sciences	6,911 (£3,961)	7,140 (£4,092)	3.3
Engineering	7,827 (£4,486)	8,099 (£4,641)	3.5
Architecture and related technologies	6,810 (£3,902)	7,081 (£4,057)	4.0
Agriculture, natural resources and conservation	5,438 (£3,116)	5,582 (£3,199)	2.6
Dentistry	21,464 (£12,300)	22,297 (£12,776)	3.9

	2016/2017	2017/2018	2016/2017 to 2017/2018
Medicine	13,911 (£7,971)	14,444 (£8,276)	3.8
Nursing	5,507 (£3,156)	5,634 (£3,228)	2.3
Pharmacy	9,962 (£5,708)	10,279 (£5,890)	3.2
Veterinary medicine	7,450 (£4,269)	7,667 (£4,393)	2.9
Other health, parks, recreation and fitness	6,085 (£3,487)	6,261 (£3,588)	2.9
Personal, protective and transportation services	5,989 (£3,432)	6,157 (£3,528)	2.8

Source: Statistics Canada. Survey on Tuition and Living Accommodation Costs

Monitoring

In publicly funded colleges, provincial and territorial governments have responsibilities in the areas of funding, fees and quality assurance. This includes providers delivering apprenticeship training.

Canada does not have a system of national regulation or monitoring for Universities. Provincial legislation determines how universities are monitored and regulated within each province, each of which has different arrangements for this function.

Relationship with national economies

As previously noted, responsibility for post-secondary education sits with the provinces who set their own policies and procedures, including through legislation. The above may be informed by skills strategies developed at regional level. For example, New Brunswick's Labour Force and Skills Development Strategy 2013-2016.

At a national level, the Sectoral Initiatives Program (SIP) is a grants-and-contributions programme with the objective of addressing current and future skills shortages by supporting the development and distribution of sector-specific labour market intelligence, national occupational standards, and skills certification and accreditation systems. The programme's mandate is to help industries identify, forecast, and address their human resources and skills issues. The SIP funds partnership-based projects for key sectors of

the Canadian economy. These projects are developed and implemented by such industry partners as: workplace organisations, employer associations, education and training bodies, professional associations, unions, and Aboriginal organisations. The Government issues Calls for Proposals at regular intervals for funding consideration.

Outcomes

Performance

Student satisfaction

Statistics Canada undertakes surveys of students at colleges and universities and of apprentices on a regular basis.

The Canadian University Survey Consortium also conducts regular surveys which include measuring satisfaction rates.

The National Survey of Student Engagement (NSSE) is a large-scale annual survey used to measure the level of student participation at colleges and universities in the United States and Canada. The results provide an estimate of how undergraduates spend their time and what they gain from attending college. Institutions use their data to identify aspects of the undergraduate experience inside and outside the classroom that can be improved through changes in policies and practices more consistent with good practices in undergraduate education. This information is also used by prospective college students, their parents, college counsellors, academic advisors, institutional research officers, and researchers to learn more about how students spend their time at different colleges and universities and what they gain from their experiences.

Institutional performance

As higher education in Canada falls under the jurisdiction of the country's ten provinces and three territories, Canadian universities generally receive the authority to grant degrees from provincial legislation (a few universities still retain charters). Under this authority, each Canadian university is autonomous in academic matters and determines its own quality assurance standards and procedures. These institutional policies and procedures are formal and transparent and are coupled with an external review by the relevant provincial quality assurance authorities.

Each Canadian province has its own established system of higher education quality assurance. These systems may be managed by an organisation representing universities, an agency, a provincial government, or a combination of actors. While the approaches differ, provincial quality assurance systems generally review programmes to

ensure the quality of degrees offered, monitor the frequency and efficacy of institutional reviews, and/or set guidelines to audit existing programmes (Universities Canada).¹²

As noted, vocational education providers are also subject to quality assurance which varies by province. Some vocational education and training is regulated by the Red Seal programme, an interprovincial standards framework covering 56 occupations and overseen by the Canadian Council of Directors of Apprenticeship. Programs participating in the Red Seal programme are recognised as having met industry standards of excellence.

Perceptions of value for money

Could find no relevant information.

Disadvantage

There is no pan-Canadian approach to tackling disadvantage and improving participation in post-secondary education that we could find. Various grants are available to those from low income families available for those in university, college or in an apprenticeship but these vary somewhat between provinces. Similarly, initiatives to address disadvantage will largely be undertaken by the provinces.

One such initiative, which ran in 2016, is the “Life after high school” programme. This was targeted at high schools in Ontario, Canada with particularly low college transition rates. In the programme, upper secondary pupils were given three workshops in the school computer lab. In the first workshop they could access a website which displayed a list of eligible courses based on the students’ own. They could access associated information about these courses, such as distance from home, entry requirements, and potential earnings returns. Students were also able to enter their family income information which would reveal grant and loan eligibility personalised to their circumstance. In the second workshop students could apply to courses in which they were interested, completing the form in the workshop with the help of teachers. In the final workshop, students were supported to complete the financial aid process. Applications to college increased by 14 percentage points among programme participants, and actual enrolment increased by over five per cent, (although this was nearly all in two-year programmes). The researchers concluded that providing personalised guidance was critical to convert interest into actual enrolment (Oreopoulos and Ford, 2016).

¹² <https://www.univcan.ca/universities/quality-assurance/>

Appendix C: Country report, France

Overview of post-compulsory education

In France the minimum school leaving age is 16. A very high proportion (>90 per cent) of young people stay on in full-time education or in apprenticeship after the end of compulsory schooling (collège). At age 18 just under 80 per cent are still in full-time education or in apprenticeships.

After leaving primary school, children in France are required to attend secondary school, or Collège until they're 15 (OECD, 2017). At that point, students take an examination which determines how their education will continue (unless they repeat the final year of lower secondary, which around 28 per cent of students do). At upper secondary level, most students move on to a lycée. The Lycée is organised into three different streams: Lycée general, Lycée technologique, and Lycée professionnel.

Lycée usually lasts until age 18 in the cycle long, where students prepare to take the baccalauréat (le bac) exam. The general academic stream culminates in the diplôme du baccalauréat général. The technology-based stream earns students the diplôme du baccalauréat technologique and the vocational stream leads to the baccalauréat professionnel (BAC Pro). Students who fail the baccalauréat examination are issued the certificat de fin d'études secondaires. All three types of baccalauréat are studied over three years and grant students access to university studies. The overall success rate (general, technological, and professional) was 90.6 per cent for those who were entered in 2015.

Other students in lycée attend the cycle court instead where they take either a brevet d'enseignement professionnel (BEP) or Certificat d'aptitude professionnelle (CAP), both of which can lead to the baccalauréat professionnel or into work. The CAP is more vocationally focused and develops practical skills, whereas the BEP is more theoretical with a greater component of general education, intended primarily for those wanting to continue their studies to achieve the BAC Pro. CAP certification remains selective since many students do not pass their final exams. Hence, many enter the labour market without any formal certification, suffering considerable risks (Powell et al., 2012b). There are over 200 CAP courses that can be followed and around 40 BEP programmes. Both are at European Qualifications Framework (EQF) level 3. After the BEP, students may follow a two-year programme in order to obtain a Baccalauréate Professionnel, (the Bac Pro), leading to direct employment or to further study. The BEP is gradually being phased out in favour of achieving the Bac Pro in three rather than four years. The vocational baccalaureate offers 70 specialisms in a wide variety of sectors (retail and wholesale trade, services, catering, maintenance, administration, accounting, construction, agriculture etc.), and in highly specialised sectors (watchmaking, jewellery, fashion). Schools will not offer the full range of options and some will specialise in a particular occupational area. The main purpose of the vocational baccalaureate is entry to the job

market. However, it also enables students to move on to higher education, particularly at University Technical Colleges.

Most vocational education in upper secondary (and tertiary level for two years following the baccalauréat) is delivered through full-time studies in the lycées professionnels. Studies here combine classroom learning with practical workshop sessions and often include work experience (stage en entreprise). In exploring typologies of vocational education across different countries, Pilz (2016) characterised France as having a Vocational Education and Training (VET) system that is primarily state-oriented with strongly segmented practice between general and vocational education and training. Teaching and learning processes are strongly theoretically oriented with a low level of relevance to practice.

This track competes with the apprenticeship track in which learners can access precisely the same qualifications but do so through alternating periods, working in a business and studying at a Centre de Formation pour Apprentis (CFA). Apprenticeships are dominated by a legal framework consisting of, for example the 1987 Seguin law. This raised the upper limit of the age eligibility criteria to 25 and expanded the scope of qualifications that could be studied through the apprenticeship route to include higher education level qualifications. Lycées professionnels, IUTs, other training establishments and employer in-house provision can all be CFAs.

In addition to the state qualifications, since the mid-1980s employer organisations and unions have been developing and promoting competence-based Certificats de Qualification Professionnelle (CQP). CQPs are occupational qualifications based on standards set by the relevant sector and can be taken following training or through the demonstration of skills. They are much narrower in focus than other vocational qualifications and in some instances, can be regarded as a license to practice. They are particularly prevalent in certain sectors, for example construction and automotive repairs. In some sectors, these are used as an alternative to the state system, in others as a way of complementing the formal system, to develop the specialist skills needed for particular jobs.

CQPs are often completed under Contrats de Professionalisation (training contracts) which can be regarded as a form of apprenticeship programme; the occupational sectors that have prioritised CQPs over qualifications within the state system tend to provide very limited opportunities for standard apprenticeships. The contract alternates periods of general and technological education with training providers, and periods working in an activity related to the qualification.

There was a mass expansion of higher education in France in the 1980s fuelled by the creation of University Institutes of Technology (IUTs) in 1966 and the development of university-level curricular pathways and grandes écoles (OECD, 2014). The number of students attending IUTs has increased substantially in the last thirty years, now numbering around 116,000 students. Other sectors that have expanded markedly include

organisations specialising in engineering, business and management, and social work and health (public and private) as well as “classes préparatoires aux grandes écoles” (again, especially in the track leading to engineering) (Duru-Bellat, 2015).

Access to some forms of higher education in France has long been selective (grandes écoles, vocational higher education provision by the Higher Technical Sections (STS) in Lycées and the University Institutes of Technology), whereas entry to traditional university is non-selective provided students have achieved the baccalauréat (Carpentier, 2018). The policy which began in the 1950s to broaden access to the baccalauréat inevitably led to an increase in access to higher education in the 1960s at annual rates of between 11 and 18 per cent per annum, most of which expansion in numbers accrued to the traditional, non-selective, universities (Forest and Altbach, 2008).

Stability in the rate of baccalauréat holders in the 1970s slowed down the increase in higher education students to more or less correspond with demographic factors (Forest and Altbach, 2008). Expansion in higher education participation rates in the 1980s coincided with the expansion of the Bac Technologique (Technological Bac) created in 1968. The proportion grew to 30 per cent by the mid-1980s (Carpentier, 2018) and frequently led to study at IUTs. The expansion of the 1990s was driven by the Bac Professionnel (Vocational Bac) and the share rose from six per cent to 29 per cent today (INSEE, 2017). In total, the proportion of baccalauréat-holders per generation, was around five per cent in 1950 and then rose to 20 per cent in 1970, to 29.4 per cent in 1985, 43.5 per cent in 1990 and 62.7 per cent in 1995. However, while rates of access to the baccalauréat level have increased very strongly since the 1980s, they seem to have stabilised nowadays, at around 74 per cent (Duru-Bellat, 2015). Carpentier notes that:

“Holders of Technological Bac are more likely to enrol in selective short vocational programmes such as University Institutes of Technology (IUT) while holders of Vocational Bac traditionally enrol in less selective 2-year programmes such as the Higher Technical Sections (STS) and increasingly in non-selective universities where they experience difficulties as shown by low data on retention and success. Those tensions between the democratisation of the Bac and selection in higher education are at the heart of policy debates today.”

Thus, the percentage of higher education graduates in France has increased significantly to 44 per cent of 25 to 34-year-olds (OECD average 41 per cent) compared with 20 per cent of 55 to 64-year-olds (OECD average 24 per cent).

The French system of higher education is distinguished by a diversity of institutions, courses, organisational arrangements and admission requirements. Over 3,500 different institutions offer higher education studies to over two million students. In total, there are 83 universities in France.

Instituts Universitaires Technologiques (IUTs), of which there are 112 in France, are vocationally based higher education institutions attached to a university. Some offer more

intensive studies and offer qualifications up to Master's degree level; they are then called Instituts Universitaires Professionnalisés (IUPs). Students typically study for the DUT (higher level vocational diploma) over two years. IUTs have close links with industry and commerce and students undertake a minimum of ten weeks work placement as part of their studies. Where students are studying for a DUT as part of an apprenticeship contract, the work experience component will normally be undertaken at their place of employment but, outside of work placements, they will attend the IUT full-time alongside the other students.

IUTs generally offer the Diplôme Universitaire de Technologie (DUT- Bac+2 years) or the Diplôme d'Études Universitaires Scientifiques et Techniques (DEUST). Students can continue on to degree studies after these qualifications, supported by the fairly flexible system of parallel admissions operating in French Higher Education, or go into employment.

Another feature of higher education in France is the grandes écoles, of which there are approximately 250, regarded as the training ground for the country's future elite. The main grandes écoles are those of the Ecoles d'ingénieurs and Ecoles de commerce but there are also more specialist institutions such as the Ecole Normale Supérieure (ENS), Ecole Nationale d'Administration (ENA), Institut d'Études Politiques (IEP) and Ecoles Nationales Vétérinaires (ENV).

There are three streams of study that can be followed in the grandes écoles: Economics and Commerce, Literature or Science and students normally study for between three and five years. The usual qualifications awarded in the main schools are either Diplôme d'ingénieur or Diplôme de Grande École.

There are also a wide variety of other specialist vocational higher education establishments including Ecoles d'art, Ecoles de journalisme, Ecoles d'architecture, Ecoles spécialisées en formation audiovisuelle, Ecoles de comptabilité, Ecoles paramédicales and Études médicales.

Other than universities, a large number of other establishments offer courses at higher levels. For example, large Business and Management schools have opened their courses to apprentices in the last decade or so and now ten per cent of their masters' students are apprentices. Overall, figures from the CFAs suggest that 57 per cent of higher level apprentices are studying at level III (mainly a BTS), 17 per cent level II and 26 per cent at level I.

Education systems

Provision

All three types of baccalauréat theoretically grant access to university. The kind of baccalauréat obtained matters because selection procedures vary accordingly — along

with grades obtained. The general (academic) baccalaureate is the most prestigious, especially the scientific track (mathematics, physics), followed by technological and vocational baccalaureates (conceived as a stepping stone into the labour market) (Powell et al., 2012).

Academic institutions

Entry criteria

Those with a general or technological baccalaureate have a clear competitive advantage (Powell et al., 2012b). The baccalauréat general leads to academic routes of study with the best performing ten per cent of students offered places in the most selective institutions of higher education.

Possessors of a Baccalauréate are guaranteed a public university place regardless of grades which, along with negligible tuition fees, has long been held up as an egalitarian policy. For oversubscribed university programmes, the French currently use a lucky draw system to select who will be admitted on to courses. Many students enrol in universities after they have been refused access to a selective stream (CPGE, STS, IUT), contributing to a first-year failure rate of nearly 60 per cent. In 2012, Powell et al. (b) commented that “the current university crisis also results from a lack of resources, multiple incoherent reforms, greater bureaucratisation, and lack of labour market forecasting.” In 2018, universities will be granted access to school records and student transcripts to support selection.

Each of the grandes écoles admits only a few students each year. Entry is normally via a two-year preparatory course called Classes Préparatoires aux Grandes Ecoles (CPGE) undertaken in specialist classes at those lycées which offer them, followed by a highly competitive nationwide exam. The standard is equivalent to the first two years of university, enabling those who have followed the CPGE to obtain exemption from the first two years of university undergraduate education, should they pursue this route rather than entering a grande école.

Vocational/technical institutions and providers

Entry criteria

The baccalauréat technologique will usually lead to degree level study in the appropriate specialism, often at IUTs, and the baccalauréat professionnel to short course higher level study, which may be followed by a degree. The proportion of holders of a vocational upper secondary diploma entering higher education has more than doubled since 2000 (DEPP, 2016d), contributing to an improvement in the social make-up of higher education students. A very significant proportion of these entered short profession-oriented tertiary programmes (‘Sections de Techniciens Supérieurs’).

Apprenticeship providers

Entry criteria

Apprenticeships do not have formal entry requirements as these are dependent on the qualification being taken. In 2011, 37 per cent of young people entering apprenticeships were qualified to baccalaureate level, while 63 per cent had no more than CAP-BEP (pre-baccalaureate secondary education). Fifty-two per cent of apprenticeships undertaken in 2011 led to qualifications at baccalaureate level or above.

Flexibility

Distance learning

Many higher education institutions in France offer distance learning opportunities to study for qualifications at all levels, as well as non-accredited training. There are also eight virtual thematic universities in France, (Universités Numériques Thématiques, UNT), supported by the French government which have built up an extensive collection of Open Educational Resources (OER). Over the past ten years, around 33,000 quality assured open licensed educational resources, have been developed and are now made available by an open search engine (ICDE, 2018).

Short courses

Apprenticeships give access to all levels of state recognised vocational qualifications, from secondary to higher education, by means of successive contracts, or via bridges with school-based education courses. The target vocational certification must lead to a professional diploma or title included in the Répertoire National des Certifications Professionnelles (RNCP), typically the BAC Pro, BEP, CAP, Higher Technical Diploma (BTS), or University Technological Diploma (DUT). These can then lead onto higher qualifications or degrees. The DUT offers credit against a full degree.

Credit transfer

Ways to acquire qualifications in France have been made easier through more systematic recognition of prior learning. A 2014 reform introduced the notion of 'skills blocks' (covering vocational and transferable skills and knowledge) as a solution for securing pathways and making them more flexible. Vocational qualifications are composed of learning outcome units structured progressively in blocks. The latter may be validated to facilitate step by step acquisition of full qualifications (European Commission, 2017).

Provision to support low attainers

Powell et al. (2012) note that, unlike in Germany, the major target group for VET in France are low school achievers, and VET takes place in schools that also favour more general, theory-based education, even if more recently this has been supplemented by phases of in-firm training (alternance).

Leaving school prematurely is a major issue for the French education system with approximately 100,000 young people leaving school with no qualifications (just under ten per cent). A flagship scheme against dropping out (*Tous mobilisés pour vaincre le décrochage scolaire*) was launched in 2014 by the Ministry of Education, and initiatives have proliferated to reverse the phenomenon: dedicated local networks, personalised guidance and support, specialised training structures. As a result of these measures, a quarter of all dropouts have gone back into continuing training (Cedefop, 2018).

As of September 2016, a new financial incentive has been introduced for 16 to 18-year-olds who have had an interrupted education for over five months and who have enrolled in secondary VET programme leading to a diploma registered in the national register of vocational qualifications (*Répertoire national des certifications professionnelles*, RNCP). This measure was introduced by the Higher Council of Education (*Conseil supérieur de l'éducation* - CSE), composed of 97 members representing the staff, users and partners of the State in educational activities. After several debates, the decision took particular account of factors of economic insecurity which undermine school attendance among pupils from disadvantaged backgrounds. According to the estimates from the Ministry of Education, at least 12,500 pupils should benefit from this new allowance in 2016/17 (€1,250,000 (£1,095) for re-entering education).

A new individual training account was introduced in 2015 (Compte Personnel de Formation – CPF) which provides individuals with training credits based on working time. These are generally at a rate of 24 hours of training per annum until the account reaches 120 hours, after which it is 12 hours per annum. Since 2017, low-qualified individuals get 48 hours a year (capped at 400 hours). CPF hours can be used for any accredited opportunities that appear on national, regional or sectoral list. By February 2017 there were 4.2 million open accounts (one in seven adults) and around 20 per cent of these had undertaken training paid for by their account. Thirty six per cent of all CPF training participants were qualified below Bac level (OECD, 2017). However, the training system's complexity makes access more difficult for low-skill workers (OECD 2017c).

The Professional Future bill, introduced in 2018 announced that CPF entitlement will be supplied no longer in hours, but in euros. The government has announced 500 euros per year (800 for unskilled employees), up to a limit of €5,000 (£4,383) (€8,000/£7013) for unskilled). Part-time employees will have the same rights as full-time employees.

Role of government

In the 1990s, the French public authorities started giving thought to companies' needs in terms of skills rather than simply in terms of employment; this led to creation of the "Forward-looking management of jobs and skills" (GPEC – Gestion prévisionnelle des emplois et des compétences) concept. The scheme is defined in the Labour Code, which specifies that employers in companies with more than 300 employees are obliged to negotiate the implementation of a GPEC plan every three years. Companies with fewer than 300 employees may benefit from State financial aid in order to take part.

Other schemes include "employment and skills development actions" (ADEC – actions de développement de l'emploi et des compétences) and the "forward-looking studies and technical support contract" (contrat d'études prospectives et appui technique), which are both based on agreements signed by the State (Ministry of Labour) and social partners.

In 2015, France Strategie and Dares (The Labour, Employment and training Ministerial Statistical Department) published a forecasting exercise looking at job creation and replacement demand. Dares also publishes a quarterly indication of skills pressures in the labour market. There is also an annual employer survey of hiring needs.

There are also various regional and sectorial surveys and analyses of skills needs.

Take up

The proportion of upper secondary students (ISCED 3) in vocational education and training (VET) decreased slightly in 2015 to 41.5 per cent, below the EU average of 47.3 per cent. The enrolment rates of young people in vocational pathways (professional baccalauréat, CAP/BEP or the equivalent) remain below the average for 15 to 19-year-olds in European countries (24 per cent in France versus 28 per cent in the comparator group of 22 European Union countries [EU22]). Six per cent of 15 to 19-year-olds in France are enrolled in vocational courses that combine work and study, compared to seven per cent in the EU22 and 15 per cent in Germany (OECD, 2016).

In 2015 France was 0.8 percentage points below its initial national target of 50 per cent of 17- to 33-year-olds attaining higher education by 2017. This has now been re-set to 60 per cent (MESRI, 2015). French graduates are far more likely to have a short cycle diploma (ISCED 5) than their EU peers.

During 2014/2015, there were 405,882 young people enrolled in apprenticeship training, far below the 2017 national objective of 500,000 apprentices. The national pact for growth, competitiveness and employment in November 2012 reinforced the goal of reaching 500,000 apprentices in 2017 with the desire for a balanced development of the different routes. In parallel, the Minister of higher education and research at the time announced the intention to double the number of apprentices in higher education to reach 250,000 by 2020. Since the end of 2015 there have been first signs of improvement in the numbers of apprenticeship contracts. This is likely due to the introduction in 2015 of a premium for small companies that recruit an employee under the

age of 18 and to the increasing number of apprentices working in the public sector (European Commission, 2016).

In 2015 just over 280,000 new apprenticeship contracts were registered, with 42 per cent studying for a level 5 qualification (CAP, BEP) (OECD, 2017c). Young people in France lag behind numerous European peers. OECD data from 2016 shows 4.9 per cent of French youths aged between 16 and 29 completed apprenticeships in 2012, compared with 8.6 per cent in Denmark and 15.1 per cent in Germany.

The increase in apprentices over the last decade is almost entirely due to the increase in the upper levels, with the number of apprentices in the highest three levels increasing at a steady rate of over 10,000 additional apprentices every year since 2004 (OECD, 2014). The most notable increase was for level I and II degrees (masters/PHD) which went from 23,531 in 2004/2005 to 55,693 in 2011/2012, an increase of 29,289 apprentices (+ 111 per cent). For the year 2012-2013, there were 31,600 apprentices enrolled in Universities, or 2.3 per cent of all the 1.4 million university students. Over the same period, the number taking the BTS (level 5) increased by 23,701 apprentices (+ 40 per cent). The number of apprentices in the lower levels have been falling since 2007 with the number of young people gaining college-level apprenticeship diplomas falling to 260,000 in 2016 from 335,000 a decade ago (Ministère de l'Éducation nationale, de l'Enseignement supérieur et de la Recherche, 2018).

Almost 190,00 new professionalism contracts were started in 2015, of which 76 per cent were under 25 and 31 per cent had been unemployed (OECD, 2017 Economic surveys).

France differs from many countries in that short-stream higher education programmes such as those offered by IUTs are popular with young people and valued by the labour market. A short-stream diploma was the highest level of attainment for 40 per cent of 25 to 34-year-olds with higher qualifications in France in 2014 compared with the OECD average of 17 per cent (OECD, 2015).

Far fewer students in France leave formal education after obtaining a degree than the OECD average; 27 per cent of all 25 to 34-year-olds in France with a higher education degree do not continue beyond a bachelor or equivalent (OECD average 49 per cent). France is broadly in line with the OECD average for second-degree programmes and doctorates with 31 per cent of all 25-34-year-olds with higher education degrees obtaining a Masters or equivalent (OECD average 32 per cent) and two per cent a doctorate (OECD average one per cent) (OECD, 2015).

Adult learning

In 2016, 18.8 per cent of adults aged between 25 and 64 participated in some form of learning in France compared with 17.8 per cent in 2013 (Eurostat).

For adult learning, the Personal Training Account initiated under the 2014 VET reform allows individuals to acquire up to 150 hours of training (up to 400 for low-qualified

people). It may also be used for skills assessments, validation, support for entrepreneurship, as well as for a new ‘vocational basic skills’ certificate (CléA) designed to empower low-qualified adults on the labour market. Latest figures indicate that 4.7 million eligible active adults (close to 20 per cent of the total) had opened an account and over one million had undertaken training. However, this initiative has recently been reformed to replace hours of training with monetary credit.

Employees and job seekers can also work towards vocational diplomas as part of continuous vocational training. Organisations that can provide training for them include les groupements d’établissements (Greta) de l’Éducation nationale (groupings of national education establishments). The Gretas are formed by state schools, collèges (lower secondary), lycées (upper secondary schools), lycées technologiques (technological upper secondary schools) and lycées professionnels (vocational secondary schools) which pool their skills and are grouped together depending on their geographical proximity. Present in all regions, 211 Gretas train some 450,000 adults every year at 6,500 sites. Gretas can:

- offer general courses, language courses, refresher courses, trade courses
- help individuals to work towards vocational diplomas (CAP, Baccalauréat professionnel, BTS)
- adjust the length and content of courses according to the needs and objectives of individuals: the employee or the job seeker can build his or her own course and spread it over time
- offer services such as the skills audits, support for validation des acquis de l’expérience (accreditation of life experience) or careers advice.

Funding

Spend by route

Tertiary

Table 16 Annual expenditure per student by educational institutions for all services (2014) In equivalent USD converted using PPPs for GDP, by level of education, based on full-time equivalents

	Tertiary (including R&D activities)			All tertiary (excluding R&D activities)
	Short cycle tertiary	Bachelor’s, master’s and doctoral degrees	All tertiary	
France	14,122 (£10,629)	17,178 (£12,929)	16,422 (£12,360)	11,310 (£8,513)

	Tertiary (including R&D activities)			All tertiary (excluding R&D activities)
	Short cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	
OECD Average	10,423 (£7,845)	16,674 (£12,550)	16,143 (£12,150)	11,056 (£8,321)
EU22 Average	11,239 (£8,459)	16,189 (£12,185)	16,164 (£12,166)	10,781 (£8,115)

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

France spends more on tertiary education per student than the average for both EU22 countries and the OECD. The most significant variation is the spend on short cycle courses where the expenditure in France is around 35 per cent more than the OECD average. This higher than average expenditure is true for core services, ancillary services and research and development, as indicated in the table below.

Table 17: Annual expenditure per student by (tertiary) educational institutions for core educational services, ancillary services and R&D (2014)

	Educational core services	Ancillary services (transport, meals, housing provided by institutions)	R&D	Total
France	10,474 (£7,883)	836 (£629)	5,112 (£3,848)	16,422 (£12,360)
OECD average	10,348 (£7,789)	710 (£534)	5,084 (£3,827)	16,143 (12,150)
EU22 average	10,123 (£7,619)	694 (£522)	5,346 (£4,024)	16,164 (£12,166)

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

While expenditure on staff forms the largest component of expenditure in OECD countries, France, with 81 per cent of expenditure going towards staff costs, spends considerably more than the average (67 per cent). The difference is particularly marked in relation to expenditure on staff other than teachers.

Table 18: Distribution of current expenditure by public and private tertiary educational institutions as a percentage of total current expenditure

	Compensation of all staff			Other current expenditure
	Compensation of teachers	Compensation of other staff	Total	
France	43	38	81	19
OECD average	41	26	67	33
EU22 average	m	m	67	33

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

Public institutions allocate 33 per cent on tertiary education for purposes other than compensating staff, which include expenses such as maintaining school buildings, providing students' meals, or renting school buildings and other facilities across the OECD. Allocations are higher in private institutions, reaching 36 per cent in tertiary education. France also spends proportionately more on staff in public institutions compared with private ones, with the most significant difference being the percentage of spend on non-teaching staff in private institutions (22 per cent of total expenditure in private institutions compared with 41 per cent in public ones).

Table 19: Distribution of current expenditure by educational institutions

Compensation of all staff as a percentage of current expenditure						
	Compensation of teachers		Compensation of other staff		Total	
	Public	Private	Public	Private	Public	Private
France	41	55	41	22	82	77
OECD average	38	m	29	m	67	64
EU22 average	m	m	m	m	68	63

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

Apprenticeships

The complexity and devolved nature of apprenticeship funding in France makes it difficult to establish the overall costs. A CNFPTLV (2013) report set out the difficulties in arriving at the true cost of apprenticeship training because of the different methodologies used in both the regions and CFAs to arrive at figures (for example, the cost of staff both directly and indirectly involved in the training; the cost of buildings including maintenance, consumables, any offset from artefacts made for sale by apprentices etc.).

In 2014, the latest year for which public statistics are available, the national expenditure for continuous professional training and apprenticeships amounted to €31.6 billion (£27.7 billion). Businesses were the main contributor (45.2 per cent of overall expenditure), the regions in second place (14.2 per cent) and the state third (11.8 per cent) (Dares, 2017).

The way apprenticeship funding is managed is undergoing reforms in France, and anglophone literature is difficult to find. Up until 2015, there were several legal arrangements in place between the different stakeholders, in particular the regional performance contracts and 'apprenticeship' performance and resources contracts (contrat d'objectifs et de moyens pour l'apprentissage – COMA). The primary objective for the COMA relates to the number of apprentices, with a national target of 500,000. The Region is responsible for drawing up the COMAs, which are then signed with other apprenticeship actors, including central government, the public economic agencies, and one or more organisations representing employers and employees. Most of the contracts have set ambitious quantitative targets. The financial underpinning for the development of the COMAs consists of central government credits released on the signature of the COMA with the Region, on a principle of joint funding for new initiatives. Central government contributed to the efforts of the regions by allocating €1.4 billion (£1.2 billion) over the period 2005-2010. The second generation of COMAs, for the period 2011-2015, was agreed in 2011 with central government committing €1.7 billion (£1.49 billion). However, with the law of 5 March 2014, COMAs ceased to be compulsory, with all financial contribution from central government ending in 2015. Subsequently, all responsibility for training and apprenticeships has been transferred to the regions which contract out to providers (CFAs). There are also plans to introduce new rules for managing and allocating the apprenticeship tax, and in particular to simplify the network of apprenticeship tax collectors.

OPCA, the approved joint collection bodies for the apprentice tax (see below) cover the costs of assessment, support and training initiatives. This funding is based on hourly costs set by the contract or under collective sectoral agreements.

Employer subsidies

To encourage the use of apprenticeship contracts, multiple financial subsidies for employers have been introduced and these change frequently.

Those currently available¹³ are:

- Throughout the duration of the contract, the employer is exempted from social security charges.
- A company with less than 11 employees recruiting an apprentice under the age of 18 may receive a flat-rate grant of €1,100 (£964) paid each quarter, or €4,400 (£3,856) during the first year of the contract. The aid can be combined with existing schemes: apprenticeship premium, help with recruiting a first apprentice or an additional apprentice, tax credit, for example.
- Companies with less than 11 employees may receive a premium of at least €1,000 (£876) per year of training, paid by the region in which the establishment where the apprentice works is located.
- A second aid of at least € 1,000 (£876) (for a single year) concerns companies employing up to 249 employees who recruit:
 - a 1st apprentice;
 - or an additional apprentice (the number of current contracts after the recruitment of this new apprentice must be greater than the number of live contracts in the establishment on 1 January of that year).
- The apprenticeship tax credit, an amount of €1,600 (£1,402) per apprentice per year paid by central government.
- Where an organisation takes on an employee with disabilities, the employer and the disabled employee may apply for funding assistance to the Association for the management of the fund for the professional integration of disabled people (Agefiph).
- Companies with more than 250 employees (all establishments combined) liable for the apprenticeship tax and employing more than five per cent of young people in apprenticeships may benefit from a claim to be deducted from non-quota learning tax (TA).

Maintenance

Grants are provided based on family or individual resources. Most students are entitled to a minimum grant. The main student grant (bourse d'enseignement supérieur sur critères sociaux) is available on a means tested basis, with the amount per year ranging from around €1,000 (£876) to circa €5,500 (£4,819) (2013/14), depending on the test of parent resources and other related criteria. The main body responsible for student support is the Centre National des Œuvres Universitaires et Sociales (CNOUS) which operates through a network of regional offices (CROUS), as well as some more local offices. Any student

¹³ Source: <https://www.service-public.fr/professionnels-entreprises/vosdroits/F23556>

receiving a state grant is automatically entitled to 100 per cent reduction in Tuition Fees at state universities.

Assistance to independent young persons (*Aide aux jeunes en situation d'autonomie avérée*) is designed to assist students who, due to family issues (separation, divorce or death) cannot count on parental support. The grant ranges from €4000 (£3,504) annually to €5000 (£4,380) annually. Approximately 7,000 students received this type of grant in 2013.

International mobility assistance (*Aides à la mobilité internationale*) is paid as a supplement to the means-tested grant and is €400 (£350) per month for up to nine months for a student attending a recognised foreign university as part of his or her studies.

Merit-based assistance (*Aide au mérite*) are grants given to those students who are entitled to a means-tested grant and have achieved high grades (16 out of 20 in the baccalaureate or are amongst the best students in the last year of bachelor's degree). The grant is €200 (£175)/month (for nine months).

Emergency assistance (*Aides d'urgence*). Students whose family is not resident in France or who are over 28 years old or who are estranged from their family may be entitled to this grant. The annual amount ranges from €1,650 (£1,446) to €4,735 (£4,149).

There are also grants awarded by the local and regional councils which vary in size and scope.

It is also possible for students to obtain a low interest loan from a bank of up to €15,000 (£13,144) repayable on a delayed basis. These loans are offered by most of the High Street banks with the State offering a guarantee of 70 per cent of the loan.

Source of funding

Tertiary education

France's spending on tertiary education is broadly in line with OECD averages although the split between short and long cycle education differs, reflecting the high proportion of students following shorter higher-level courses in France.

Table 20: Expenditure on educational institutions as a percentage of GDP, by level of education (2014) From public and private sources of funds

Tertiary (including R &D activities)			
	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary
France	0.3	1.2	1.5
OECD Average	0.2	1.4	1.5
EU22 Average	0.1	1.3	1.4

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

The most recent figures show France spent 5.3 per cent of GDP on funding educational establishments of all types, in line with the OECD average. However, France spent slightly less than the average on the tertiary level although this reflected a lower spend from private sources rather than public expenditure.

Table 21: Public and private expenditure on educational institutions as a percentage of GDP, by level of education (2014) [OECD, 2017: 189]

	Public expenditure on tertiary education institutions	Private expenditure on tertiary education institutions	Total expenditure on tertiary education institutions
France	1.2	0.3	1.5
OECD Average	1.1	0.5	1.6
EU22 Average	1.1	0.3	1.4

Source: OECD/UIS/Eurostat (2017), Table B2.3. (www.oecd.org/education/education-at-a-glance-19991487.htm).

France spends less on tertiary education, particularly at Bachelor's level or above, than the OECD average when viewed as a proportion of all government spending.

Table 22: Direct public expenditure on educational institutions plus public subsidies to households and other private entities as a percentage of total government expenditure, by level of education

Includes R&D activities

	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	All tertiary (excluding R&D activities)
France	0.5	1.7	2.2	1.5
OECD Average	0.3	2.7	3.1	2.3
EU22 Average	0.2	2.4	2.7	1.6

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

Nonetheless, higher education costs are met almost entirely by the French government and tuition fees are moderate in comparison with other OECD countries. Tuition fees charged to Masters students are only slightly higher than those for Licence students. Basic standard student fees in France for the 2014-2015 academic year were €184 (£161) per year for undergraduates, and €256 (£224) per year for post graduate Master's courses - plus a few extras such as health insurance which may be additional (under €100 (£87)). Students are also eligible for subsidised student restaurants, basic but very cheap student residences (though demand well outstrips supply for rooms in residences), bus passes and discounts in many places. In addition, students from low-income backgrounds get grants; French student grants vary from just exemption from paying tuition fees to exemption plus a grant and are means related.

There are signs that the universities are being given greater discretion to impose their own charges, as the government struggles to find a way to fund higher education, and the universities are granted greater autonomy. Some universities have been granted new powers over their budget, and it is likely this will lead to an increase in fees.

In France, the proportion of funding that comes from local government is significantly higher than the average:

Table 23: Share of sources of public funds by level of government (2014) Before and after transfers, by level of education [OECD, 2017: 211]

	Initial funds (before transfers between levels of government)			Final funds (after transfers between levels of government)		
	Central	Regional	Local	Central	Regional	Local
France	86	10	5	86	10	5
OECD Average	87	12	1	85	13	2
EU22 Average	86	12	1	85	13	2

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

Apprenticeships

All companies pay an apprenticeship tax, the standard rate of which is 0.68 per cent of the gross wages bill (a combination of the former 0.5 per cent apprenticeship tax and the 0.18 per cent continuing learning tax). In addition, there is a variable supplementary tax (set by the regions) for enterprises with 250 or more employees where the annual average number of young people under 26 years, under contract or under professional apprenticeship, does not reach a certain threshold. A law in 5 March 2014 changed the process of collecting and redistributing the apprenticeship tax. The apprenticeship tax is now collected by the approved joint collecting bodies (OPCA), one collecting agency per Region. If the company has not allocated the apprenticeship tax, the allocating is done by the apprenticeship tax collecting body in concert with the Region.

Exemption from the tax is conditional on firms training a specified number of apprentices. In 2010 the number of apprentices which grant exemption from the tax for firms with >250 employees was increased to three per firm.

Education institutions receive funding for apprentices from the apprenticeship levy funds through the CFA to which they are attached according to calculations for teachers' salaries, allocated classrooms etc. However, in research, many establishments were unable to work out their costs in relation to training apprentices with any precision because of funding allocated centrally which are distributed according to the institution's priorities.

In 2015, programmes the state spent a total of €2,051.3 million (£1,798 million) on vocational training, including apprenticeships.

Student debt

It was not possible to find any figures for France; this is probably because loans are taken out with high street banks rather than through a central student loans organisation (see above).

Funding and fees by subject area

Tertiary education

Outside of the main university sector, fees are considerably higher at the grandes écoles. Fees for a classic business school are generally between €5,000 (£4,382) and €10,000 (£8,764) a year, whilst an engineering school can cost up to €15,000 (£13,147). The high cost of attending a grande école is compensated by the fact that student loans to enter these schools can often be obtained with a low rate, and by the higher salaries and enhanced career opportunities for graduates.

Apprenticeships

The training costs of any apprenticeship can be paid directly to an approved Centre de Formation d'Apprentis (CFA) of the employer's choice (which can include lycées and IUTs) using a proportion of their apprenticeship tax, or through central funds from the tax administered regionally. Central funding for CFAs is provided by the Ministry of Education and the regional authorities enter into a contract with the provider body for a five-year period for the provision of off-the-job training. Each centre agrees a list of training costs by institution, subject and qualification which are agreed by the Regions and which vary between centres and regions depending on local conditions. The costs will also vary depending on the length of programme which could be one or two years for the CAP and two or three years for the BAC or BTS. The unit costs do not cover the core costs of the centres which are funded by regional grants.

Monitoring

In the regulative dimension, the state continues to play the major role in both HE and VET-funding and regulating education standards - even if universities have gained more autonomy (Powell et al., 2012a).

Apprenticeships

A new approach to the funding and monitoring of vocational training was announced by the French Government in April 2018. A new national agency, France Compétences, will regulate the quality of training and its cost. The France Compétences agency will replace the three current national authorities (Copanef, Cnefop and FPSPP) and will be managed by the State, the employers' and unions' organisations, and the Regions. Among its missions will be the regulation of training prices, so that the costs "do not drift", according

to the Minister who pointed out that currently, the cost of training in a CFA can vary from between €2,500 (£2,191) and €14,500 (£12,709) for a kitchen fitter CAP for example.

Training organisations wishing to benefit from CPF-related funding will have to go through France Compétences certification. The training centres will thus be subject to quality criteria and new requirements that remain to be defined by decree.

Relationship with national economies

The level of devolved responsibilities to the regions and the autonomous and diverse nature of organisations involved in the delivery of post-compulsory education means that there is no centrally guided relationship between provision and the national economy.

Outcomes

Performance

Student satisfaction

France is participating in the Eurostudent project, which is co-funded by the Erasmus programme of the European Union. Eurostudent collects data on the socio-economic background and on the living conditions of higher education students, satisfaction with the quality of teaching, and temporary international mobility in several European countries, including Norway, Germany the Netherlands and Norway. The main users of the findings are higher education policy-makers at national and European level, researchers in this field, managers of higher education institutions and students.

Institutional performance

Higher education

The following bodies participate in evaluating higher education:

- The Agence d'évaluation de la recherche et de l'enseignement supérieur (AERES–Evaluating Agency for Evaluating Research and Higher Education)
- The Comité national d'évaluation des établissements publics à caractère scientifique, culturel et professionnel (CNE–National Committee for Evaluating Schools of a Scientific, Cultural and Vocational Nature)
- Inspection générale de l'administration de l'éducation nationale et de la recherche (IGAENR–Inspection General of the Administration of National Education and Research)
- The Haut conseil de l'évaluation (HCE–High Evaluation Council)

Higher education institutions also contribute to assessing the system by implementing internal assessment procedures.

Vocational training and apprenticeships

In recent years, France has instigated many initiatives to introduce quality criteria for its VET system. At national level, the Outline Financial Legislation Act (LOLF) of 1 August 2001 introduced 'a culture of results, of spending more wisely and making public action more effective'. At regional level, the regional councils, which are now in charge of apprenticeships and vocational training for young people and adults, 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. They cover various aspects of training, such as:

- Improving provision for apprentices, placing workers in jobs, and qualifications in specific sectors.
- Enhancing the quality of services offered by training bodies, including the way trainees are treated on work placement, as well as training methods, follow-up and help with job finding.

There are no systems or schemes for qualitative evaluation of traineeships except evaluations and monitoring of the legality of a trainee's work conditions, which are carried out by inspectors from the Labour Inspectorate (inspection du travail), which is under the aegis of the ministry in charge of labour and employment.

Perceptions of value for money

Nothing was found on this in the Anglophone literature.

Disadvantage

Disadvantaged students in France tend to be steered more towards initial VET than the general route. While students in general and technological upper secondary education achieve much better results than the OECD average, the performance of those in VET or still in lower secondary education when tested — due to grade repetition which occurs more often for disadvantaged children — is much lower than the OECD average (DEPP, 2016c).

Young people with fewer opportunities and further removed from the labour market are targeted by a number of work/study schemes, such as professionalisation contracts, which have no required level of entry qualification. The professionalisation contract is designed for a wider public than the apprenticeship contract. It is aimed at:

- young people aged 16-25
- jobseekers aged 26 years and older
- beneficiaries of various benefits.

Programmes last between six months and one or even two years. Remuneration of young people on professionalisation contracts varies according to level of initial training and age.

The Youth Guarantee scheme aims to integrate young people in precarious situations through introducing them to a profession or sector. Young people benefiting from the scheme can also complete “periods of placements in professional settings”, which are neither traineeships nor work/study programmes. During such periods, the young people concerned are not employed by the host organisations and therefore receive no payment from them.

From 2017, a monthly financial incentive of €200 (£175) (for four months) is payable to VET graduates from a disadvantaged socioeconomic background to support their job search.

While a baccalauréat is normally required for university entrance, those with a diplôme d'accès aux études universitaires (DAEU) or capacité en droit (legal capacity) can access higher education without the baccalauréat. Awarded by universities authorised for that purpose, the DAEU is aimed at applicants having interrupted their initial studies for at least two years. It is thus a major means of encouraging a return to studies for students who, for whatever reason, left education too early. The diploma is awarded after a year's training and after successfully passing an individual written and oral examination assessing knowledge and general culture and applicants' methods and know-how according to the requirements of continued higher education. In compliance with the objectives set as part of the "Espoir Banlieues" momentum, the Department of Higher Education and Research aims to increase the number of students enrolled for and qualified by the DAEU, in particular young people from deprived areas.

The proportion of higher education students benefiting from needs-based grants (see above) is relatively high (Eurydice, 2016). These grants further increased in number and amount in 2016/2017.

Appendix D: Country report, Germany

Overview of post-compulsory education

In Germany, it is compulsory to stay in education/training until the age of 18 or 19, depending on the lander (region) in which young people reside, although the federal Youth Employment Protection Act regulates the minimum employment age at fifteen. From a young person's 15th to 18th (or 19th) birthday, they are obliged to pursue at least part-time vocational secondary education, usually within the German dual education system.

Children in Germany enter compulsory full-time schooling at the age of six. After the four-year primary-school period, pupils enter lower secondary education, where approximately a third go to grammar school (Gymnasium), a third to the less academic secondary school (Realschule) and the remaining third to a secondary modern school (Hauptschule), which covers similar ground to the Realschule but at a slower pace, or to a comprehensive school (Gesamtschule), which combines the streams of the Gymnasium and the Realschule.

At around age 15-16, approximately a third of pupils, mostly from a Gymnasium (grammar school) or Gesamtschule (comprehensive school), are streamed towards the academic route, the upper Gymnasium, which concludes with either a general university qualifying certificate (Abitur) that entitles school-leavers to study at any institution of higher education in any subject/field or a subject-related university qualifying certificate (*Fachgebundene Hochschulreife*) which permits entry only into specified courses of studies.

The remaining two thirds of pupils, mainly from the less academic lower secondary schools (*Realschule* and *Hauptschule*), enter some form of vocational study. The majority (around three-quarters) undertake an apprenticeship in the Dual System (*Duale Berufsbildung*), which combines part-time classroom instruction at vocational school (*Berufsschule*) and practical work experience and training at a place of work, while the remainder attend study for a qualification at a full-time vocational school (*Berufsfachschule*). There is also a 'transition system' (*Übergangsbereich*) for those who leave school without qualifications, do not fulfil the entrance requirements for full-time vocational schools or failed to obtain an apprenticeship position. This comprises a range of training, education and labour market schemes to assist people into education/training or employment.

The German apprenticeship system offers training in over 300 occupations (BIBB, 2015) and full-time vocational schools provide training in predominantly service-sector industries (such as nursing, kindergarten teachers and office clerks). Typically lasting for three years, apprenticeships are clearly split between on the job training and vocational school-based elements. Assigning levels to apprenticeships has been complex but it is

now generally recognised that those where the training takes place over two years are at EQF level 3 and those taking three years or more to complete are at EQF level 4 of the EQF.

Full-time school-based vocational programmes, for which the training may include company placements, cover a period of two or three years depending on the occupation. Under certain conditions, higher-achieving students are able to acquire the higher education entrance qualification (*Fachhochschulreife*) for universities of applied sciences (*Fachhochschulen*). The *Fachhochschulreife* (often referred to as *Fachabitur*) is a subject-limited entrance qualification, allowing students to study the subjects belonging to the field (economical, technical, social) they studied in at the vocational school (Adam 2017). The *Fachhochschulreife* differs from the *Fachgebundene Hochschulreife* mentioned above in that it only allows individuals to study at universities of applied science (*Fachhochschulen*), whereas the *Fachgebundene Hochschulreife* enables them to study specific subjects not only at universities of applied science but also at universities and technical universities.¹⁴

At the end of compulsory education, students with the appropriate qualifications may opt to enrol on an academic programme at a university or university-equivalent institutions - including specialised pedagogical universities, theological universities, and fine arts universities - which award Bachelor, Master and doctoral degrees. Although students generally access academic programmes at these institutions by virtue of having acquired a university entrance certificate, the *Allgemeine Hochschulreife* (generally referred to as *Abitur*), under certain circumstances, graduates of the dual vocational education and training system can also acquire a university entrance certificate, in a year of full-time schooling, and then go on to university studies.

The provision in the post-secondary vocational education track is offered by senior technical schools (*Fachschulen*), professional academies (*Berufsakademien*), and Universities of Applied Science (*Fachhochschulen*). Senior technical schools (*Fachschulen*) offer sub-bachelor degree higher level technical and commercial qualifications and 'master craftsman' qualifications. The courses are either two years full-time or three to four years in part-time education, with part-time participants often working in a job closely related to their course. Courses are available in around 160 different specialisations and lead up to a state-administered examination. *Fachschulen* courses may also prepare students for advanced vocational qualifications and/or the University of Applied Science (*Fachhochschule*) Entrance Qualification (*Fachhochschulreife*). The most strongly represented subjects are electrical engineering, mechanical engineering,

¹⁴ It should be noted that, despite this distinction, the term *Fachabitur* is sometimes used to refer to both of these certificates.

construction engineering, chemical engineering and business management. Almost one third of these institutions are privately run.

Professional academies (*Berufsakademien*) offer courses that combine academic training at a study institution (*Studienakademie*) with practical professional training at a place of work up to the level of Bachelor's degree. Employers bear the costs of on-the-job training and pay the students a wage, which is also received during the theoretical part of the training at the study institution. Courses leading to a Bachelor's degree, which have a minimum length of study of three years, are equivalent to Bachelor's degrees obtained at institutions of higher education and thus provide access to Master's study courses. However, the designation does not refer to a higher education degree but to a state-recognised degree. At completion students are awarded entry into a profession and receive a diploma with initials BA for *Berufsakademie* to distinguish from other higher education diplomas. During recent years some professional academies have either been integrated into universities of applied sciences or changed their formal status into a higher education institution awarding a higher education rather than a state-recognised Bachelor degree (Wolter and Kerst, 2015).¹⁵ Courses offered at the professional academies include, in particular, business, technology and social work.

Universities of applied science (*Fachhochschulen*) are more industry-oriented and focused on the practical application of knowledge than universities offering academic programmes. Study courses at universities of applied science can lead to either a Diploma (*Diplomgrad*), to which the word *Fachhochschule* is added, or Bachelor's degree. They usually include a practical internship component and tend to be concentrated in fields like engineering, business, and computer science. The standard period of study for Bachelor's study courses is generally six or seven semesters, including one or two semesters of practical training.

As an alternative to the dual courses offered by professional academies several universities of applied science also offer dual study degree courses which combine work-based learning with a bachelor degree course, especially in the fields of engineering and business administration. These are typically organised through a training contract, although other models, such as internship contracts, are also available. These involve additional practical placements over and above the practical semesters required in other

¹⁵ According to Wolter and Kerst (2015: 519), the most notable example of a professional academy changing its formal status into a higher education institution is “the transformation of the *Berufsakademien* in Baden-Württemberg into the Baden-Württemberg Cooperative State University (*Duale Hochschule Baden-Württemberg*) in 2009. This new higher education institution has nine branches all over the state. Nearly half of all first-year students in dual study programmes in Germany are enrolled at the Cooperative State University that is one of the ten largest universities in Germany. The next step in the transformation of the former *Berufsakademie* into a full higher education institution (indicating an academic drift) is the development of Master programmes” (Wolter and Kerst, 2015).

study courses at a Fachhochschule. In addition to being awarded a diploma or degree, students in the dual system also obtain a vocational certificate.

Although dual study programmes are mainly the domain of professional academies and the universities of applied sciences, some universities also offer a few dual study programmes, which serve less than ten per cent of dual study students (Autorengruppe Bildungsberichterstattung, 2014: Tab. F1-14web). There are two main reasons for this minimal interest on the part of universities. The strong orientation towards academic standards and excellence seems to be incompatible with the practical character of dual study programmes. In addition, many of the subjects taught at universities do not seem to be appropriate for the dual structure because there are no corresponding occupations in companies, for example in arts and humanities or many sciences (Wolter and Kerst, 2015).

Advanced qualifications may also be taken after some years of relevant work experience. Preparatory courses for examinations are not mandatory, but candidates almost always attend either part- or full-time courses offered by the chambers or private providers. The number of providers of courses leading to higher vocational qualifications is estimated at over 15,000 and the quality and price of training provision vary as neither a federal training regulation nor a federal or a *Land*-wide quality assurance mechanism exists.

There is a relatively clear division between occupations requiring either an academic degree or a vocational qualification with a limited area of overlap. Higher education has been mainly aimed at the upper level of the civil service and the so-called liberal professions (accountants, architects, dentists, doctors, engineer, lawyers, notaries, amongst others), whereas vocational training leads to occupations in the industrial, commercial and craft sectors (Wolter and Kerst, 2015).

Education systems

Academic institutions

Entry criteria

For admission to academic higher education programmes at universities students should possess a general university entrance certificate (*Abitur/ Allgemeine Hochschulreife*), a subject-restricted higher education entrance certificate (*Fachgebundene Hochschulreife*) or an advanced vocational training qualification that enjoys the status of “general higher education entrance qualification” (e.g. master craftsman qualifications in the craft trades, certified senior clerk qualifications and technician qualifications).

Vocational/technical institutions and providers

Entry criteria

For admission to senior technical schools (*Fachschulen*) students must either possess a university entrance qualification, be qualified apprentices with at least one year of work experience in the relevant profession, or have a secondary school leaving certificate plus at least five years of work experience.

For admission to Professional academies (*Berufsakademien*) students must either have a general university entrance certificate (*Abitur/Allgemeine Hochschulreife*), a subject-restricted higher education entrance certificate (*Fachgebundene Hochschulreife*), or a university of applied sciences entrance certificate (*Fachhochschulreife*). Applicants should also have arranged a training contract with a suitable employer.

Those wishing to attend a university of applied science (*Fachhochschulen*) require either a general university entrance certificate (*Abitur/Allgemeine Hochschulreife*), a subject-restricted higher education entrance certificate (*Fachgebundene Hochschulreife*), a universities of applied sciences entrance certificate (*Fachhochschulreife*) or advanced vocational training qualifications which enjoy the status of “general higher education entrance qualification” (e.g. master craftsman qualifications in the craft trades, certified senior clerk qualifications and technician qualifications).¹⁶

Candidates who have completed a two-year course of vocational education and training and have at least three years of occupational practice may apply to universities of applied science (*Fachschulen*) for an admissions test in a subject of study which is professionally related to the occupation in which they are qualified.

Flexibility

Access to academic higher education for vocationally qualified people without traditional school credentials

During the past ten years, access to higher education has been formally opened to people with vocational qualifications who do not have a school certificate (*Abitur*) that entitles them to take up academic studies (Dahm et al., 2013; Wolter and Kerst, 2015). As noted in the previous section, people with advanced vocational qualifications (such as master craftsman qualifications in the craft trades, certified senior clerk qualifications and technician qualifications) now have a general study entitlement equivalent to the *Abitur*. Those with a lower level vocational training certificate who have at least three years of occupational practice also have a study entitlement but this is limited to one subject and

¹⁶ Despite the vocational focus of universities of applied science, over 50 per cent of their students have the general university entrance certificate (*Abitur*) (Adam, 2017; Wolter and Kerst, 2015).

they are generally required to pass a university entrance examination (Wolter and Kerst, 2015). Despite these developments, however, access to German higher education remains centred on the Abitur and alternative access routes continue to play a marginal role (Wolter and Kerst, 2015).

Hybrid courses (in academic and vocational HE) to match the needs of working people

There has also been a process of diversification in the provision of programmes and courses in higher education in order to address the needs of working people – for example part-time studies alongside work, online-based and distance courses. The proportion of students enrolling in one of these ‘hybrid’ courses has increased, although only to a limited degree. For example, the share of new entrants in distance learning programmes rose from 2.9% in 2005 to 4.2% in 2012 (Autorengruppe Bildungsberichterstattung, 2014: 122).

As we have seen, there has also been a growth in the provision of dual study higher education programmes - that combine academic learning and practical training at the workplace - at both universities of applied sciences and, to a lesser extent, general universities (Graf, 2013; Wolter and Kerst, 2015). These dual study programmes allow a Bachelor’s or Master’s degree to be completed part-time or parallel to work or integrated with a professional activity. They may also include long internships and/or distance learning for the academic strand. However, once again these developments remain at the periphery of the German higher education system. The traditional mode of studying in German higher education still comprises on-campus presence and full-time studies for the large majority of students (Wolter and Kerst, 2015).

Provision to support low attainers

As noted above, Germany has a so-called ‘transition system’ for those who upon leaving the school system do not fulfil the entrance requirements for full-time vocational schools or failed to obtain an apprenticeship position. The transition system, which aims to address competence deficits, does not provide its participants with vocational certificates or diplomas as it serves as preparation for further vocational training or employment.

Role of government

Higher education and vocational training in Germany have been subject to different governance regimes and regulation procedures concerning the function and influence of the state, market mechanisms and collective stakeholders such as the so-called social partners (trade unions and employer associations). Whereas the steering of higher education is a state responsibility, vocational training in particular in the dual system is subject to a mixed regime, including primarily a private responsibility for the practical training in enterprises and a state responsibility for the vocational school as the other component, but both within the legal framework of the Vocational Training Law (Berufsbildungsgesetz) (Wolter and Kerst, 2015: 512).

In Germany employer and employee organisations have a strong role in determining training content and assessing students, along with training providers. Training plans for vocational training are developed by representatives of industry under the supervision and moderation of the state. The curricula for school education are aligned with these occupational training plans to ensure that programmes are geared towards the needs of the business. This situation requires a high level of commitment from businesses, which, in return, are entitled to shape vocational training and, thereby, are also responsible for co-financing. In the dual system of vocational training in Germany, about 70% of the total cost (school education and industry training) is borne by business. In an economic crisis, however, this leads to a tendency to reduce the number of training places, which is why, in addition to the dual vocational training system in Germany, fully school-based forms of vocational training have been developed to compensate for this. The specifics of vocational training mean that it is largely decoupled from the general and higher education system (Gessler and Herrera, 2015; Adam, 2017).

Curricula of senior technical schools are developed by each Land within the framework agreement established by the Standing Conference of Ministers of Education and Cultural Affairs of the Länder (*Kultusministerkonferenz*) allowing 20 per cent of the syllabus to reflect local needs.

Take up

In recent years a key political objective in Germany has been to increase the proportion of first-year higher education students to 40–42 per cent of the age group in order to address concerns about a skills shortage at the level of the academically qualified workforce, primarily due to demographic decline. This target has been significantly exceeded in a very short period (Wolter and Kerst, 2015).

The number of students enrolling for higher education (tertiary A) has substantially increased while the number of entrants in the dual system of vocational training (tertiary B) has slightly declined. Whereas in the year 2000 there were 315,000 first-year students compared to 582,000 new entrants in the dual system, the difference narrowed until in 2013, for the first time, access to higher education exceeded access to the dual system: 507,000 first-year students were registered compared with 497,000 new entrants in the dual system (Wolter and Kerst, 2015). A recent academic study (Wolter and Kerst, 2015) predicts that this general trend of convergence will continue but the number of new entrants in dual vocational training is likely to again exceed the number of new higher education students in the next few years.

This study also highlights a complementary trend towards the ‘vocationalisation’ of academic studies in the higher education sector. In 2015, 35 per cent (929,241) of higher education students attended universities of applied science (Fachhochschulen), which provide academically-based VET programmes, while 65 per cent (1,756,452) attended research-oriented universities (Wolter and Kerst, 2015).

When interpreting the implications of these figures, it should be noted that a large number of young people do not transfer directly to formal vocational training when they leave the school system. Instead they attend one of a range of programmes and institutions in the ‘transition system’ (discussed above), which aims to address competence deficits but does not offer any final certificates or diplomas. The number of young people, entering the transition system considerably decreased from 460,000 in the year 2000 to 258,000 in the year 2013, primarily for demographic reasons (Wolter and Kerst, 2015).

Adult learning

Figures not available in English language publications.

Funding

Spend by route

Tertiary

Excluding research and development activities, Germany spends more on tertiary education per student than the average for both the OECD and EU22 countries. However, whereas Germany spends more on higher education programmes per student than the OECD and EU22 averages, its expenditure on short-cycle programmes is less than the averages. Moreover, Germany’s overall expenditure on tertiary education per student is less than the OECD and EU22 averages when research and development activities are not excluded.

Table 24: Annual expenditure per student by educational institutions for all services (2014). In equivalent USD converted using PPPs for GDP, by level of education, based on full-time equivalents

	Tertiary (including R&D activities)			
	Short cycle tertiary	Bachelor’s, master’s and doctoral degrees	All tertiary	All tertiary (excluding R&D activities)
Germany	10,107 (£7,607)	17,181 (£12,932)	17,180 (£12,931)	10,048 (£7,563)
OECD Average	10,423 (£7,845)	16,674 (£12,550)	16,143 (£12,150)	11,056 (£8,321)
EU22 Average	11,239 (£8,459)	16,189 (£12,185)	16,164 (£12,166)	10,781 (£8,115)

Source: OECD/UIS/Eurostat (2017).

Table 25 shows that Germany spends around 25 per cent more than the OECD and EU22 averages on research and development on a per student basis.

Table 25: Annual expenditure per student by (tertiary) educational institutions for core educational services, ancillary services and R&D (2014)

	Educational core services	Ancillary services (transport, meals, housing provided by institutions)	R&D	Total
Germany	9,252 (£6,964)	796 (£599)	7,132 (£5,368.)	17,180 (£12,931)
OECD Average	10,348 (£7,789)	710 (£534)	5,084 (£3,827)	16,143 (12,150)
EU22 Average	10,123 (£7,619)	694 (£522)	5,346 (£4,024)	16,164 (£12,166)

Source: OECD/UIS/Eurostat (2017).

While expenditure on core services, which includes the cost of staff, is below the OECD and EU22 averages (see Table 25), the compensation of staff is in line with the averages.

Table 26: Current expenditure by resource category (2014)

Distribution of current expenditure by public and private educational institutions as a percentage of total current expenditure.

	Compensation of all staff			Other current expenditure
	Compensation of teachers	Compensation of other staff	Total	
Germany	Not available (N/A)	N/A	67	33
OECD average	41	26	67	33
EU22 average	N/A	N/A	67	33

Source: OECD/UIS/Eurostat (2017).

Germany spends proportionally more on staff in public institutions compared with private ones, and its spend is broadly in line with the OECD and EU22 averages.

Table 27: Share of current expenditure by resource category and type of institution (2014)

Distribution of current expenditure by educational institutions

Compensation of all staff as a percentage of current expenditure						
	Compensation of teachers		Compensation of other staff		Total	
	Public	Private	Public	Private	Public	Private
Germany	N/A	N/A	N/A	N/A	67	63
OECD average	38	N/A	29	N/A	67	64
EU22 average	N/A	N/A	N/A	N/A	68	63

Source: OECD/UIS/Eurostat (2017).

Apprenticeships

In the dual system of vocational training in Germany, about 70% of the total cost (school education and industry training) is borne by business (Gessler and Herrera, 2015). The latest analysis of the cost of apprenticeship training to employers is provided by Jansen et al (2015) at the Federal Institute of Vocational Education and Training (BIBB, March 2015). This is based on the BIBB Cost-benefit Survey 2012/13 (BIBB-CBS 2012/13), a representative survey on the costs and benefits of apprenticeship training, which included 3,032 companies providing apprenticeship training ('training companies') and 913 'non-training companies'.¹⁷

Average gross costs, returns and net costs per year for the training year 2012/13

- Average gross costs per apprentice: €17,933 (£15,716).
- Average returns per apprentice (from productive inputs): €12,535 (£10,984)
- Average net costs incurred per apprentice: €5,398 (£4,730)

Gross costs

The breakdown of gross costs across the cost categories is as follows¹⁸:

- Apprentice-related personnel costs: The apprentice-related personnel costs, at an average of around €11,000 (£9,639) (62 per cent) make up the largest share of

¹⁷ The study is primarily concerned with establishing whether the decline in training participation by German companies since 2009 could be due to a deterioration in the cost-benefit ratio of providing initial vocational education and training?

¹⁸ Jensen et al 2015: Page 3

apprenticeship training costs. They are composed of the gross training wages of apprentices along with voluntary and statutory social benefits.

- Costs of training personnel: The costs of training personnel amount to €4,125 (£3,615) per apprentice, which equates to 23% of gross costs.
- Premises and non-personnel costs: Premises and non-personnel costs amount to an average of €925 (£811) (five per cent). These include procurement costs for tools and equipment for apprentices, plus the costs of any training workshops or in-company teaching; also the costs of consumable materials that are required for teaching purposes.
- Other costs: Other costs amount to €1,866 (£1,635) (ten per cent) per apprentice in the training year 2012/13. These include, among other things, chamber fees, the costs of teaching and learning materials and of external courses, and the costs of in-company training administration.

Returns

Two thirds of gross costs are balanced out by the productive outputs of apprentices. Returns can be generated both in the workplace and in a training workshop.

Furthermore, some companies receive grants from support programmes run by the German federal government, the German federal states, the European Social Fund (ESF), the Federal Employment Agency, or occupational or sectoral associations; these are also subsumed under returns.

- Half of the returns calculated (€6,210 - £5,442) are generated on average by unskilled activities, 47% (€5,875 - £5,148) through skilled-worker activities, two per cent (€209 - £183) in the training workshop and two per cent (€241 - £211) through grants from the various bodies.

Variance

Region: In Eastern Germany both gross costs and returns are significantly lower on average than in the West: gross costs, at €15,726 (£13,779), are around 14% lower and returns, at €9,412 (£8,246), around 28% lower. The main causes of these differences are the persistently lower wages and training allowances. Since there is a smaller differential between gross costs than returns, the average net costs in Eastern Germany are around €1,100 (£964) higher than in Western Germany.

Company size: Both gross costs and returns rise with company size. Companies with fewer than ten employees have the lowest gross costs (€15,911 (£13,943) per apprentice per year) as well as the lowest returns (€10,807 - £9,740). In large companies the gross costs amount to €21,757 (£19,065) on average with returns of €14,403 (£12,621). Here, too, wage differences explain the disparities at least partially. Companies with ten to 49 employees have the lowest average net costs (€4,254 - £3,728) whereas large companies have the highest net costs (€7,354 - £6,444).

Sector: For domains of training, gross costs are highest on average in Industry and Trade and in Public Service, at over €19,500 (£17,087) in each case. The lowest gross costs

were found in Agriculture, at around €14,000 (12,268). High returns are generated in Industry and Trade, Agriculture and the Free Professions with close to €13,400 (£11,743) and €12,750 (£11,173) respectively; in the Home Economics domain, returns amount to barely €9,000 (£7,885) which is one-third lower in comparison to Industry and Trade. For net costs, the following picture emerges: Public Service (€8,032 – £7,037) has the highest net costs, followed by Home Economics (€6,385 – £5,594) and Industry and Trade (€6,146 – £5,385). Distinctly lower net costs per apprentice per year are incurred on average in the Skilled Crafts (€4,390 – £3,846) and the Free Professions (€3,705 – £3,246). Companies in the Agriculture domain have the lowest net costs, at €1,293 (£1,133).

Occupational groups: The technical occupations exhibit the highest gross costs, the lowest returns and hence the highest net costs. The commercial occupations are also associated with high gross costs but the returns, at €14,684 (£12,867), are substantially higher than in the other two occupational groups. Hence the net costs for these occupations are lowest on average.

Training facilities: If training also takes place in a training workshop, the net costs increase distinctly: in part because of the direct costs of this facility and in part because more training personnel are required and the apprentices spend less time on productive work. The net costs in companies with a training workshop are almost four times as high as in companies without one. This differential of around €9,500 (£6,745) arises from higher gross costs and lower returns in almost equal parts.

Duration of apprenticeships: Apprentices in three-year occupations generate the highest returns. Another influence on costs and returns is the duration of training in the given training occupation. Annual gross costs are highest in the three-and-a-half-year occupations (€18,636 – £16,329) and lowest in the two-year occupations (€16,970 – £14,870). In the three-year occupations the apprentices are most productive, generating average returns amounting to almost (€14,000 – £12,267) per year. It is clearly apparent that the three-and-a-half-year occupations have the highest net costs in all years.

Overall the net costs of a three-and-a-half-year apprenticeship training programme amount to over €35,000 (£30,667) on average as opposed to only €10,600 (£9,289) and €11,300 (£9,903) for the two-year and three-year occupations respectively. Among the three-and-a-half-year occupations, many technical occupations are found which, firstly, call for high levels of material inputs and, secondly, have only minor elements that can be taught in the actual work process (for example, if apprenticeship training is provided partly in a training workshop). Both aspects increase net costs. For the two-year occupations it is striking that there is no decline in net costs from the first to the second year. In other occupations a decline can be observed in the course of training, since returns increase. For the two-year occupations, the returns only rise on the same scale as the gross costs; accordingly, the net costs in both years remain at about the same level.

Maintenance

The percentage of total public expenditure in higher education devoted to public support in the form of grants or scholarships to households in Germany is above the OECD average (OECD 2014). The annual expenditure per student by educational institutions in tertiary education is quite similar in Germany to that of France and the UK (Del Rey and Schioppa, November 2015).

Currently, grants and loans for students attending institutions of higher education are only available for children of low-income families, as parents are required by law to fund their children's education, including higher education. In contrast, non-low-income families with children under 25 pursuing studies are entitled to tax allowances (Eurydice, 2015). General public student support (BAföG) is awarded, half as a grant, and half as an interest free loan, and approximately 25 per cent of students receive this kind of support. Total amounts range from €10 (£8.76) to €670 (£587) per month for 12 months per year. A maximum of €10,000 (£8,763) needs to be paid back. According to Grave and Sinning (2014) this programme is largely in deficit, costing the government between 57 and 80 per cent of the total issued debt. They argue that it would be less expensive to give out all the aid in the form of a grant due to the large cost of interest subsidies. Moreover, there is evidence that student aid has not been successful in improving access of the less well off in Germany (Del Rey and Schioppa, November 2015).

In 2017, 25,900 students received a Germany Scholarship in accordance with the Scholarship Programme Act. The Federal Statistical Office (Destatis) also reports that the number of scholarship holders rose by 2% compared with the previous year. Measured against the provisional total number of students in the winter semester of 2017/2018, the share of those on a scholarship was 0.9% (German Federal Statistical Office).

In the vocational system, the German federal qualification initiative provides support by way of the Advanced Further Training Assistance Act (*AFBG - Aufstiegsfortbildungsförderungsgesetz*), also called master BAföG. The act ensures individual rights to funding for advanced training such as master craftsman programmes and comparable courses. These courses may be full- or part-time, school- or home-based, media-supported or distance learning. Usually, advanced training programmes require a previous professional qualification and professional experience. Craftsmen and other skilled workers preparing for an advanced training qualification and holding a vocational education and training qualification can apply for a master BAföG (*Meister Bafög*). A programme contribution is available for part-time and full-time courses; it is up to €10,266 (£8,996) for training course and examination fees, of which 30.5% is given as a grant and the rest is offered as a loan at low interest rates. Applications for support funding are submitted to municipal educational support offices. Loans are granted by the government-owned development bank (*KfW - Kreditanstalt für Wiederaufbau*). In 2014, over 171,000 employees received master craftsman (BAföG) funding and their numbers are increasing. The total Government investment in this initiative in 2014 was €576 million (£505 million).

The Ministry of Education supports young qualified professionals under 25 years with continuing education scholarships. For up to three years, they provide high performing intermediate level graduates with funding for continuing education programmes in their discipline or across disciplines. Qualification criteria are also met if graduates successfully participate in supraregional skills competitions or are highly recommended by employers. Each year, up to 6,000 scholarships of up to €2,000 (£1,753) per person are granted. Individuals are required to contribute 10% per programme. Continuing education scholarships are organised nationwide by the foundation vocational training programme for highly talented (SBB - Stiftung Begabtenförderung berufliche Bildung).

Federal States may offer their own incentives; for example, North Rhine-Westphalia offers education grants for employees, people returning to work and entrepreneurs starting a new business. Half of all private expenses for occupational advanced training may be subsidised, capped at a maximum of €2,000 (£1,753) per year. In addition, the Ministry for Education has introduced the education bonus programme (Bildungsprämie). All employed or self-employed people whose taxable annual income does not exceed €20,000 (£17,530) may receive a bonus voucher of up to €500 (£438). However, this bonus must be match-funded by the individual. Vouchers may be used towards training courses, examinations and certificates.

Upgrading scholarships provide experienced professionals with an incentive to enrol in university courses. Full-time study courses are funded with a lump sum of €670 per month (£5,587); part-time extra-occupational students receive up to €2,000 (£1,753) per year. Applicants must have at least two years' professional experience in addition to a particularly successful graduation result. There are also tax reduction schemes for companies investing in advanced vocational degrees of their employees.

Source of funding

Overall spending on tertiary education

According to the OECD, Germany invested 1.2 per cent of its gross domestic product in tertiary education in 2013. Given the dominance of public institutions in German higher education, it is not surprising that more than 85 per cent of financing came from public sources. The German Rectors Conference puts the total amount of government spending on university education in 2010 at €23.3 billion (USD \$25.6 billion), 85.4 per cent of which was provided by the governments of the individual states.”

Compared with the OECD and EU22 averages, Germany spent less on both short-cycle and long-cycle (degree level) tertiary education as a proportion of GDP.

Table 28: Expenditure on educational institutions as a percentage of GDP, by level of education (2014)

From public and private sources of funds

	Tertiary (including R &D activities)		
	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary
Germany	0.0	1.2	1.2
OECD Average	0.2	1.4	1.5
EU22 Average	0.1	1.3	1.4

Source: OECD/UIS/Eurostat (2017).

Whereas public expenditure on tertiary educational institutions as a percentage of GDP was in line with the OECD and EU22 averages, private expenditure on tertiary education was below the averages.

Table 29: Public and private expenditure on educational institutions as a percentage of GDP, by level of education (2014)

From public and private sources, by level of education and source of funds

	Public expenditure on tertiary education institutions	Private expenditure on tertiary education institutions	Total expenditure on tertiary education institutions
Germany	1.1	0.2	1.2
OECD Average	1.1	0.5	1.6
EU22 Average	1.1	0.3	1.4

Source: OECD/UIS/Eurostat (2017).

Germany spends more at Bachelor's level and above than the OECD and EU22 averages when viewed as a proportion of all government spending but less than the averages in relation to short-cycle programmes. Overall spending, when viewed as a proportion of all government spending, was less than the OECD average, regardless of whether research and development activities are excluded.

Table 30: Total public expenditure on education (2014)

Direct public expenditure on educational institutions plus public subsidies to households and other private entities, as a percentage of total government expenditure, by level of education

Includes R&D activities

	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	All tertiary (excluding R&D activities)
Germany	0.0	3.0	3.0	2.0
OECD Average	0.3	2.7	3.1	2.3
EU22 Average	0.2	2.4	2.7	1.6

Source: OECD/UIS/Eurostat (2017).

In Germany, the proportion of public funding that comes from local government is much higher than the OECD and EU 22 averages, while the proportion of funding that comes from central government is much lower than the average

**Table 31: Share of sources of public funds by level of government (2014)
Before and after transfers, by level of education**

	Initial funds (before transfers between levels of government)			Final funds (after transfers between levels of government)		
	Central	Regional	Local	Central	Regional	Local
Germany	25	73	2	20	78	2
OECD Average	87	12	1	85	13	2
EU22 Average	86	12	1	85	13	2

Source: OECD/UIS/Eurostat (2017).

Tuition fees

Although in principle the Länder may impose fees on students, social pressure against university fees is very large and, at present, none of them charge general study fees. In

fact, many Länder experimented with university fees for short periods (less than ten years), but they all decided to abolish them. The last to do so were Bavaria, in 2013- 14, and Lower Saxony, in 2014-15. While fees were in place, state loans were available to cover fees and living costs (Del Rey and Schiopu, November 2015: 24).

Changes to this funding structure have been debated for some time. The OECD in 2016 went as far as calling the German model unsustainable, but solutions, especially those focused on tuition-based funding models, have been hard to find. The introduction of additional tuition fees by seven states in the 2000s turned into one of the more controversial topics in recent German higher education politics. Although the so-called “Uni-Maut” levied by public universities was modest by international standards, strong political opposition quickly led to the abolition of fees in all states by 2014.

2014 saw the last of Germany’s 16 states abolish tuition fees for undergraduate students at all public German universities. The only charge now is a small fee per semester for enrolment, confirmation and administration – usually between €150 and €250 depending on the university. While most universities in Germany are public, private institutions continue to charge up to €30,000 (£26,205) per year for a Bachelor’s degree. For example, the University of Witten-Herdecke, which offers subjects including Business Administration, Nursing Science and Dentistry, charges around from €2,184 (£1,914) to €8,550 (7,494) per semester but offers flexible finance options, giving students the choice of whether to pay tuition fees from the start or pay a percentage based on income after graduation. Jacobs University in Bremen is currently charging as much as €11,500 (£10,081) per semester for a Bachelor’s degree. These tuition fees go far beyond the average €500 (£438) that public universities were collecting per semester.

Since the 16 German Bundesländer have legislative authority over university education, the role of the federal government in the funding of higher education has traditionally been limited. In recent years, however, both the federal government and the states have sought to expand the federal role in cases of “supra-regional importance.” One example of such increased financial intervention by the federal government is the so-called “Excellence Initiative,” a programme in which Berlin provided the bulk of €4.6 billion (£4.03 billion) given to institutions between 2005 and 2017 to improve the global competitiveness of German universities. The funding was allocated to establish new graduate schools and create “clusters of excellence” that connect universities, industry and research institutes.

In 2012, 11 universities were selected to receive funding for their “future concepts” in promoting research. A number of these institutions are considered to be among Europe’s best universities. Seven of them are among the nine German universities included in the world’s top 100 universities in the current Times Higher Education world university ranking. Overall, Germany’s place in this ranking has improved markedly in recent years. In 2016/2017, for instance, nine universities were included in the top 100; only six were included in the top 100 the year before.

Vocational

Public funding for vocational education and training in the dual system in Germany is provided at both the Federal and State level. At the Federal level, the German government commits funds to support measures to promote part-time training within companies, funding for on the job training of disadvantaged young people, 'external' apprenticeships within the dual system, and vocational training assistance contributions made by the Federal Employment Agency and the Federal Ministry of Labour and Social Affairs. The main financial responsibility of the governments of Germany's 16 States is the funding of the vocational schooling component of apprenticeships (plus contributions to funding for on the job training of disadvantaged young people within the apprenticeship system).

The VET system in Germany has benefitted from considerable financial support from government. However, these may be topped up through student loans (German qualification initiative) or contributions (support for young qualified professionals and bonus programme (Bildungsprämie)).

Germany does not operate an apprenticeship levy. However, German employers have to provide support for employees undertaking higher vocational qualifications, including allowing time off for study and sitting examinations. Often businesses financially support advanced training programmes where they see this as benefitting their business although they frequently protect their investment by way of contracts with repayment clauses should employees leave their company during or shortly after advanced training.

It is clear however that students are also expected to make a significant contribution to their training. In 2012, the average individual contribution to postsecondary VET was €1,268 (£1,001) for upgrading courses, and €692 (£546) for courses at Fachschulen (Hippach-Schneider et al., 2012). More recent figures are not available.

Student debt

In Germany borrowing for college and university is not widespread. A student loan scheme available only to students in need is reported to be too costly and actually more costly than it would be to simply give out the equivalent aid in the form of a grant. Although public subsidies are relatively large, parents also contribute nearly 50 per cent of student income in Germany (Del Rey and Schiopu, November 2015).

Funding and fees by subject area

Tuition fees are not charged for higher education at public institutions. Some examples of variations in the fees charged by private institutions are provided in the section on sources of funding above.

Outcomes

Performance

Student satisfaction

Germany is participating in the Eurostudent project, which is co-funded by the Erasmus programme of the European Union. Eurostudent collects data on the socio-economic background and on the living conditions of higher education students, students' satisfaction with the quality of teaching and temporary international mobility in several European countries, including France, Germany the Netherlands and Norway.

Institutional performance

Germany's higher education institutions are generally recognised and regulated by the ministries of education in the individual states. In order to become state-recognised, private institutions must also be accredited by the "Science Council," an advisory body to the federal and state governments.

Quality assurance mechanisms in Germany have undergone significant changes since the introduction of the European Bologna reforms at the end of the 20th century. In 1998, the German states jointly decided to add external programme accreditation as a quality assurance mechanism for new bachelor's and master's degrees – a key concept of the Bologna reforms. There presently are ten independent accreditation agencies operating in Germany. These private agencies are in turn accredited by the German Accreditation Council, the designated supervisory public authority. However, as of 2016, less than 60 per cent of all existing degree programmes were externally accredited. The accreditation process is widely viewed as slow and burdensome for universities, involving high direct and indirect costs (Education in Germany, 2016). A new concept of "system accreditation" has consequently become a popular alternative.

First introduced in 2007, system accreditation allows institutions to forgo external programme accreditation by creating internal quality assurance systems that are evaluated by the accreditation agencies. By 2016, 47 higher education institutions had obtained accredited quality assurance systems – a considerable increase compared to previous years. System accreditation is likely to continue to be a growing trend, as illustrated by the fact that a significant number of institutions currently have pending applications for accreditation. But how exactly the quality assurance mechanisms in Germany will develop in the long term is currently unclear.

Since 2004, TVET (Technical and Vocational Education and Training) providers have been obliged to undergo internal and external quality assurance according to criteria set out by the Federal Ministry for Economy and Labour (Bundesministerium für Wirtschaft und Arbeit). External assessment of TVET institutions and their training courses is conducted by certification agencies (Zertifizierungsstellen) or centres of expertise (fachkundige Stellen) which in turn are accredited by the Federal Agency for Labour

(Bundesagentur für Arbeit). Certification and licensing is conducted by private certification agencies which are subject to accreditation from a national body. Accreditation of certification agencies is granted for the period of three years and can be national or regional/sectorial. An accreditation council (Anerkennungsbeirat) has been established to advise and support the national accreditation body. TVET providers benefit from public funding if their institution is certified and their courses licensed by an accredited certification agency. The following criteria determine eligibility for funding:

- the capacity to support the integration of their trainees into employment
- the qualifications, professional experience and participation in further training of teachers and trainers
- an efficient system for quality assurance and quality development including: (1) customer orientation; (2) continuous evaluation of training courses based on the use of indicators and measurement; (3) continuous improvement of training provision; and (4) cooperation with external experts for quality development.

Perceptions of value for money

Robust evidence has not been found on this issue.

Disadvantage

There is a particular interest in widening participation in higher education which is being driven by, amongst other things, a concern about a demographically caused decline in the social demand for higher education, particularly in economically disadvantaged and demographically shrinking regions. The most high-profile programme introduced to address this is the competition 'upward mobility by education – open universities', provided by the federal government in cooperation with the German states (Banscherus and Wolter, 2013). Currently, this programme promotes more than 70 projects at more than 100 higher education institutions. Its focus is on the development and implementation of flexible studies at the BA or MA level, sometimes also at a certificate level (e.g. for a single module), including part-time studies parallel to work, procedures of recognition of prior learning, new media-based learning technologies and so on (Wolter and Kerst, 2015).

Appendix E: Country report, The Netherlands

Overview of post-compulsory education

In the Netherlands it is compulsory to stay in education/training until the age of 18. The Dutch education system is a mixed system of general education at primary (5-12 years) secondary (12-18 years) and tertiary (19-22 years) level, and vocational education and training at secondary (12-16 years) and tertiary (17-22 years) level.

Within general secondary education, there are two types of education: pre-university education (known as VWO) with a study duration of six years (12-18 years), which can be taken at a *gymnasium*, *atheneum* or *lyceum* (a combination of *gymnasium* and *atheneum*); and senior general secondary education (HAVO), which lasts five years (12-17). The study programme in general secondary education concludes with a national examination in seven subjects (VWO) or six subjects (HAVO). If the examination is passed, the VWO or HAVO diploma is awarded. The HAVO diploma is positioned at level 4 of the Dutch Qualifications Framework (EQF level 4), while the VWO diploma is positioned at level 4+ of the Dutch Qualifications Framework (EQF level 4). VWO (the most academic secondary pathway) prepares students for traditional university degree programmes (known as WO) at 18 years old, whereas students that ultimately attend the more vocational universities of applied sciences (*hogescholen*) will generally have followed the HAVO (general secondary education) route to get there.

The vocational education and training pathway at secondary level (known as MBO) prepares pupils for work or a subsequent vocational study programme. MBO can be followed at regional training centres (ROCs), agrarian training centres (AOCs) and vocational schools (*vakscholen*). Senior secondary vocational education and training has four training levels (EQF levels 1-4): qualification level 1, assistant training (*assistentopleiding*), has a study duration of up to one year and is concluded with an *assistentopleiding* diploma; qualification level 2, basic vocational training (*basisberoepsopleiding*), has a study duration of two to three years and is concluded with a *basisberoepsopleiding* diploma; qualification level 3, vocational training (*vakopleiding*), lasts two to four years and is concluded with a *vakopleiding* diploma. The management training (*middenkaderopleiding*) at qualification level 4 lasts about four years and provides admission to higher professional education (*hoger beroepsonderwijs*, HBO). The specialist training (*specialistenopleiding*) is also at qualification level 4 and lasts one to two years following completion of the level 3 vocational training (*vakopleiding*) or level 4 management training (*middenkaderopleiding*) programmes

Pupils in the MBO can choose from two learning tracks (*leerwegen*): the school-based route with fulltime education (*beroepsopleidende leerweg* - BOL) in which pupils spend at least 20% and no more than 60% of their time as interns, and the work-based route (*beroepsbegeleidende leerweg* - BBL), in which at least 60% of their time is spent

working as interns (the Dutch apprenticeship system). Practical experience forms an important part of the training for both learning tracks.

Having completed their compulsory education, students with a VWO diploma may apply to undertake a bachelor's level degree at one of the Netherlands' research universities (WO). There are 14 Dutch research universities (*universiteiten*), including the *Open Universiteit*. Most research-oriented universities offer study programmes in various disciplines, such as economics, law, medicine, language and culture, natural sciences and public administration; one university specialises in agriculture and the environment and three universities primarily offer technical study programmes. WO can also be followed at a university college, which is generally part of a university. These colleges mainly offer undergraduate programmes in liberal arts.

The parallel vocational track (HBO) has seven educational sectors: economics, health care, agriculture, teacher training, social work, arts and engineering. Within these sectors, students can choose from various educational profiles. Almost all types of study programme can be followed at 39 public universities of applied sciences (*hogescholen*), delivering a wide range of professional bachelor and associate degree programmes. The majority of programmes in the universities of applied science are full-time degree programmes lasting four years. These programmes, which have a more theoretical focus than upper secondary VET, have no required work-based learning, although internships of a few weeks to few months are common.

Associate degrees are similar to the first two years of a professional bachelor programme, and graduates are offered a two-year programme to advance to a bachelor's degree, so that the bachelor degree normally takes four years by either learning route. They mainly attract upper secondary VET graduates from the school-based track (BOL). The government intends to substantially expand the number of associate degree programmes and student enrolments by 2020 and is working with employers to develop more labour market relevant programmes and promoting associate degree programmes within upper secondary and postsecondary VET institutions.

Alongside the public universities of applied science (*hogescholen*) there are between 80 and 90 (typically much smaller) private institutions providing professional bachelor degree programmes, associate degrees, and a few hundred institutions providing a wide range of shorter courses. Private providers dominate part-time post-compulsory education and training in the Netherlands. This is because adult students typically work during their studies and although this creates an opportunity to link studies and workplace practice, the public universities of applied science (*hogescholen*) face regulatory constraints on the total amount of learning taking place outside the institution.

For graduates of lower levels of upper secondary VET, there are relatively few options for further upskilling. Only graduates of MBO level 4 can (without meeting additional requirements) continue to a professional bachelor or associate degree programme. However, many MBO graduates typically already have a job, often have a family and the

benefits of an additional degree are lower than for graduates of academic secondary education (OECD 2014). For those graduates of who want a vocationally oriented postsecondary pathway there are a number of short courses provided by private organisations, 60 per cent of which last less than one month. These courses often reflect the specific needs of one employer, rather than the industry sector, which potentially inhibits labour market mobility as non-accredited short courses are not always recognised by other employers or schools

Education systems

Academic institutions

Entry criteria

Admission to a programme at a research university (*wetenschappelijk onderwijs*, WO) requires a *VWO* diploma or the completion of the first year of higher professional education (HBO), in some cases with additional requirements relating to the subjects taken.

Vocational/technical institutions and providers

Entry criteria

Admission to higher professional education (*hoger beroepsonderwijs*, HBO) requires a *HAVO* or *VWO diploma*, although additional requirements relating to the subjects taken apply in some cases. Admission to higher professional education is also possible on the basis of an MBO diploma at qualification level 4 (either a diploma from a management training (*middenkaderopleiding*) or specialist training (*specialistenopleiding*) programme). In addition to admission to higher professional education, this diploma also gives exemption of the first year in some cases, provided it has been obtained in a related field of study.

Admission to the shorter associate degree programme takes place on the basis of the same admission requirements as those for the HBO programme in question.

Students are able to move between vocational and academic pathways.

Private providers

Since the early 2000s both types of higher education share a bachelor-master structure with approximately the same length (4 years). There are 39 public universities of applied science (*hogescholen*) delivering a wide range of professional bachelor and associate degree programmes and between 80 and 90 (typically much smaller) private institutions providing professional bachelor degree programmes, associate degrees, and a few hundred institutions providing a wide range of shorter courses.

Flexibility

The OECD (2014) found that the post-compulsory education system faces two major challenges. First, there is inadequate public provision of part-time and modular programmes that might meet the needs of adults and, second, that the private sector, although it performs a useful service in meeting the need of adults for part-time provision, cannot call on public funding.

The current legal framework for public provision discourages part time study because public institutions are, by law, obliged to provide only complete educational programmes, so they cannot offer and give credit for individual modules of programmes. In addition, adult students typically work during their studies, creating an opportunity to link studies and workplace practice but public *hogescholen* face regulatory constraints on the total amount of learning taking place outside the institution. Against this background, many adults who wish to study part-time, and who can afford the fees (or have their fees paid for them) prefer the private sector, since course length can vary and it is possible to obtain only some credits in one semester and the rest of the programme later on.

Provision to support low attainers

Provision for low attainers appears to comprise a disparate collection of local initiatives and we have been unable to identify schemes of a similar scale to those outlined in relation to several of the other countries considered in this review.

Role of government

Concerns about the mismatch between the education system and the labour market has led the Dutch government to invest in the establishment of Craftsmanship Centres for stimulating learning on craftsmanship skills, the extension of dual learning systems (school learning and internships) and the continuous exchange of teachers from practice for keeping pace with up-to-date work experiences. From 2014, new regulations came into force requiring vocational schools at secondary and tertiary level to provide traineeships for every new student. If there is no traineeship found for the student by the school or the student him/herself the student is not admitted to the school. The concern is what happens to young people unable to secure a traineeship and, therefore, access to training.

The Dutch skills system is one where policy is developed at the national level with the support and involvement of national and regional partners. The Ministry of Education, Culture and Science (*Ministerie van Onderwijs, Cultuur en Wetenschap* - OCW) has responsibility for strategic policy and oversight for both VET and higher education, although the agriculture and public health ministries play an important role in monitoring the content of study programmes in their respective fields.

In 2014, several initiatives were taken to better match vocational education and training to the needs of the regional labour markets. These aimed to improve the quality of education, provide incentives for employers to provide more and better-quality internships and to give more opportunities for students' personal development including more attention to avoiding drop-outs. According to the European Commission's Country Report (2015), increasing the amount of work-based learning remains a particular challenge. At secondary and higher vocational level, the main youth policy issue is the shortage of traineeships, internships and apprenticeships offered by employers for the large number of students. As having a traineeship or apprenticeship in place is a requirement for admission to institutions of dual education, the shortage in supply can impact adversely on young people's prospects.

Supporting central government on VET policy is the Foundation for Cooperation on VET and the Labour Market (*Samenwerking Beroepsonderwijs Bedrijfsleven* - SBB) which was established in 2012. The SBB represents all social partners (employers, employees and training providers) in the system and provides a unified, single voice on VET policy to advise the OCW. Its role includes reviewing various aspects of VET policy, such as the duration of training, its ability to meet labour market demands, the regional structure of training provision and the quality of qualifications. Employers (and employees) are represented in Dutch VET through the knowledge centres (*Kenniscentra Beroepsonderwijs Bedrijfsleven* - KBB) of which there were 17. Each one related to a distinct sector. The role and functions of the knowledge centres for their respective sectors include:

- Coordinating and promoting sectoral training (e.g. recruiting new vocational education providers);
- Providing labour market intelligence;
- Ensuring a sufficiency of apprenticeship and internship places;
- Matching training programmes to sectors skills needs;
- Some knowledge centres are also training providers where there is a gap in provision in the sector.

In order to meet their remit, knowledge centres needed to develop and maintain strong links with the sector to understand skills needs, and with training providers to ensure that provision meets those needs. Each knowledge centre had a strategic board with employer, trade union and training provider representation although the extent to which individual employers and employees are engaged is not clear. The SBB coordinates the work of Knowledge Centres and, as of January 2015, the previously independent Knowledge Centres became part of the SBB. The intention is to improve inter-sector collaboration and knowledge transfer between the various sectors. However, the accompanying reduction in the overall budget might also mean that there is less room for operating at regional level.

The tradition of cooperation between the social partners in the Netherlands results too in collaboration on specific initiatives. One example is the 2013 joint agreement on

initiatives to stimulate the Dutch technology sector and education provision (*Nationaal Techniekpact 2020*). As part of this plan, employers offer scholarships to postsecondary VET and university-level technology students and provide technical education to primary and lower secondary pupils to increase interest in technology.

In 2013 in response to a shortage of STEM graduates, the government initiated the National Technology Pact, which brings together over 60 signatories from education, business and government to promote technical training throughout the education system. The Pact identifies measures from primary to adult education which are implemented through regional coordination units. Recent labour market forecasts indicate that the Netherlands will continue to experience labour market shortages in technical and ICT-related professions in the medium term and the objectives and the activities of the Pact were therefore renewed in April 2016. The 2016 Pact is structured in three action lines encouraging:

- more pupils to choose a technology education:
- more graduates in technology programmes to start a career in technology:
- more people already working in technology to remain in the field (European Commission, 2017):
- Take up.

The vast majority of 18-21-year olds enrolled in post-secondary education (ISCED levels 5-8) and training in the Netherlands are enrolled on higher education programmes. In 2015, 76.8 per cent of tertiary students were studying for Bachelor's degrees (Eurostat, 2017). Figures recently published by Statistics Netherlands (2017) indicate that in 2016/2017, 63 per cent of higher education students were enrolled on vocational (HBO) programmes and 37 per cent were enrolled on academic (WO) programmes.

Following the transition from the grant-based system to student loans, enrolments in higher education in 2015 actually dropped by seven per cent but recovered in 2016 (European Commission, 2017). In 2015 the number of students enrolling in tertiary education dropped by seven per cent, both in universities (WO) and universities of applied sciences (HBO). This fall was reversed in 2016/2017: 2016 data show a recovery in enrolments of five per cent for HBO and eight per cent for universities; participation of students with special needs also increased in HBO (European Commission, 2017).

Adult learning

Figures not available.

In the Netherlands adult education is accessible to adults over the age of 18 and offers various programmes for their development:

- Adult general secondary education (VAVO). VAVO is regarded as 'second chance education' (VMBO-theoretical programme, HAVO and VWO).
- Dutch as a second language (NT2) I and II, leading to the Dutch as a second language certificate, as referred to in the Decree on State Examinations Dutch as a Second Language. NT2 plays an important role in the integration of immigrants.
- Dutch language and arithmetic, aimed at basic literacy and the starting level for vocational education.

Funding

Spend by route

Tertiary education

The Netherlands spends more on tertiary education per student than the average for both the OECD and EU22 countries, although the differences narrow significantly if research and development activities are excluded. The most significant variation is the spend on Bachelor's programmes and above which is in the region of 13 per cent more than the OECD average and 15 per cent more than the EU22 average.

Table 32: Annual expenditure per student by educational institutions for all services (2014)

In equivalent USD converted using PPPs for GDP, by level of education, based on full-time equivalents

	Tertiary (including R&D activities)			
	Short cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	All tertiary (excluding R&D activities)
Netherlands	11,477 (£8,638)	19,188 (£14,442)	19,159 (£14,420)	11,948 (£8,993)
OECD Average	10,423 (£7,845)	16,674 (£12,550)	16,143 (£12,150)	11,056 (£8,321)
EU22 Average	11,239 (£8,459)	16,189 (£12,185)	16,164 (£12,166)	10,781 (£8,115)

Source: OECD/UIS/Eurostat (2017).

As can be seen in Table 33, the Netherlands spends considerably more than the OECD and EU22 averages on educational core services and research and development on a per student basis.

Table 33: Annual expenditure per student by (tertiary) educational institutions for core educational services, ancillary services and R&D (2014)
In equivalent USD converted using PPPs for GDP, by level of education and type of service, based on full-time equivalents

	Educational core services	Ancillary services (transport, meals, housing provided by institutions)	R&D	Total
Netherlands	11,948 (£8,993)	x	7,211 (£5,427)	19,159 (£14,420)
OECD Average	10,348 (£7,789)	710 (£534)	5,084 (£3,827)	16,143 (£12,150)
EU22 Average	10,123 (£7,619)	694 (£522)	5,346 (£4,024)	16,164 (£12,166)

Source: OECD/UIS/Eurostat (2017).

Table 34 shows that expenditure on compensating staff is above than the OECD and EU22 averages, while other current expenditure is the below the averages.

Table 34: Current expenditure by resource category (2014) [OECD, 2017: 231]
Distribution of current expenditure by public and private educational institutions as a percentage of total current expenditure

	Compensation of all staff			Other current expenditure
	Compensation of teachers	Compensation of other staff	Total	
Netherlands	N/A	N/A	71	29
OECD average	41	26	67	33
EU22 average	N/A	N/A	67	33

Source: OECD/UIS/Eurostat (2017).

Table 35 shows that the Netherland spends proportionally more on staff in private institutions compared with public ones, and its spend is noticeably higher than the OCED and EU22 averages.

Table 35: Share of current expenditure by resource category and type of institution (2014) [OECD, 2017: 232]

Distribution of current expenditure by educational institutions

			Compensation of all staff as a percentage of current expenditure			
	Compensation of teachers		Compensation of other staff		Total	
	Public	Private	Public	Private	Public	Private
Netherlands	N/A	N/A	N/A)	N/A	70	78
OECD average	38	N/A	29	N/A	67	74
EU22 average	N/A	N/A	N/A	N/A	68	63

Source: OECD/UIS/Eurostat (2017).

Maintenance

Prior to September 2015 all students were eligible to a basic grant, a public transportation pass, and a supplementary means-tested grant that, like the loan, needed to be applied for. As of September 2015, the basic grant was abolished and substituted by a low-interest loan. Grants in the Netherlands are performance-related: they are initially paid out in the form of a loan but become non-repayable if the student graduates within ten years. Repayment of these loans will depend on the students' income after graduation. Students who fail to graduate have to repay all the finance they have received, with the exception of the first five months of the supplementary grant (Eurydice, 2015; Del Rey and Schiopu, November 2015). The aim is to invest the resulting savings in higher education, starting with €200 million (£175 million) in 2018 and gradually increasing to an additional €600 (£526) million annually from 2025. Furthermore, higher education institutions have also agreed to invest €200 million (£175 million) per year from their own savings in 2015-2017 (Euro Commission 2017).

Public subsidies are provided to students in school-based upper secondary VET and in postsecondary vocational education to partially cover their private educational expenses.

The Netherlands incentivises individuals to engage in vocational learning as they can deduct training costs between €250 (£219) and €15,000 (£13,147) from their income tax and claim the costs back in their annual tax submission.

Source of funding

The national government covers 80% of the costs of higher level vocational education and training on average (OECD 2014). The additional costs fall on students who pay tuition fees and employers who pay for training and support work-based learning. Private

spending on VET by students remains low in comparison with other OECD countries (OECD, 2013) contributing to high participation levels in VET.

The government provides funding for targeted initiatives intended to improve the quality of VET. For example, in the period 2014-2017 the government is investing up to €100 million (£88 million) to create a regional investment fund for the setup of dual learning/work to improve the qualitative match between MBO and work practice, conditional on two-thirds match-funding by the companies and the regional authorities.

Compared with the OECD and EU22 averages, the Netherlands spent more on Bachelor's programmes as a proportion of GDP than OECD and EU22 averages. Expenditure on short-cycle tertiary programmes, however, was below the two averages.

**Table 36: Expenditure on educational institutions as a percentage of GDP, by level of education (2014) [OECD, 2014: 187]
From public and private sources of funds**

	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary
Netherlands	0.0	1.7	1.7
OECD Average	0.2	1.4	1.5
EU22 Average	0.1	1.3	1.4

Source: OECD/UIS/Eurostat (2017).

Public expenditure on tertiary educational institutions as a percentage of GDP was above the OECD and EU22 averages, while private expenditure as a percentage of GDP was in line with the averages.

**Table 37: Public and private expenditure on educational institutions as a percentage of GDP, by level of education (2014)
From public and private sources, by level of education and source of funds**

	Public expenditure on tertiary education institutions	Private expenditure on tertiary education institutions	Total expenditure on tertiary education institutions
Netherlands	1.2	0.5	1.7
OECD Average	1.1	0.5	1.6
EU22 Average	1.1	0.3	1.4

Source: OECD/UIS/Eurostat (2017)

The Netherlands spends more at Bachelor's level and above the OECD and EU22 averages when viewed as a proportion of all government spending but less than the averages in relation to short-cycle programmes. Overall spending when viewed as a proportion of all government spending was above the OECD and EU22 averages, regardless of whether research and development activities are excluded.

**Table 38: Total public expenditure on education (2014) [OECD, 2017: 209]
Direct public expenditure on educational institutions plus public subsidies to households and other private entities, as a percentage of total government expenditure, by level of education**

Includes R&D activities

	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	All tertiary (excluding R&D activities)
Netherlands	0.0	3.6	3.7	2.6
OECD Average	0.3	2.7	3.1	2.3
EU22 Average	0.2	2.4	2.7	1.6

Source: OECD/UIS/Eurostat (2017).

In the Netherlands the central government is the source of all public funding.

**Table 39: Share of sources of public funds by level of government (2014)
Before and after transfers, by level of education**

	Initial funds (before transfers between levels of government)			Final funds (after transfers between levels of government)		
	Central	Regional	Local	Central	Regional	Local
Netherlands	100	0	a	100	0	a
OECD Average	87	12	1	85	13	2
EU22 Average	86	12	1	85	13	2

Source: OECD/UIS/Eurostat (2017).

Tuition fees

Government-funded institutions (thirteen *universiteiten*, the *Open Universiteit* and more than 50 *hogescholen*) receive funds from the Ministry of Education, Culture and Science or the Ministry of Economic Affairs and are entitled to award officially recognised degrees. These institutions offer study programmes for which the tuition fees are established by law (Nuffic, 2015).

There is a statutory tuition fee (referred to as *collegegeld*) for academic and vocational Bachelor and Associate Degree programmes in public institutions, which the Dutch government sets annually. Students can apply for a tuition fee loan that is a monthly loan equivalent to the amount of the tuition fees (Del Rey and Schiopu, November 2015: 17). For 2018-2019, the statutory fee is set at €2,006 (£1,784) per year for full-time Bachelor/Associate Degree programmes and € 1,722 (£1,509) per year for part-time Bachelor/Associate Degree programmes.

The statutory fee for academic and vocational higher education in public institutions has been gradually increasing in the last 20 years, however the Dutch government has announced that it is planning to halve tuition fees for first-year students in higher education in 2018/2019. Students taking initial teacher education courses will be eligible for the reduced fee for two years. If the plans are approved by parliament, the annual fees will amount to €1,030 (£903) in 2018/2019 instead of €2,060 (£1,784).

Students from the age of 18 are also required to pay a statutory fee for secondary level (MBO) vocational courses provided in public institutions. For 2017/18 this is set at €1,137 (£996) per academic year. Teaching materials, clothing or other items needed for the training can cost between € 500 (£438) and €1000 (£876) per year. Students over the age of 18 are usually eligible for a student grant and a public transport student concession card.

A challenge for the Dutch system (OECD 2014) is the two-tier market in provision. In the unsubsidised private sector, tuition fees are often at least two to three times higher for comparable programmes. In the private sector about half of the students pay their tuition fees themselves while most of the remainder have their fees paid by employers. Recognising these challenges, the government has provided publicly funded loans to adults wishing to return to education and to create a voucher system for some target groups allowing them to spend their voucher on selected postsecondary VET programmes (2012). The actual implementation and impact of the voucher system however has yet been reported in Anglophone literature.

Employers and training levies

As of 2014, there were a range of direct and indirect financial incentives available to encourage employers and individuals to engage in MBO training or other forms of continuing VET. Incentives range from tax rebates to sectoral training levies. All are

offered by the state apart from training levies, which are employer generated and based on collective agreements with social partners.

Alongside public spending, Dutch employers contribute substantially. Training firms' expenditure includes wages for students, costs of trainers for students and, for some forms of training, tuition fees.

Up until the end of 2013, the *Wet Vermindering Afdracht loonbelasting en premies volksverzekeringen Onderwijs* (WVA), an employer tax rebate, was available when training contracts for new or existing employees were provided. Employers accredited by the knowledge centres were given a rebate deducted from their payroll tax and social insurance contributions. There were various categories of rebate available, depending on the training level/status of the trainee:

- €2,738 (£2,340) per year (max) for training employees in an apprenticeship programme (MBO training between Levels 2 to 4) or a programme in higher vocational education (HBO training, Level 4) on the work based (BBL) route to VET. Training takes between two and four years.
- €3,337 (£2,925) per year (max) for training employees who were previously unemployed and unqualified who start a qualifying programme at MBO Level 2. Training takes two years.
- €1,322 (£1159) per year (max) for training of MBO students (Levels 1 and 2 only) on the school based (BOL) route to VET.
- €332 (£291) for enabling an employee to get their prior work experience tested and validated in accreditation of prior learning (APL). This incentivises the employer to encourage an employee to achieve a qualification.

From 1st January 2014, the WVA ceased to exist to be replaced by a 'subsidy for practical learning', managed by OCW. Reasons for the abolition of WVA included the predicted increase in the budget (estimated to increase from €200 (£175) to €400 (£351) million in the next five years) and some abuse of the present arrangements (Casey). The reform includes the change of a tax deduction for employers who support of work-based learning into a more targeted subsidy for employers providing apprenticeships, (but not for work-based learning on the school-based vocational track). As public support plays a considerable role in companies' decisions to offer work-based learning, the changes could affect employer willingness to offer training (OECD). The actual subsidy levels are not yet available in the literature.

Funding also comes from training levies known as the Training Development Funds (*Onderzoek en Ontwikkelingsfondsen*) which mainly fund continuing vocational training. There are around 100 training levies in existence. TDFs exist to financially support specific training to meet the short-term needs of employers in their sector. They may provide funding for training where provision does not currently exist and can also be used

to develop courses and advise employers on training and development matters. The funds are not necessarily spent on public institutions such as ROCs. They are established voluntarily through collective bargaining agreements, between social partners, within sectors (such as construction, steel, catering, healthcare, etc.). Organisations pay a certain percentage of the total wage and salary bill into their respective sectoral TDF. The rates are set by each TDF and vary: for example, the Technical Installation sector TDF agreement for 2013 was to commit one per cent of employers' payroll on training and development activities. All employers pay the same percentage, irrespective of company size. TDFs are independent of the government, being led and managed by the sectors themselves. Some funds have built up large funding pots (€50m and €100m) from employer and employee contributions.

Student debt

In the Netherlands there is a statutory tuition fee (referred to as *collegegeld*) for Bachelor's and Master's programmes at Dutch universities. The statutory tuition fee is a fixed amount set by the Dutch government for all universities for 2018-2019, the statutory fee is set at €2,006 (£1,784) per year.

Students can apply for a tuition fee loan that is a monthly loan equivalent to the amount of the tuition fees (Del Rey and Schiopu, November 2015). The loan bears the same interest rate that the Dutch government pays to the National Bank plus a small administrative surcharge. During the last decade, this implied an average of 3.5 per cent. For 2010-11 the OECD (2014) reports an interest rate of 1.5 per cent and, in 2012-13, it was only 0.6 per cent (Vossensteyn, 2014).

There is a grace period of two years after graduation during which students do not have to make repayments. After that, a mortgage-style repayment schedule with fixed monthly instalments is applied over a period of 15 years. The minimum monthly amount is €45 (£39). Graduates can apply for a temporary reduction of payments in case of need and all debt remaining after 15 years is cancelled. Vossensteyn (2014) records that, in 2012, about three per cent of total debt was not repaid, but the most recent figures provided by Dutch Ministry of Education, Culture and Science reveal a repayment rate of 90 per cent only. After the reform of the system of student aid that is in 2015, the repayment rate was reduced down to 86.4 percent. The reason is that the new system will increase the amount of debt and make repayments more income contingent, with a maximum of four per cent of gross income to be spent by graduates on repayment. (Del Rey and Schiopu, November 2015: 17)

About 50 per cent of graduates have debt, and the average debt is about €15,000 (£13,146). This is likely to increase in some additional €6,000 (£5,258) on average after the reform of the system of student aid due next September.

Funding and fees by subject area

Tuition fees at public higher education institutions, which are fixed annually, do not vary by subject area.

Monitoring

Relevant information not available.

Relationship with national economies

Relevant information not available.

Outcomes

Performance

Student satisfaction

The Netherlands is participating in the Eurostudent project, which is co-funded by the Erasmus programme of the European Union. Eurostudent collects data on the socio-economic background and on the living conditions of higher education students, students' satisfaction with the quality of teaching and temporary international mobility in several European countries, including France, Germany the Netherlands and Norway. The main users of our findings are higher education policy-makers at national and European level, researchers in this field, managers of higher education institutions and - of course - students all over Europe.

Institutional performance

The quality of higher education is monitored by the NVAO, the Dutch-Flemish accreditation organisation, which is responsible for the accreditation of study programmes in higher education institutions. The NVAO is a member of both the European Association for Quality Assurance in Higher Education (ENQA) and the European Consortium for Accreditation (ECA). Its main task is to monitor the quality of higher education in the Netherlands and Flanders. It does this on the basis of the tasks described in the Higher Education and Research Act (WHW) and in accordance with current international accreditation practice. The NVAO's task description includes monitoring the quality of existing higher education study programmes and assessing the quality of new study programmes. In higher education, inspection is different from that in other educational divisions, because the Dutch higher education system applies a peer review-based accreditation system, like many other countries in Europe (Dutch Ministry, 2016).

In the Netherlands the Ministry of Education and Science has performance agreements with each higher education institution. The performance-related budget, linked to the achievement of performance goals set for each institution, increased from EUR 80 million in 2012 to EUR 325 million in 2016, when it represented about seven per cent of the total budget for higher education. During the period 2013-2016, higher education institutions could only receive such funding if they had signed a performance agreement. For 2017-2020, they will receive performance funds in function of how much they have achieved their targets for quality of education and study success in the period until 2015. The performance agreement tool is being evaluated in 2017; lessons drawn will be used to design future agreements (European Commission, 2017).

Perceptions of value for money

Robust evidence not available.

Disadvantage

A report by the Inspectorate of Education in 2016, reported that whereas in 2008, 70 per cent of disadvantaged students and 72 per cent of non-disadvantaged students were eventually admitted to higher education institutions, the difference was much bigger in 2015; when 60 per cent of disadvantaged students went on to study compared to 69 per cent of non-disadvantaged children (Dutch Inspectorate of education, 2016).

Appendix F: Country report, New Zealand

Overview of post-compulsory education

New Zealand's education system has three levels – early childhood education, school education, and tertiary education – across which students can follow a variety of flexible pathways. New Zealand students must attend school until they are 18 years old. Study at secondary school begins when students are 12 or 13 years old and lasts for about five years, from Year 9 to Year 13. At the upper secondary school level students may begin to specialise in vocational learning or may integrate some vocational courses into a more general programme.

The Government-run qualification system is the National Certificate of Educational Achievement (NCEA). NCEA has three levels, one for each of the last three years of secondary school. It contains a mix of internal and external assessments. NCEA replaced the old School Certificate, Sixth Form Certificate and Bursary systems.

New Zealand's Youth Guarantee is about improving achievement, retention and transitions from school through to work. It does this by making accessible a wider range of learning opportunities and choices through making better use of the education network and by creating clear pathways from school to further study and work. The Youth Guarantee is targeted at the secondary-tertiary-employment interface and aims to support all learners up to age 19 to gain a foundation education qualification. Vocational Pathways have been created in six broad sectors - Primary Industries, Construction and Infrastructure, Manufacturing and Technology, Social and Community Services, Services Industries and Creative Industries. The pathways represent ways to structure and achieve at NCEA Levels 2 and 3 and provide a coherent framework to support progression through education to employment.

Trades Academies are secondary-tertiary programmes that provide a broad range of learning opportunities for senior secondary students, to ensure they stay in education for longer. There are 23 Trades Academies run in partnerships between schools and tertiary providers. The combined programme is fulltime (25-30 hours per week) for students already enrolled at school. 33 Trades Academies deliver trades and technology programmes to students in Years 11 to 13 (ages 15 to 18) that take account of local and national workforce needs and are aligned to allow students to achieve secondary and tertiary qualifications. Trades may include such areas as tourism, primary industries, building and construction, hospitality, engineering, business, computing, and more.

Tertiary education includes all post-secondary education including higher and vocational education. It is the third level of education and is delivered by both state and privately-owned institutions. Tertiary education providers offer courses which range from transition (school to work) programmes, through to postgraduate study and research. There are no fixed divisions between the types of courses offered by providers. The focus is on their

ability to offer education to the required quality standards, rather than based on their type.

The Tertiary Education Commission (TEC), the government's arm for providing post compulsory education, defines the post-compulsory system as follows:

- Eight universities (all publicly funded). All New Zealand's universities offer a broad range of subjects for undergraduate, masters and Doctoral (PhD) degrees in commerce, science and the humanities. A number of universities have more than one campus, often located in different cities.
- 18 polytechnics, some recast as Institutes of Technology. Institutes of Technology and Polytechnics (ITP)
- Provide professional and vocational education and training on a wide range of subjects from introductory studies through to full degree programmes. Programmes are at all levels: community interest courses, English language training, foundation programmes, certificates, diplomas, degrees and some postgraduate qualifications. The most common qualifications ITPs award are certificates and diplomas encouraging students to build from lower qualifications to higher ones. Courses emphasise practical experience and application to work situations such as studios, workshops, laboratories, hospitals and other workplaces.
- Three Whare Wānanga (Maori controlled "houses of learning"). They offer Certificates, Diplomas, and Bachelor's Degrees, with some providing programmes in specialised areas up to Doctorate Degree level.
- New Zealand has 11 Industry Training Organisations (ITOs). These are government and industry-funded bodies that represent particular industry sectors. For example, agriculture, building and construction, motor trade, and more. They develop and maintain national standards and qualifications for their sector. They also facilitate on-job training and contract training providers to offer off-job training and courses. ITOs are responsible for arranging training for apprentices through New Zealand Apprenticeships.
- Private Training Establishments (PTEs), offering such diverse programmes as English language provision, hospitality, business and religious-based institutions. At any one time there are approximately 550 registered Private Training Establishments (PTEs), including registered private English language schools.
- Adult and Community Education (ACE), including prominent players such as community education in schools.
- 13 Rural Education Activities Programmes (REAPs) and adult literacy and numeracy.

However, in a recent report by the New Zealand Productivity Commission (NZPC, 2017), despite recognising that the sector had adapted to significant change in the last two decades, it identified a number of trends which are likely to accelerate, offering strategic challenges and opportunities within the tertiary sector:

- Ongoing technological change – offering new ways to deliver higher education programmes and more choice for students and challenging traditional organisational and operating models.
- Increasing tuition costs.
- Increasing internationalisation of the tertiary education sector including: the growth and rising quality of universities and research organisations in Asia; competition internationally for students, academics and research investment; the growth of export education; and the acceleration of the English language as the language of global business and research.
- Changes in employer demand and student demand, including changes in the types of skills demanded; demand for options to combine study with work and other commitments; and demand for on-job and mid-career re-training.
- Demographic change – an ageing and more diverse population. New Zealand’s demography is set to reduce the number of domestic tertiary students for the next few years.

The Commission found that the tertiary education system is not well-placed to respond to uncertain future trends and the demands of more diverse learners: “The system is not good at trying and adopting new ways of delivering education and does not have the features that will allow it to respond flexibly to changing circumstances.”

Education systems

Provision

Higher Education Providers

Entry criteria

Students who want to study at a New Zealand university need to meet a University Entrance (UE) standard. They need to achieve minimum standards at various levels of the National Certificate of Educational Achievement (NCEA) or the New Zealand Qualifications Framework (NZQF).

For NCEA candidates, the prerequisites for the University Entrance award were changed in 2014 for the university year beginning 2015. Candidates must currently:

- Achieve NCEA Level Three
- Gain Fourteen credits in each of three Approved Subjects
- Meet the Literacy and Numeracy standards based on Level Two and Level One credits across a multitude of standards and subjects.

Apprenticeship providers

Entry criteria

An apprentice must be employed in the occupation for which they are training. There are no set entry requirements as these vary according to the qualification for that area of employment.

Flexibility

There are a number of distance learning options in New Zealand, with many institutions offering programmes through these means. Also available is New Zealand's Correspondence School – Te Ahoo Te Kura Pounamu – which has more than 24,000 students studying full and part-time and who, for a variety of reasons, cannot attend a local education provider. It provides distance learning using multimedia and online learning for early childhood, primary, secondary and special needs students. At tertiary and adult levels, full and part-time learning programmes are available for self-directed learning at home and in the workplace.

However, NZPC (2017) found that the system is insufficiently flexible to meet the needs of groups other than school leavers who might be better served by different models and for whom the campus delivery model is less appropriate.

Transferring to other courses is also problematic for New Zealand's students who change their mind about a field of study or provider or want to change the qualification level they are studying towards. Providers often impose high switching costs on students and have incentives to do so. The system does not support students to change their path or to have their credit or prior learning recognised. The way government both measures and rewards provider performance means that providers have little incentive to help students change their course of study (NZPC, 2017).

Provision to support low attainers

The NZPC (2017) found that the tertiary system does not “reach out, as much as it could, to extend the benefits of education to groups that have traditionally missed out on tertiary education. This is largely due to the high degree of central control that stifles the ability of providers to innovate.”

Role of government

What role does the government play in these post-compulsory systems? What assessment is made of current and future skills needs?

The Government stated its priorities for tertiary education in its Tertiary Education Strategy which sets out the Government's long-term strategic direction for tertiary education. This strategy highlights the need to build international relationships that

contribute to improved competitiveness, support business and innovation through development of relevant skills and research and improve outcomes for all.

Tight central control of finances and regulation enable the Government to use funding mechanisms to prioritise identified skills needs. The 2015 Budget 2015 provided a further NZD\$112.3 million (£58.9 million) of operating funding over four years and NZD\$1 million (£0.52 million) of capital funding to invest in knowledge and skills to grow New Zealand's economy. The investment came from funding made available by the reducing demand for tertiary education. The Tertiary Education, Skills and Employment Minister said:

“We are continuing to address the relative underfunding of higher-cost disciplines such as science and agriculture to ensure that these economically important and research-rich areas attract more investment from providers to deliver more of the skills and knowledge New Zealand needs to drive economic growth. We are also investing more in manifesto priorities such as engineering and Māori and Pasifika trades training.”

Take up

Tertiary

New Zealand's bachelor or equivalent graduation rates at 44 per cent are significantly above the OECD average of 34 per cent. However, the graduation rate for those younger than 30 is more in line with the OECD average (32 per cent and 27 per cent respectively). At master's level, graduation rates are below the OECD average (five per cent versus 15 per cent) (OECD, 2015).

When enrolments were uncapped in the late 1990s, the system expanded to serve the significant growing or latent demand for tertiary education. However, quality problems led to the system being recapped in stages between 2003 and 2006. Subsequently, participation rates in tertiary education have fallen steadily, with more than 20% fewer domestic enrolments in provider-based tertiary education in 2015 than in 2005.

The inherent tension between expanded access and expanded public costs is tighter in New Zealand than in most other countries due to New Zealand's interest-free student loan policy. The significant costs that arise via the interest-free student loans scheme, has had the unintended consequence of creating a strong incentive to constrain the supply of tertiary education (NZPC, 2017).

Apprenticeships

Late in 2016, the Government set a target of 50,000 apprentices by 2020. In 2017 there were over 43,000 apprentices, an increase of 6800, nearly 19 per cent, since 2012. Most of these were in the construction and engineering sectors.

Adult learning

Nearly four out of five New Zealanders now have formal qualifications. Ten per cent of adults aged between 30 and 39 were enrolled in education in 2013, well above the OECD average of six per cent (OECD, 2015). At the time of the last census, almost 15% of adults were taking part in some kind of study according to figures from the Statistics Department in 2015.

There are some who argue that, nevertheless, more could be done. Finden (2017) acknowledged that organisations under the auspices of TEC offer some learning opportunities for older people but do not see them as a primary target for their services. NZPC (2017) also found that the system was overly focussed on school leavers and campus-based learning rather than older learners.

Funding

Spend by route

While institutional expenditure per student at tertiary level at USD 13,740 (£10,378) is below the OECD average of USD 15,042 (£11,362), more public spending is directed towards households in the form of loans and grants. The share of public expenditure is highest across OECD countries as a percentage of total public expenditure at 5.2 per cent. Similarly, public expenditure as a percentage of GDP is amongst the highest at 1.7 per cent.

New Zealand was slightly below the OECD average for spend per student on tertiary education in 2014 although this largely seemed to be a function of lower than average spend on research and development activities.

Table 40: Annual expenditure per student by educational institutions for all services (2014)

	Tertiary (including R&D activities)			All tertiary (excluding R&D activities)
	Short cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	
New Zealand	10,312 (£7,762)	16,219 (£12,208)	15,088 (£11,356)	12,063 (£9,079)
OECD Average	10,423 (£7,845)	16,674 (£12,550)	16,143 (£12,150)	11,056 (£8,321)

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

A breakdown of spend between core and ancillary services was not available for New Zealand, but the table below shows that expenditure per student on research and development was just under 60 per cent of the OECD average.

Table 41: Annual expenditure per student by (tertiary) educational institutions for core educational services, ancillary services and R&D (2014)

	Educational core services	Ancillary services (transport, meals, housing provided by institutions)	R&D	Total
New Zealand	x	x	3,025 (£2,277)	15,088 (£11,356)
OECD average	10,348 (£7,789)	710 (£534)	5,084 (£3,827)	16,143 (12,150)

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

Total government spending on tertiary education for the year ended June 2017 increased slightly on the previous year due mainly to higher funding rates for qualifications at level 3 and above and an increase in funding for research. Partially offsetting these increases was a decrease in expenditure on student allowances (Ministry of Education, 2018).

Maintenance

How much maintenance funding do countries provide for their students; which students are eligible (including different levels if appropriate) and for which forms of provision?

Tertiary

The downward trend in the number of student allowances recipients and student loan borrowers continued from 2015 to 2016 according to the Ministry of Education (2018). Expenditure on student allowances, at NZ\$470 million (£247 million), was 26 per cent below its peak in 2011. The amount borrowed from the Student Loan Scheme increased slightly from 2015 to 2016 to NZ\$1.5 billion (£0.78 billion).

Maintenance loans are available, with a lifetime limit of NZ\$35,372 (£18,555), which covers study for approximately 7-8 years (sufficient to complete the majority, if not all of bachelor's, master's and doctoral study). Up to NZ\$1,000 (£525) is also available each year to cover course costs, including everyday materials and services that are required for the completion of study. Grants are available for low income students and others with particular needs. The New Zealand student allowance entitles the receiver to up to NZ\$350.20 (£183.70) per week, with a set lifetime limit on the number of weeks that can be claimed. Accommodation benefits of various amounts, dependent on circumstances,

may also be available. Provider-funded scholarship and grants vary according to university (Kirby, 2016).

The NZUSA (2017) argued that the cost of being a student continues to increase, particularly the cost of housing, but the support for it has failed to keep pace. The loan available to help with the costs related to the direct costs of learning (course costs) was introduced in 1993 at \$1000 (£525) per year. In 2017 it is still \$1000 (£525) per year. Increasingly, students qualify for no government grants since the qualifying parental income threshold for student allowances has been frozen since 2012 and is fully abated, meaning the student is entitled to nothing, at 70% of the average two-parent household income.

Apprenticeships

New apprentices enrolled since 2013 have been eligible for a grant of \$1,000 (£525) towards their on-job and off-job costs, or \$2,000 (£1,049) if they are in priority trades, with the same amount paid to their employer. Initially this applied to the first 10,000 apprentices, but uptake has been extended it to the first 14,000 who applied.

Source of funding

Compared with the OECD average, New Zealand spent a higher proportion of its GDP on tertiary education:

**Table 42: Expenditure on educational institutions as a percentage of GDP, by level of education (2014) [OECE, 2017: 187]
From public and private sources of funds**

Tertiary (including R &D activities)			
	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary
New Zealand	0.2	1.6	1.8
OECD Average	0.2	1.4	1.5

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

In New Zealand, a significantly larger proportion of expenditure comes from private sources than the OECD average whereas public expenditure is slightly below the average.

Table 43: Public and private expenditure on educational institutions as a percentage of GDP, by level of education (2014) [OECD, 2017: 189]

From public and private sources, by level of education and source of funds

	Public expenditure on tertiary education institutions	Private expenditure on tertiary education institutions	Total expenditure on tertiary education institutions
New Zealand	0.9	0.9	1.8
OECD Average	1.1	0.5	1.6

Source: OECD/UIS/Eurostat (2017), Table B2.3. (www.oecd.org/education/education-at-a-glance-19991487.htm).

In New Zealand, 5.4 per cent of Government spending went on tertiary education, a significantly greater proportion of public expenditure than for most OECD countries.

Table 44: Total public expenditure on education (2014) [OECD, 2017: 209]

Direct public expenditure on educational institutions plus public subsidies to households and other private entities, as a percentage of total government expenditure, by level of education

	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	All tertiary (excluding R&D activities)
New Zealand	0.6	4.8	5.4	4.7
OECD Average	0.3	2.7	3.1	2.3

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

Across OECD countries, 15 per cent of public funding comes from regional or local government. In the case of New Zealand, funding is completely centralised. However, private sources of funding, particularly the contributions of households, are significantly higher in New Zealand with private sources providing 49 per cent of funds for tertiary institutions against an OECD average of 30 per cent.

Table 45: Distribution of disaggregated public and private sources of funds for tertiary educational institutions after transfers from public sources

	Public sources	Private sources		
		Household expenditure	Expenditure of other private entities	All private sources
New Zealand	51	34	15	49
OECD Average	70	22	10	30

Source: OECD/UIS/Eurostat (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

During their studies, students are charged no interest on public loans which continue to be interest-free for those who continue to live in New Zealand. Repayment of loans is dependent on income (OECD, 2015).

The NZPC (2017) argued that, because student loans are only available where TEC subsidises a course, and market failures prevent many students (those early in their career and without assets to borrow against) accessing private finance on affordable terms, the effective range of study choices available to students is limited to those subsidised by TEC. It recommended that Government should trial extending the Student Loan Scheme to courses that are approved by the New Zealand Qualifications Authority (NZQA) but not subsidised by TEC. These courses would not be subject to fee or volume caps, but borrowers would pay interest on their loans. This would provide an opportunity for existing providers to offer courses where there is high student willingness to pay (such as professional Master's), fund recognition of prior learning, or leverage economies of scale available from online provision.

New Zealand recently announced 'Tertiary education fees free' which gives school leavers in 2017/18 a year of fees-free provider-based tertiary education or two years of industry training in 2018. Non-school leavers who have completed less than half a year of tertiary education or training may also qualify.

Tertiary

Students need to contribute about 30 per cent of the cost of their courses. New Zealand students can take out a student loan from the government to pay for their courses until they are earning.

Apprenticeships

The Industry Training Fund (ITF) subsidises formal, structured, employment-based training linked to qualifications primarily at levels 1–4 on the New Zealand Qualifications

Framework (NZQF), covering New Zealand Apprenticeships, industry training and industry-training related projects.

Industry training is a partnership between government and industry and is provided to people in employment. It helps support the development of skills that meet industry needs. The ITF was established to support industry training. It enables industry training organisations (ITOs) to:

- develop and maintain skill standards (unit standards and qualifications), and
- develop and maintain arrangements for delivering training.

The ITF is the Government’s contribution to the cost of training. The balance of the cost is met through contributions from employers, trainees and apprentices.

The funding rate for a single standard training measure (STM) for each type of New Zealand Apprenticeship and industry training is shown below:

Industry training	\$3,200.00 (£1,679) for training arranged by an industry training organisation (ITO), or \$2,880.00 (£1,511) for training arranged by a direct funding scheme organisation
New Zealand Apprenticeship	\$5,200.00 (£2.728) for a New Zealand Apprenticeship arranged by an ITO, or \$4,680.00 (£2.456) for a New Zealand Apprenticeship arranged by a direct funding scheme organisation

Funding from the ITF is limited for each learner up to a maximum of 10 credits per month and 75 credits per year. A learner may enrol in more than 75 credits of training in one year, but the additional credits will not be funded.

Industry training organisation (ITOs) are required to ensure that the employers of learners who are enrolled with them make a financial contribution towards the cost of training, except for training where the learner is eligible for fees-free.

Student debt

The Student Loan Scheme Annual Report (2017) noted that 176,938 students took out a loan in 2016, 70% of those eligible. The average student loan balance of all those with a student loan was \$21,467 (£11,264) in June 2017.

The number of students using the Student Loan Scheme has been decreasing since 2010. In 2016 44,566 new borrowers used the loan scheme, a decrease of almost five per cent compared with 2015. This is consistent with a reduction in tertiary education enrolments due to the stronger labour market. The total amount borrowed was \$1.6

billion (£0.84 billion). Students used 67 per cent of the total they borrowed to pay for course fees. Borrower uptake reflected the trend towards higher-level qualifications; the number of borrowers at masters and honours level increased while the number of borrowers at all other levels of study decreased.

The New Zealand Union of Students' Association (NZUSA), drawing from its annual income and expenditure survey, stated that, "The typical Bachelor's degree student in 2017 would pay \$7,385.64 (£3,875) for tuition fees each year (totalling \$23,500/£12,331) over three years); borrow for fees (74% do) and get the maximum \$176.86 (£92.8) a week in loan living costs to pay for rent and other weekly expenses, totalling \$50,000 (£26,233) combined loan for fees and living costs." In addition, one quarter of New Zealand students have credit card debt, and two thirds have two or more forms of debt.

Funding and fees by subject area

Tertiary

In New Zealand, average tuition fees stand at around (£525) 5,400 (£2,833) per annum. There are variations in tuition fees charged according to the university attended and course undertaken. Tuition fee loans are variable, according to state and the cost of attendance at a particular university (Kirby, 2016).

OECD (2017) found that tuition fees in New Zealand varied within a range of USD 3,789 (£2,833) to USD 6,131 (£4,627) with Health and Welfare programmes charging the highest fees and Social Sciences, Journalism and Information the least.

Table 46: Tuition fees in equivalent USD converted using PPPs, for bachelor's, master's, doctoral or equivalent level, based on full-time students [OECD, 2017: 222]

Annual average tuition fees charged by public institutions (for full-time national students)											
	All	Education	Arts & humanities	Social sciences, journalism & information	Business, admin & law	Natural sciences, mathematics & statistics	ICT	Engineering, manufacturing & construction	Agriculture, forestry, fisheries & veterinary	Health & welfare	Services
New Zealand											
Short-cycle tertiary	Included with bachelor's and equivalent programmes										
Bachelor's or	4,295 £	3,824 £	3,838 £	3,789 £	4,080 £	4,163 £	4,281 £	4,731 £	5,064 £	6,131 £	3,824 £

	Annual average tuition fees charged by public institutions (for full-time national students)										
equivalent level	2,250	2,004	2,012	1,985	2,138	2,181	2,143	2,479	2,653	3,212	2,004

Source: OECD (2017). (www.oecd.org/education/education-at-a-glance-19991487.htm).

Introduced in 1990, the Student Achievement Component (SAC) system is the main way in which the government funds teaching in tertiary education organisations. The SAC tuition subsidy system is largely driven by the volume of study (measured in equivalent full-time student units), and by the field of study. Courses are assigned to field of study classifications which are mapped to different SAC funding categories.

At the time the SAC funding system was introduced, tuition subsidy funding rates were derived from a cost analysis conducted in 1989 and 1990. Since 1990, SAC tuition subsidy rates have been adjusted, and new funding categories introduced. However, changes have mostly been made on an ad hoc basis, as the government has lacked access to robust, comprehensive and comparable information about delivery costs (Connew et al.,2015).

In 2012, the Ministry of Education began work to identify areas of potential SAC under- or over-funding to inform future funding policy. Analysis found that 2012 tuition subsidy rates were neither too high, nor too low, compared to direct operating costs in most fields of study and in most institution types. However, there was evidence of relative tuition subsidy under-funding in some fields and levels of study.

Decisions taken in Budgets 2013 and 2014 reduced many of these imbalances. After updating the analysis to apply 2015 tuition subsidy rates, Connew et al. (2015) found that there remains evidence of under-funding in a small number of fields:

- 2015 average tuition subsidy rates for laboratory-based sciences in universities were 2 times higher than management and commerce, while 2012 average direct costs were 2.3 times that of management and commerce
- 2015 average tuition subsidy rates for agriculture in the universities were 2.1 times that of management and commerce, while 2012 average direct costs were 2.5 times that of management and commerce
- 2015 average tuition subsidy rates for optometry, pharmacy and physiotherapy were, respectively, 2.3, 2.2 and 1.6 times that of management and commerce, while the 2012 average direct costs were, respectively 2.8, 2.4 and 2.3 times that of management and commerce.

Apprenticeships

New Zealand Apprenticeship fees vary by employer and ITO. However, fees are generally minimal as apprenticeship courses are subsidised.

Monitoring

The tertiary education system is controlled by regulatory and funding rules that dictate the nature, price, quality, volume and location of much delivery. These controls have extended over time as a result of different financial, quality and political risks. Tuition subsidies allocated to tertiary providers come with tight specifications on the nature and volume of delivery, and these limit the ability of providers to develop new or innovative offerings. Government also tightly regulates the fees that providers can charge. The total number of domestic student places in the tertiary education system is capped, and the proportion of total government funding that shifts between providers year to year is very small.

One reason government maintains tight control over tertiary education institutions (TEIs) is because government bears legal liability for their debts in the event of failure (NZPC, 2017).

The TEC expects institutes of technology and polytechnics (ITPs) to concentrate primarily on delivering education that meets the needs of students in their region and requires ITPs to gain prior approval before they deliver outside their region. Funding mechanisms include tight specifications regarding how funding is allocated, and what can be delivered. These include requirements that students be enrolled in a full qualification, restrictions on the delivery of short qualifications, and restrictions on higher level industry training. The NZPC (2017) argues that this gives incumbent ITPs protection, dampens pressure to improve or increase efficiency, and restricts the spread of new models.

The TEC operates a Financial Monitoring Framework to monitor industry training organisations' financial performance and assign a financial risk rating. ITOs must make annual returns.

In 2018, the Ministry of education reported that the combined financial performance of tertiary education institutions was within the low-risk performance bands in 2016, based on the four key financial performance measures set by the Tertiary Education Commission.

Relationship with national economies

Could find no research data on this aspect.

Outcomes

Performance

Student satisfaction

According to the NZPC (2017), students should have more power in driving quality and innovation within the system. They argue that the current system is set up to be too supply-driven, with providers more responsive to government than to students. They recommend improvements to the government's approach to funding tertiary education to allow funding to be more responsive to student demand and to reward providers for good performance in adding value to students.

The Australasian Survey of Student Engagement (AUSSE) is run by the Australian Council for Educational Research (ACER) in conjunction with participating higher education institutions. The AUSSE is designed to help stimulate evidence-focused conversations about students' engagement in higher education and provide institutions with information that they can use to monitor and enhance the quality of education they provide to their students. Surveys appear to have been run in New Zealand's Universities up until 2010, with pilots in ITPs and PTEs in 2010 and 2011. There appear to be no further surveys but the findings allowed for a comparison of student satisfaction undertaking higher education courses in three setting types. Satisfaction was remarkably similar in all cases:

- While nearly one-third of New Zealand's university students have seriously considered leaving their university before completing their study, students are generally very satisfied with their experience at university. A total of 78.8 per cent of first-year and 74.8 per cent of later-year students rated the quality of academic advice received as 'good' or 'excellent'. A further 85.0 per cent of first-year and 82.3 per cent of later-year students were satisfied with their overall educational experience and rated it as 'good' or 'excellent'. The vast majority of New Zealand university students also indicated that given the chance to start over, they would attend the same university again (89.1%).
- In 2010, an AUSSE pilot surveying student satisfaction in ITPs found that overall, most students at the ten ITPs for which data were collected were satisfied with their experience at their institution. Three-quarters (75.5 per cent) rated the overall quality of academic advising at their institution as 'good' or 'excellent'. The majority of students (77.7%) rated their overall educational experience positively and 80.9 per cent said that they would 'probably' or 'definitely' attend the same institution again if they had the chance to start over.
- A subsequent pilot involving students at PTEs had similar satisfaction rates, with students studying at PTEs tending to be highly satisfied with their educational experience, and over threequarters of students rating the overall quality of academic advising and overall experience as 'good' or 'excellent'. Over 80 per cent of students would attend the same PTE given the chance to start over again.

A relatively large proportion of students indicated they had seriously considered leaving their institution or planned to leave before finishing their study. Around 35 per cent of certificate level students, 34 per cent of bachelor level students and 26 per cent of diploma level students had seriously considered leaving before finishing.

Institutional performance

Tertiary excluding universities

Quality assurance in the tertiary sector focuses on the quality of learning outcomes recognised through qualifications as a whole. It also examines the systems and processes that support delivery of quality by providers. Only those tertiary qualifications and providers that are quality assured can receive government financial assistance.

The New Zealand Qualifications Authority approves all qualifications and is the quality assurance body for all tertiary education organisations with the exception of universities. The New Zealand Qualifications Authority's (NZQA) role in the education sector is to ensure that New Zealand qualifications are regarded as credible and robust, nationally and internationally, in order to help learners succeed in their chosen endeavours and to contribute to New Zealand society. NZQA's services span the secondary and tertiary education sectors. NZQA administers the NCEAs for secondary school students and is responsible for the quality assurance of non-university tertiary training providers. An external evaluation and review (EER) of training providers is conducted periodically to provide the NZQA with 'a statement of confidence (judgment) about an organisation's educational performance and capability in self-assessment'. Ratings given as a result of the evaluation are awarded across the six evaluation areas and key focus areas. These EER ratings are also published.

The evaluation of New Zealand's External Evaluation and Review quality assurance framework (New Zealand Qualifications Authority 2012) revealed disquiet about perceived inconsistencies in the approaches and capability of evaluators, which in turn were perceived to have affected the reliability of the external review and the ratings applied (Misko, 2015).

In the university sector, quality assurance is delegated to Universities New Zealand through its Academic Quality Agency and its Committee on University Academic Programmes (CUAP). These arrangements are not conducive to innovation and focus primarily on processes rather than student outcomes.

Universities

Universities New Zealand (UNZ) Universities New Zealand (UNZ) – Te Pōkai Tara – provides quality assurance for university qualifications through its Committee on University Academic Programmes (CUAP), and through the independent Academic Quality Agency for New Zealand Universities (AQA). CUAP is charged with setting up

and applying qualification and regulation approval, accreditation and programme moderation procedures across universities. AQA supports universities in their achievement of standards of excellence in research and teaching through regular institutional audits and promoting quality enhancement practices across the sector.

Perceptions of value for money

Tertiary

The NZPC (2017) argues that, over time, the government has responded to fiscal pressure, political risks, and quality concerns by layering increasingly prescriptive funding rules and regulatory requirements on providers. These have the cumulative effect of tying the system down. The report recommends that providers need more freedom, and incentives, to try new things and should have greater autonomy and responsibility.

In an April 2018 Government press release, Education Minister Chris Hipkins outlined a programme of work to reform the polytechnic sector to improve sustainability and effectiveness. He noted that:

"The 16 polytechnics around the country are crucial to vocational training – they account for about 20 per cent of total government spending in tertiary teaching and learning. But over the past decade domestic student numbers have dropped by a third... TEC will work with polytechnics, and the broader community, to explore and test different options for change. I have considered whether increased funding, which was reduced in real terms over the last nine years, would solve the issues in the sector. But while a funding system specifically designed to meet the cost challenges of the sector could help make it less vulnerable to fluctuating demand, it will not be enough on its own. I believe there's value in exploring how the network of polytechnics can operate more as a system so that we can use the resources of the network as a whole to achieve high quality provision across the country. It's about making sure the sector is agile and able to respond to the changing patterns of demand and the changing needs of learners."

Apprenticeships

Introducing an Industry Training and Apprenticeships Bill in 2014, the responsible minister noted that Government expenditure on industry training had more than trebled from NZ\$64 million (£48.3 million) in 2000-01 to \$204 million (£154 million) in the 2009-10 financial year. In 2011 there were approximately 154,000 trainees and apprentices enrolled in industry training. This included nearly 15,000 Modern Apprentices. However, performance, as measured by qualification completions and credit attainment, was very poor. Only about a third of trainees achieved the qualification five years after starting their industry training programme. Typically, more than half of industry trainees and over 30 per cent of Modern Apprentices achieved no credits between 2002 and 2010. The Bill

resulted in changes to ensure programmes consisted of at least 120 credits and resulted in a level 4 qualification.

Disadvantage

When enrolments were uncapped in the late 1990s, the system expanded to serve the significant growing or latent demand for tertiary education, including from groups that had historically poor levels of participation. Significant quality problems occurred along the way, and the system was recapped in stages between 2003 and 2006. Subsequently, participation rates in tertiary education have fallen steadily, with more than 20% fewer domestic enrolments in provider-based tertiary education in 2015 than in 2005.

Māori and Pasifika have higher rates of participation in tertiary education than New Zealand Europeans overall, but this is exclusively because of their higher rates of participation in sub degree-level study.

Appendix G: Country report, Norway

Overview of post-compulsory education

In Norway, compulsory education/training ends following completion of lower secondary education at age 16. However, every pupil aged 16-19 who has completed the lower secondary level is entitled to upper secondary education or training leading to university and college admissions certification or to a vocational qualification.¹⁹ Upper secondary education - which is divided into three levels namely, VG1, VG2 and VG3 - provides three years of general education or four years of vocational training, with students choosing from five general study programmes and eight general vocational programmes (Building and Construction; Design, Arts and Crafts; Electrical Trades; Healthcare, Childhood and Youth Development ; Agriculture, Fishing and Forestry; Restaurant and Food Processing Trades; Service and Transport; Technical and Industrial Production).

The general studies subjects focus on more theoretical knowledge and are conducted in school for the entire three years (VG1-VG3). General studies programmes lead to an upper secondary school leaving certificate which makes students eligible for direct admission to general university programmes.

The vocational education pathway consists of two years in school (VG1 and VG2) and two years of apprenticeship with an employer. The VET pathway at this level has three strands. The first strand comprises apprenticeships, most of which follow a 2+2 model, which entails two years of education in school, followed by two years of formalised apprenticeship training in an enterprise or public institution, known as a training enterprise. Some VET programmes deviate from the 2+2 model. For instance, some programmes follow a 1+3 model or 3+1 model, which involve either one year in school followed by three years of apprenticeship training, or vice versa. Some trades such as the Electrical Trades programme follow a 2 + 2^{1/2} model which therefore involves a half year longer apprenticeship period than ordinary programmes. After two years of apprenticeship training, learners take a practical-theoretical examination and successful candidates are awarded a trade certificate (fagbrev) for industrial and service trades or a journeyman's certificate (Svennebrev) for traditional crafts. The two certificates are both at EQF level 4 and have equal status based on similar sets of theoretical knowledge and practical skills.

¹⁹ Norwegian youth have a right to upper secondary education, which is valid for five years for pupils in three-year school-based upper secondary programmes, and six years for pupils in VET programmes with apprenticeship (Norwegian Directorate for education and Training 2016).

There is no statutory right to an apprenticeship placement in a training enterprise and some students do not manage to get an apprenticeship contract in a training enterprise. For these students county authorities are required to provide practical school-based training as a substitute for an apprenticeship placement. This alternative route is costly for the counties (that are responsible for funding VET) and VET schools, and 3+0 pupils (i.e. those who complete three years in vocational school with zero years in on-the-job training often perform less well in their trade and journeyman's examination than apprentices.

After two years in a VET programme students have the option of transferring to a third year of supplementary studies that leads to a qualification (at VG3 level/EQF level 4), which qualifies them for entry to higher education. This pathway replaces the two-year apprenticeship period, and the learners therefore do not receive a trade or journeyman's certificate. Students following the vocational track can also qualify to apply for general university programmes by completing a supplementary studies programme after they have completed their apprenticeship training/trade or journeyman's certificate examination. The year of supplementary studies is a packaged course in the six key academic subjects: Norwegian, English, mathematics, natural sciences, social sciences, and history). Approximately 40 per cent of the VET learners who embark on this path fail in one or more of the subjects.

Alongside these routes is the 'training candidate scheme', which targets learners who for various reasons struggle to meet the requirements for the trade or journeyman's certificate. The scheme provides learners with the possibility of achieving a specially adapted qualification of a lower level (EQ3) than a trade or journeyman's certificate (EQ4). Training candidates who have succeed in acquiring a training contract with an employer may convert the training contract to an ordinary apprenticeship contract while in training, should they start aiming for a trade or journeyman's certificate.

Tertiary vocational programmes at EQF 5 are available for those who gained a trade or journeyman's certificate. These programmes run from between six months to a maximum of two years.

Higher education in Norway (EQF levels 6 and above) is offered by eight universities, nine specialised universities, twenty-four university colleges and a range of private university colleges. The specialised universities (six public and three private) each function as a national competence centre for the field they represent. (which encompass architecture and design, economics, sport sciences, music veterinary science, theology, business administration, logistics IT, and health). In Norwegian higher education, all vocationally oriented courses and programmes are part of the mainstream system. There is no formal or other distinction between vocational and non-vocational higher education. Courses normally last three years or more.

Adults who have not completed sufficient primary and lower secondary education are entitled to education at these levels. Adults from the age of 25 years who have completed

primary and lower secondary school or the equivalent, but not upper secondary education, have the right to such education upon application.

Education systems

Provision

Entry criteria

To be admitted to an education programme at VG1, the main rule is that a student must have completed the Norwegian 10-year primary and lower secondary education or the equivalent. In grade 10 students select which education programme they are going to apply for and personally apply for placement in upper secondary school the county where they live (each county has their own rules that stipulate which schools you can apply to). Students have the right to be admitted to one of the three education programmes they want most. The students' final grades from grade 10 may contribute to deciding whether they are admitted to their first choice.

The main rule for admission to VG2 and VG3 is that students must have passed all subjects at the previous level. This applies both to subjects where there are overall assessment grades and, if relevant, examinations grades, and subjects where there are half-year assessments with grades.

In order to be qualified for admission to study programmes taught in Norwegian universities and university colleges, applicants must satisfy the requirements for Higher Education Entrance Qualification. These are as follows:

- Upper secondary school leaving certificate based on successful completion of one of the general or academic programmes in upper secondary education.
- Third year of a bridging course qualifying for admission to higher education for VET pupils.
- An upper secondary vocational qualification (a craft or a journeyman's certificate), plus successful completion of the one-year bridging course qualifying them for admission to higher education.
- The '23/5' pathway: Applicants aged 23 or above with at least five years of work experience, or a combination of education and work experience, and who have successfully passed the course in the six key subjects mentioned in the previous section.
- Recognition of prior learning, RPL: Access based on individual assessment of formal, informal and non-formal qualifications is open to applicants aged 25 or above. Applications for admission on the basis of RPL are processed locally at each institution.

Vocational/technical institutions and providers

Entry criteria

Holders of a trade or journeyman's certificate may pursue further studies at vocational education college (fagskole) at EQF 5. Access to tertiary education is based on an upper secondary qualification or validated prior learning. Practical work experience is not required, however many programmes, particularly those aimed at the health and social service sector, are designed as part-time courses, where students are required to work part-time and undertake project assignments at a workplace, often their own. There are no age restrictions.

In the case of universities and university colleges, in addition to the criteria set out for academic programmes above, for those with a specific relevant journeyman's certificate, it is possible to gain direct admission to certain specially designed engineering programmes at bachelor level (Y-veien). In addition, candidates who have completed a two-year tertiary vocational education and training programme qualify for some engineering and technical programmes at higher level. The framework curricula for the bachelor degree programmes in engineering allow for the recognition of relevant two-year technical tertiary vocational education as one year of the engineering programme. Some tertiary vocational education colleges have agreements with higher education institutions whereby their graduates are directly admitted to the second year of engineering programmes in the relevant field of study. However, such agreements often set conditions for technical vocational college students. For example, engineering at higher education level requires college candidates to spend three or four years on completing their bachelor's degree.

Flexibility

Individuals without an upper secondary school leaving certificate are provided with multiple pathways through which they can access higher education. These include:

- After two years in a VET programme, rather than continuing on to a two-year apprenticeship period, pupils may transfer to a one-year bridging course (known as 'supplementary studies') that leads to a qualification at NQF EQF level 4 and qualifies them to enter higher education (Påbygging til generell studiekompetanse). In 2015, 8,688 pupils (26.6 per cent) selected this option after their second year in a VET programme (Norwegian Directorate for Education and Training, c). The course is a 'packaged' course in the six key academic subjects of Norwegian, English, mathematics, natural sciences, social sciences, and history, and successful candidates satisfy the general admission requirements to higher education (on par with those taking general study programmes).

- Apprentices and other vocational learners who pass the trade- or journeyman's certificate also have a statutory right to undertake the one-year bridging course (a fifth year of training) in order to qualify for admission to higher education.
- Individuals aged 23 or above with at least five years of work experience, or a combination of education and work experience, and who have successfully passed a course in the six key/core subjects mentioned above qualify for admission to higher education. This is known as the '23/5' pathway.
- Individuals aged 25 or above who do not meet general entrance requirements may qualify for admission to higher education via recognition of relevant formal, informal and non-formal learning. Applications for admission on this basis are processed locally at each institution.
- Individuals with relevant upper secondary vocational qualifications may qualify for admission to certain specially designed engineering programmes at bachelor level (Y-veien) (Centre for International Cooperation in Education, 2016; Cedefop (2017)).

Most programmes of higher education are open to part-time study and other flexible modes of provision (including distance, decentralised, media and/ or ICT-based programmes) are common. The Norway Opening Universities (Norgesuniversitetet) is an agency under the Ministry of Education and Research that is mandated to stimulate Norwegian higher education institutions to develop and offer flexible programmes and courses based on ICT, and to coordinate activities within the field of lifelong and flexible ICT-supported or multimedia learning in higher education (Norwegian Centre for International Cooperation in Education, 2016).

Provision to support low attainers

The 'training candidature scheme' targets learners that for various reasons struggle to meet the requirements for the trade or journeyman's certificate. The scheme started in 2000, and in 2013 there were about 1800 training candidates distributed across the nine different VET programmes. The scheme provides learners with the possibility of obtaining a specially adapted qualification of a lower degree than a trade or journeyman's certificate. The training candidate signs a training contract with a training enterprise and has to pass a competence exam (*kompetanseprøve*) at the end of training. While apprentices must fulfil all the objectives set in the curriculum, a training candidate receives adapted training targeted towards a limited number of the objectives in the curriculum. A training candidate therefore has a less comprehensive exam that leads to a vocational training certificate (*kompetansebevis*) at EQF level 3 when completed.

Role of government

The VET system in Norway is built upon the tripartite cooperation principle. A system of cooperation, mandated by the Norwegian Education Act, is established both at national and regional level, involving both employers' and workers' unions. At national level, the National Council for VET (Samarbeidsrådet for yrkesopplæring), a body for cooperation on vocational education and training, appointed by the Ministry, gives advice and takes initiatives within the VET sector. Each of the eight upper secondary VET programmes are closely monitored by the trade-specific Vocational Training Councils. The Vocational Training Councils must report to the national authorities every two years on the situation and on the potential need for changes in their respective VET programmes. At regional level, there are county vocational training boards (Yrkesopplæringsnemnder), one in each county.

The public colleges delivering post-compulsory education are administered by the county authorities (except for 16 funded directly by the Ministry of Education and Research). The public colleges are required by law to offer good quality training and to cover local/regional labour market demands for skills at this competence level (mainly in technical, maritime, and health and social studies) (Norwegian Centre for International Cooperation in Education (2016)).

In the case of higher education, the government encourages higher education institutions to cooperate with business and industry to ensure the relevance of provision. Pursuant to a 2009 white paper entitled Education Strategy, all higher education institutions are required to have a consultative council for cooperation with working life and to develop a strategy for such cooperation. (Norwegian Centre for International Cooperation in Education (2016)).

Take up

Upper-secondary education and training

In 2017 92.3 per cent (243 490) of all 16 to 18-year-olds were enrolled in post-compulsory upper secondary education as pupils, apprentices and trainees, which is two per cent higher than was the case in 2013 (Statistics Norway, February 2018). Slightly more (51.4 per cent/125,036) of the students were enrolled in general studies programmes than were enrolled in vocational study programmes (48.7 per cent/118,454), which were either vocational programmes in upper secondary schools (30.4 per cent/73,908), apprenticeships (18.3 per cent/44,546) or traineeships (0.8 per cent/1,952). (Statistics Norway, 20 February 2018).

According to Statistics Norway (March 2017) men and women differ in their choice of upper secondary education. Women outnumber men in general study programmes, while men are in the majority in vocational programmes. In 2016, with the exception of sports

and physical studies, women were in the majority in the different programmes for general studies. Fifty-six per cent of pupils in these programmes were female. In the vocational programmes, the gender balance was reversed, with a male majority in most programmes. In Building and construction, Electricity and electronics and Technical and industrial production, as many as 90 to 95 per cent of the pupils were male. As in previous years, about 70 per cent of the 40,700 apprentices and 2,000 trainees in upper secondary education were male as of 1 October 2016. About half of all the female apprentices were on the Healthcare, childhood and youth development programme.

Post-secondary education and training

Thirty-five per cent (293,123) of 19 to 24 year-olds were in higher education in 2017, compared with 35 per cent in 2016 (288,989) and 30 per cent in 2007 (21,442) – so the proportion of this age group in higher education had risen by just under six per cent in the ten years (Statistics Norway, March 2018).

The proportion of 19 to 24 year-old males in higher education rose from 23.7% in 2007 to 28.4 per cent in 2017 – so the proportion of males in this age group in HE rose by just under five per cent in the ten years (Statistics Norway, March 2018).

The proportion of 19 to 24 year-old females in higher education rose from 36.2 per cent in 2007 to 42.6% in 2016 to 42.9% in 2017 – so the proportion of females in this age group in HE rose by 6.6 per cent in the ten years (Statistics Norway, March 2018).

In 2017, 59 per cent of 19 to 24 year olds in higher education were female and 41% were male. This compares with 61 per cent female and 39 per cent male in 2007 (Statistics Norway, March 2018).

The vast majority of tertiary level vocational students are enrolled in higher education. In 2015, five per cent (15,146) of students were enrolled in post-secondary vocational programmes, compared to 95 per cent (283,115) enrolled in higher education (Statistics Norway March 2017). Almost half (48 per cent) of the vocational students attended private colleges (Statistics Norway, March 2017).

Adult learning

An analysis of statistics for VET qualifications (in 2014/15) in Norway reveals a high level of participation by adult learners. Of all trade or journeyman's certificates completed in 2015, 47 per cent of graduates were aged above 24 years. According to Norwegian Centre for International Cooperation in Education (2016) a reason for the high participation rate of adults may be that adults without upper secondary education and training have a statutory right to receive it and that adults may sign apprenticeship contracts with training enterprises – although the grant given to training enterprises accepting adult apprentices (basistilskudd II) is about €5000 (£3,774) per year per apprentice, compared to approximately €13 900 (£10,492) per apprentice for pupils in

upper secondary VET. In addition, adults can be admitted to tertiary vocational education and to higher education based on an individual assessment of informal, non-formal and formal qualifications (VPL). For VPL-based admission to higher education, applicants must be aged 25 or above. In addition, vocational colleges and higher education institutions are free to recognise parts of a study programme based on non-formal and informal learning, making it possible for mature learners to qualify in less time than the prescribed period of study. The VPL targets adults who have worked in a trade for a number of years with little schooling and no formal qualifications (Norwegian Centre for International Cooperation in Education, 2016).

In Norway in the autumn of 2016, 41 per cent of students in post-secondary vocational education were over the age of 30, and nearly 20 per cent were over 40 (Statistics Norway, 2018). The proportion of 25 to 29 year olds in higher education was 15.9 per cent in both 2016 and 2017 compared with 15.0 per cent in 2007 (Statistics Norway, 23 March 2018).

Funding

Spend by route

Spending/funding per head

County councils spend an average of NOK 155,100 (£14,377) per pupil in upper secondary school. This is just over NOK 49,000 (£4,542) more than the cost per primary and lower secondary school pupil.

Vocational study programmes are more expensive than general study programmes. A pupil enrolled in a vocational study programme costs an average of NOK 20,000 (£1854) more than a pupil enrolled in a general study programme, largely due to smaller classes and more expensive study materials.

Norway spends significantly more on both short-cycle and higher education degree programmes per student than the average for both the OECD and EU22 countries. Moreover, overall expenditure is higher, regardless of whether research and development activities are excluded.

Table 47: Annual expenditure per student by educational institutions for all services (2014)

In equivalent USD converted using PPPs for GDP, by level of education, based on full-time equivalents

	Tertiary (including R&D activities)			
	Short cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	All tertiary (excluding R&D activities)
Norway	12,813 (£9,644)	21,262 (£16,003)	20,962 (£15,777)	13,059 (£9,829)
OECD Average	10,423 (£7,845)	16,674 (£12,550)	16,143 (£12,150)	11,056 (£8,321)
EU22 Average	11,239 (£8,459)	16,189 (£12,185)	16,164 (£12,166)	10,781 (£8,115)

Source: OECD/UIS/Eurostat (2017)

Table 48 shows that Norway spends more than the OECD and EU22 averages on educational core services and research and development on a per student basis.

Table 48: Annual expenditure per student by (tertiary) educational institutions for core educational services, ancillary services and R&D (2014)

In equivalent USD converted using PPPs for GDP, by level of education and type of service, based on full-time equivalents

	Educational core services	Ancillary services (transport, meals, housing provided by institutions)	R&D	Total
Norway	12,843 (£9,667)	216 (£163)	7,903 (£5,948)	20,962 (£15,777)
OECD Average	10,348 (£7,789)	710 (£534)	5,084 (£3,827)	16,143 (12,150)
EU22 Average	10,123 (£7,619)	694 (£522)	5,346 (£4,024)	16,164 (£12,166)

Source: OECD/UIS/Eurostat (2017).

Table 49 shows that expenditure on compensating staff is just above than the OECD and EU22 averages, while other current expenditure is the just below the averages.

Table 49: Current expenditure by resource category (2014) [OECD, 2017: 231]
Distribution of current expenditure by public and private educational institutions
as a percentage of total current expenditure

	Compensation of all staff			Other current expenditure
	Compensation of teachers	Compensation of other staff	Total	
Norway	N/A	N/A	68	32
OECD average	41	26	67	33
EU22 average	N/A	N/A	67	33

Source: OECD/UIS/Eurostat (2017).

Norway spends proportionally more on staff in public institutions compared with private ones, and its spend is just above the OCED and EU22 averages.

Table 50: Share of current expenditure by resource category and type of institution (2014) [OECD, 2017: 232]

Distribution of current expenditure by educational institutions

Compensation of all staff as a percentage of current expenditure						
	Compensation of teachers		Compensation of other staff		Total	
	Public	Private	Public	Private	Public	Private
Norway	N/A	N/A	N/A	N/A	68	65
OECD average	38	N/A	29	N/A	67	64
EU 22 average	N/A	N/A	N/A	N/A	68	63

Source: OECD/UIS/Eurostat (2017).

Maintenance

Educational loans and grants are intended to provide adequate support to cover living expenses while individuals pursue an education. Learners in upper secondary school-based VET (pupils and apprentices alike, as well as pupils attending private colleges) can qualify for grants and subsidised loans from the State educational loan fund, following a needs-based assessment. They may receive:

- Relocation grants if they have to move away from home to attend school or enterprise-based training and are also entitled to support from the State Education Loan Fund. This is also available for adult learners.
- An additional subsistence grant to cover expenses if they live away from home.
- Grants for purchasing compulsory equipment, which varies according to study programmes.
- Support to students at upper secondary level is mainly provided in the form of grants.
- Financial support if they are attending private VET schools have to pay tuition fees.

170,000 pupils in upper secondary education receive grants from the Norwegian State Educational Loan Fund. They receive an average of NOK 15,900 (£1,474) each.

(HE) Students aged between 18 and 65 may receive financial support from the Norwegian State Educational Loan Fund (Statens lånekasse for utdanning).

Student loans carry no interest charges during the period of study. Norway has a long tradition of student loans, and uptake of loans by students is among the largest in the world. ((Del Rey and Schiopu, November 2015). As in the other Nordic countries, universities do not charge tuition fees and everyone, including foreign students can get student loans. For the academic year 2015-16, the maximum amount one student could borrow was NOK 100,920 (£9,357) (Del Rey and Schiopu, November 2015:16).

Up to 40 per cent of Norwegian student loans can be converted into non-repayable grants provided that some conditions, related to academic progress as well as income and wealth of the student are met. In particular the borrower must not live with his or her parents, must pass all exams, and earn less than NOK 162,769 (£15,090) in 2015 and/or less than NOK 168,059 (£15,580) in 2016. Assets must not exceed NOK 370,304 (£34,331) in 2015 and NOK 382,339 (£35,446) in 2016. However, if the annual income and/or assets of graduates exceed a certain level, the grant is converted back into a loan. The support also remains a loan if students live at home with their parents, even if they pass their exams (Del Rey and Schiopu, November 2015:16).

The normal repayment time is 20 years and all graduates can apply for delayed repayment for up to three years (during that time of deferment, however, interest still accumulates). In cases of low income, unemployment, illness, childbirth or care of small children, repayments may be postponed for a period and the interest can be waived. In some cases, all or parts of the loan will be cancelled (Eurydice, 2015). Overall, the system is designed to protect low wage earners. It is however quite difficult to estimate the global cost of these measures to the government (consequently, the taxpayer) (Del Rey and Schiopu, November 2015:16-17)

Source of funding

Public expenditure

Norway spends over 60 per cent more on upper secondary education than the OECD average. According to the Norwegian Directorate for Education and Training, it is largely the number of teaching hours per teacher that increases the cost per pupil in Norway compared with other OECD countries.

The authorities at county level are responsible for dispensing the VET financing provided by the state budget (including apprenticeships), as well as for providing apprenticeships and for supervision. The main sources of revenue for counties are local taxes, general grants, earmarked grants, charges and fees. The General Grant is a lump sum transfer to every unit of local government and is administered by the Ministry of Local Government and Modernisation. Local taxes accounted for 40 per cent of total revenue in 2016, followed by general grants at 34 per cent, fees and charges at 14 per cent and earmarked grants at five per cent.

County councils spent a total of NOK 27.3 billion (£2.53 billion) on upper secondary education institutions in 2015. The figure includes the cost of teaching, premises, specially adapted tuition, the Follow-up Service (Oppfølgingstjenesten), and the educational psychology service (PPT). This figure does not distinguish between academic and vocational routes.

County councils also provide training enterprises that offer apprenticeships with a grant that is intended to cover all costs related to training an apprentice (or training candidate) during the two-year apprenticeship period. They also provide additional grants to enterprises either offering apprenticeships in small trades in need of protection or for taking on apprentices with special needs. In 2015, county councils spent NOK 2.9 billion (£0.27 billion) on vocational training at workplaces – an increase of more than seven per cent from 2014. The increase was due to a rise in the number of apprentices and training candidates and to higher grants per apprentice.

In 2015 county councils spent almost NOK 2.5 billion (£0.23 billion) on special needs education and specially adapted tuition. This is just over eight per cent of their total spending on upper secondary education and training. The cost of specially adapted tuition includes introduction programmes for newly arrived language minority pupils and special Norwegian language tuition. County councils spend an average of NOK 14,000 (£1,298) per pupil on special needs education and specially adapted tuition in upper secondary education.

Compared with the OECD and EU22 averages, Norway spent more on Bachelor's programmes as a proportion of GDP than OECD and EU22 averages. Expenditure on short-cycle tertiary programmes, however, was below the two averages. Overall, expenditure on educational institutions as a percentage of GDP was above the OECD and EU22 averages.

Table 51: Expenditure on educational institutions as a percentage of GDP, by level of education (2014)
From public and private sources of funds

	Tertiary (including R & D activities)		
	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary
Norway	0.0	1.6	1.7
OECD Average	0.2	1.4	1.5
EU22 Average	0.1	1.3	1.4

Source: OECD/UIS/Eurostat (2017).

Public expenditure on tertiary educational institutions as a percentage of GDP was above the OECD and EU22 averages, however private expenditure on tertiary education institutions was below the averages.

Table 52: Public and private expenditure on educational institutions as a percentage of GDP, by level of education (2014)
From public and private sources, by level of education and source of funds

	Public expenditure on tertiary education institutions	Private expenditure on tertiary education institutions	Total expenditure on tertiary education institutions
Norway	1.6	0.1	1.7
OECD Average	1.1	0.5	1.6
EU22 Average	1.1	0.3	1.4

Source: OECD/UIS/Eurostat (2017)

Norway spends considerably more at Bachelor's level and above than the OECD and EU22 averages when viewed as a proportion of all government spending but less than the averages in relation to short-cycle programmes. Overall spending when viewed as a proportion of all government spending was above the OECD and EU22 averages, regardless of whether research and development activities are excluded.

Table 53: Total public expenditure on education (2014) [OECD, 2017: 209]

Direct public expenditure on educational institutions plus public subsidies to households and other private entities,1 as a percentage of total government expenditure, by level of education

Includes R&D activities

	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	All tertiary (excluding R&D activities)
Norway	0.1	4.7	4.8	3.8
OECD Average	0.3	2.7	3.1	2.3
EU22 Average	0.2	2.4	2.7	1.6

Source: OECD/UIS/Eurostat (2017).

In Norway the central government is the source of virtually all public funding for tertiary education.

Table 54: Share of sources of public funds by level of government (2014) [OECD, 2017: 211]

Before and after transfers, by level of education

	Initial funds (before transfers between levels of government)			Final funds (after transfers between levels of government)		
	Central	Regional	Local	Central	Regional	Local
Norway	99	0	1	99	a	1
OECD Average	87	12	1	85	13	2
EU22 Average	86	12	1	85	13	2

Source: OECD/UIS/Eurostat (2017).

Student debt

There are no tuition fees at state higher education institutions for mainstream programmes, however, students are required to pay a fee of around 50 EUR per semester to the student union. The average tuition fees at private universities range between approximately EURO 8,000 (£7,014) – 9,500 (£8.329) per year.

Students aged between 18 and 65 may receive financial support from the Norwegian State Educational Loan Fund (Statens lånekasse for utdanning). (Norwegian Centre for International Cooperation in Education, 2016). VET is also cost-free for pupils and students in public education and training institutions. In 2015/6 the annual average tuition fees for full-time students charged by private institutions was USD 5,099 (£3,850) (OECD, 2017: 220).

As noted above, educational loans and grants are available to provide adequate support to cover living expenses and up to 40 per cent of the loans can be converted into non-repayable grants provided that some conditions, related to academic progress as well as income and wealth of the student are met. In 2010-11, 70 per cent of students had a loan and the average debt at graduation was, according to the OECD, USD 25,188 (£19,021) (Del Rey and Schiopu, November 2015:16).

Funding and fees by subject area

Expenditure also varies significantly between the different study programmes (at upper secondary level). In 2015, the average VET programme cost was just over NOK 100,000 (£9,278) per pupil. The cheapest study programme, Media and Communication cost NOK 84,444 (£7,835) per pupil, while the most expensive, the programme for Agriculture, Fishing and Forestry, cost almost NOK 172,000 (1,596) per pupil. This compares with NOK 63,576 (£5,897) for the most popular academic programme Specialisation in General Studies (Table 55).

Table 55: Direct operating cost per upper secondary pupil by vocational programme in Norway

Programme	2015
Building and Construction	NOK 103,392 (£9,595)
Design, Arts and Crafts	NOK 105,891 (£9,827)
Electrical Trades	NOK 93,758 (£8,701)
Health and Social Care	NOK 86,538 (£8,031)
Media and Communication	NOK 84,444 (£7,838)
Agriculture, Fishing and Forestry	NOK 171,924 (£15,957)
Restaurant and Food Processing Trades	NOK 112,258 (£10,419)
Service and Transport	NOK 94,100

Programme	2015
	(£8,734)
Technical and Industrial Production	NOK 97,571 (£9,055)

Source: Directorate for Education and Training, Norway

Table 56: Direct operating cost per upper secondary pupil by general education programme in Norway

Programme	2015
Specialisation in General Studies	NOK 63,576 (£5,900)
Sports and Physical Education	NOK 74,349 (£6,900)
Music, Dance and Drama	NOK 114,888 (£10,662)

Source: Directorate for Education and Training, Norway

As of 2014, the grant given to training enterprises to cover the costs associated with training an apprentice during the two-year apprenticeship period was approximately EURO 15,000 (£13,922) per apprentice for the entire training period.

Employers pay apprentices a salary that typically increases from 30 per cent to 80 per cent of a skilled worker's salary during the two years of apprenticeship.

Monitoring

Information unavailable in English.

Relationship with national economies

A recent OECE report (Koutsogeorgopoulou, 2016), reports that overall, the supply of tertiary graduates in Norway has developed broadly in line with demand from the Norwegian labour market. It also notes that there has been an upward trend in enrolment in STEM fields (science, technology, engineering and maths) and suggests that government reforms to boost STEM fields partly explains this. These reforms include an increase in higher education places on maths, science and technology, a new framework for engineering education, and a write off of teachers' student loans if they have an advanced degree in subjects like maths. Despite this, Norway remains below the OECD average.

Outcomes

Performance

Student satisfaction

Norway is participating in the Eurostudent project, which is co-funded by the Esrasmus programme of the Eurpean Union. Eurostudent collects data on the socio-economic background and on the living conditions of higher education students, students' satisfaction with the quality of teaching and temporary international mobility in several Eurpean countries, including France, Germany the Netherlands and Norway. The main users of our findings are higher education policy-makers at national and European level, researchers in this field, managers of higher education institutions and - of course - students all over Europe.

Institutional performance

Quality assurance for VET providers are set in the education act and regulations. The legislation sets standards for the content of the training (the curricula), examinations, the trade or journeyman's certification, approval of apprenticeship training enterprises and teacher competences. The education act also regulates the county governors' responsibility to provide guidance to school.

The Education Act requires the county authority (fylkeskommunen) to consult the County Vocational Training Board (Yrkesopplæringsnemda) on quality issues related to school-based and work-based VET at the upper-secondary level. A main task for the Board is thus to give advice, especially related to accreditation of apprenticeship training enterprises. The County Vocational Training Board should also present proposals for quality development, including the enhancement of partnerships between schools and enterprises, and skills and competence development for teachers and trainers (Norwegian Centre for International Cooperation in Education, 2016).

The Act relating to Tertiary Vocational Education (Lov om fagskoler) of 2003, most recently amended in December 2010, regulates public and private tertiary vocational education colleges at EQF and NQF level 5. This level of education and training is not part of the higher education system. Providers at this level offer courses and programmes of six months' to two years' duration. Providers design their own courses and curricula, with learning outcomes as an integral part of all programme designs. Programmes must be approved by the Norwegian Agency for Quality Assurance in Education (Nasjonalt organ for kvalitet i utdanningen (NOKUT)), the agency responsible for accreditation and quality control. Norwegian Centre for International Cooperation in Education, 2016).

The Act relating to Universities and University Colleges (Lov om universiteter og høyskoler), most recently amended in 2016, applies to all higher education (state and private, vocational and non-vocational). The Act regulates organisational and

management aspects, provides for the recognition of study programmes, admission, examinations and certification, quality assurance, and the learning environment for students. NOKUT is the quality assurance and accreditation agency for higher education (Norwegian Centre for International Cooperation in Education, 2016).

Higher education institutions design their own courses and programmes in accordance with the Regulations on Quality Assurance in Higher and Tertiary Vocational Education. NOKUT has specified further quality criteria for evaluations and accreditation according to level (bachelor, master, and PhD). The criteria are laid down in regulations. The higher education institutions are required to develop their own quality assurance systems, which need to be re-accredited by NOKUT every six years. With the implementation of the National Qualifications Framework for Higher Education in 2009, now part of the Norwegian Qualifications Framework for Lifelong Learning (2011), which comprises all levels, learning outcomes are an integral part of all programme design (Norwegian Centre for International Cooperation in Education, 2016).

Perceptions of value for money

Robust evidence not available.

Disadvantage

According to a recent OCED paper (Koutsogeorgopoulou, 2016), students from lower income groups have low tertiary participation despite a strong focus by government on inclusiveness. As elsewhere, students' socio-economic background impacts on participation post-secondary education. Data from Statistics Norway indicate, for example, that in 2014, whereas 60% of 19 to 24 year olds with at least one parent having more than four years of tertiary education entered tertiary education, compared to just over 16% among those whose parents only have compulsory education (Koutsogeorgopoulou, 2016).

Appendix F: Country report, Scotland

Overview of post-compulsory education

Secondary education in Scotland can take up to six years, covering the ages 11 to 18, from S1 to S6. Education is not compulsory after the age of 16. Young people in Scotland study toward qualifications during the Senior Phase of their secondary education. The Senior Phase covers S4 to S6 (age 15/16 to 18) and is designed to prepare young people to achieve qualifications to the highest level of which they are capable, develop skills for learning, life and work, and move to a positive and sustained destination.

Scotland's National Qualifications are comprised of the National 3, National 4 and National 5 qualifications. During the Senior Phase most young people will study toward National 4 or National 5 qualifications, progressing to Higher and Advanced Higher, but a range of other awards are available, often offered in collaboration with local colleges. These include Skills for Work Courses, Personal Development Courses, National Certificates, National Progression Awards and Foundation Apprenticeships.

Further education

Further Education (FE) includes courses which are taught in a school or FE College and are below Higher National Certificate (HNC) level. They cover levels 1 to 6 on the Scottish Credit and Qualifications Framework (SCQF) and include:

- academic courses up to Higher National Certificate level;
- courses that do not lead to formal qualifications (such as courses on independent living skills);
- courses on basic skills (such as reading, writing and number skills); and
- work-related courses, such as Scottish Vocational Qualifications (SVQs).

The Scottish college landscape has fundamentally changed since 2010 with the phased creation of larger colleges operating on a regional basis through merger. This has led to a reduction in the number of colleges from 45 in August 2010 to the 27 colleges today.

Higher education

In 2014/15, there were 19 universities in Scotland teaching 232,570 students. There are 14 campus-based universities, one distance-learning university, an educational partnership institution based in the Highlands and Islands, one art school, a conservatoire and an agricultural college. Between them, the universities have five medical schools, three dental schools and two veterinary medicine schools. The universities range in age from four to 603 years old, in size from 985 students to 28,880 students, and in annual income from £19.5 million to £841 million (Audit Scotland, 2016).

Higher Education (HE) encompasses courses of study which are at Higher National Certificate level or above (that is Scottish Credit and Qualification Framework level 7 or above). Individuals can take them at college or at university and they include:

- undergraduate honours degrees
- undergraduate ordinary degrees
- Higher National Certificates (HNC)
- Higher National Diplomas (HND)
- Certificate of Higher Education (Cert HE)
- Diploma of Higher Education (Dip HE).

Undergraduate degrees are generally a year longer (typically four years) than elsewhere in the UK, though it is often possible for students to take more advanced specialised exams and join the courses at the second year.

HNCs and HNDs are long-established vocational qualifications covering a range of employment sectors with more than 1,000 on offer in areas such as Business Administration, Information and Office Management, Travel and Tourism, Engineering, Broadcasting, Agriculture, Computing and Craft subjects.

HNCs are at SCQF level 7, have 96-120 credit points and are usually taken in a 1-year course. HNDs are at SCQF level 8 and have 240 credit points, including the HNC credits taken en route to the Diploma, normally in a 2-year course if studied full-time.

Graduate Certificates/Diplomas are normally taken over a year (full time) or a longer period (part time) and require at least 60 credits at SCQF level 9 for a certificate or 120 credits for a diploma. These programmes, though taken by graduates, do not lead to a Masters level of outcome. Some provide a formal professional qualification such as the Post-graduate Diploma in Education (Primary or Secondary).

Apprenticeships

There are three types of apprenticeships in Scotland:

Foundation apprenticeship — the same level and credit value as two Scottish Highers SVQ 2 — 3/SCQF 5/6. These are designed for S5 – S6 pupils to combine school learning, college learning, and work experience. They are studied alongside other school subjects.

Modern apprenticeship —available at these levels:

- SCQF Level 5 – considered to be the same level as National 5.
- SCQF Level 6/7 – considered to be the same level as two A level passes or Advanced Highers passes.

- Technical apprenticeships at SCQF Level 8/9 – considered to be the same level as HND or DipHE.
- Professional apprenticeships at SCQF Level 10/11 – considered to be at the same level as honours degree/master's degree.

Graduate level apprenticeship (GLA) — available at SCQF Levels 8,10 and 11. These new work-based learning programmes enable apprentices doing the Level 10 apprenticeship to achieve a full honours degree as part of it. It combines work with some university attendance. Level 8 apprenticeships typically lead to a Diploma of Higher Education or an HND/SVQ 4. The levels available are equivalent to a full degree, through to a postgraduate Level 11 award, which can allow progression to a master's degree.

Following a pilot pathfinder in 2016, Phase 1 of Graduate Level Apprenticeships began in January 2017, offering up to 379 places. Working with industry and education partners, SDS has created four GLA frameworks: in IT Software Development, IT Management for Business and Engineering, Design and Manufacture (all at SCQF level 10 - honours degree), and Civil Engineering at SCQF (at level 8 - DipHE). These are now being developed and delivered by eight Scottish universities and one college, offering individuals the chance to gain high level qualifications while in paid employment (SDS, 2017a).

Education systems

Provision

Academic institutions

Entry criteria

The usual entry requirement for higher education courses is a group of awards at grades A-C in the National Qualifications Higher or Advanced Higher-level examinations set by the Scottish Qualifications Authority (SQA), or qualifications deemed by a higher education institution to be equivalent to these. For many HE courses the candidate needs to hold awards at specified levels. Awards in the English General Certificate of Secondary Education (GCSE) and General Certificate of Education (GCE) Advanced Level (or the equivalent) are also accepted. For some HE courses, particularly Higher National Certificate (HNC) and Higher National Diploma (HND), a group of appropriate National Certificate (NC) awards (often achieved in college courses) may be acceptable.

Eight Scottish universities have agreed to accept a Foundation Apprenticeship as equal to a Higher in their entry requirements, with more showing interest in doing so in the near future.

A range of specially designed courses prepare adults both for higher education in general and for particular courses. Such access courses include a range of SQA units or courses, successful completion of which may lead to an SQA award. Many access courses carry a guarantee of a place in higher education on successful completion.

Vocational/technical institutions and providers

Entry criteria

Higher National qualifications may be studied at an FE college or at an HE provider. The recommended qualification for entry to an HNC or HND course is one of the following:

- A qualification at GSVQ level III
- A programme of national Units appropriate to the course of study
- Two passes at Scottish Certificate of Education Higher level or above
- An equivalent qualification.

Apprenticeship providers

Entry criteria

Foundation apprenticeship - Entry to each is different, but generally students will be working towards National 5 qualifications and have the capacity to work at SCQF Level 6. A student undertaking a foundation apprenticeship is not employed.

Modern apprenticeship – no mandatory requirements but individuals may need three or more National 4s to apply (or Standard Grades at general level) depending on the framework.

Graduate level apprenticeship (GLA) - Entry requirements vary depending on the specific job and apprenticeship framework. Most will be looking for similar qualifications to those required for a degree course including in subjects related to the particular apprenticeship. However, graduate-level apprenticeship entry requirements are designed to recognise a candidate's skills and experience, as well as qualifications, and any previous industry experience will be taken into consideration.

Flexibility

Progression from Higher National Qualifications

Many students move to a university or higher education institution to take a degree after successfully completing an HN qualification at a college. Articulation arrangements exist between some courses at college and university to allow learners to enter university with advanced standing after successful completion of HN qualifications.

Provision to support low attainers

The Employability Fund (EF) supported 11,717 unemployed individuals to access specialist support to build their employability skills – the majority of whom (72 per cent) were aged 16-24 in 2016/17. EF provides support through programmes jointly commissioned with partners locally. 70 per cent of EF participants in 2016/175 achieved a qualification, progressed to a further stage of the pipeline, or entered employment during the programme. Of leavers achieving an outcome in 2016/17, 65 per cent moved into employment.

Role of government

Skills Development Scotland (SDS) is responsible for working with partners across the skills landscape in skills planning at both regional and sectoral level (SDS, 2017a). The Scottish Government has published a number of strategies that reference skills needs such as Scotland's Economic Strategy, Scotland's Labour Market Strategy and Scotland's Youth Employment Strategy. These, alongside the Scottish Skills Planning Model, influence skills investment.

The vision for skills alignment is set out in the Enterprise and Skills Review (2017) and is for “skills services to be fully aligned to deliver the learning and skills necessary for sustainable and inclusive economic growth.” A project is in place to achieve this, the purpose of which is to align the relevant functions of the Scottish Funding Council (SFC) and Skills Development Scotland (SDS) to ensure that Scotland's people and businesses are equipped with the right skills to succeed in the economy.

To achieve this, Scottish Government, working closely with SDS and SFC, has identified the following core principles:

- the need for a single set of strategic skills guidance to deliver skills planning: to be issued to both SDS and SFC boards alongside the agencies' letters of guidance, which will support the delivery of the Strategic Board's Strategic Plan
- the need for a jointly agreed evidence base, drawing on the work of the proposed Analytical Unit, as well as other agencies' and stakeholders' input, through which to establish demand, to inform decisions about learning and skills provision and to underpin agreed indicators of success
- the need for a clear and agreed process through which the two agencies can jointly prioritise skills investment: drawing on the evidence base described above, the operational capacity of providers, and the priorities expressed by Scottish Ministers
- a governance mechanism, through which SDS and SFC can discuss and endorse these agreements and which supports the Strategic Board's aims and expectations through the joint planning and joint delivery focus of the organisations

- the need for a common monitoring and evaluation framework, informed by the Analytical Unit, the Strategic Board's single Strategic Plan and Scottish Government's development of its National Performance Framework.

Take up

In 2017, 91.1 per cent of 16 to 19-year-olds were participating in education, employment or other training and development. With regard to school leavers, 37 per cent entered Higher Education in 2015/2016 – the same proportion as in 2014/2015. The proportion entering Further Education decreased slightly from the previous year, by one percentage point to 22 per cent. The proportion directly entering employment increased slightly from the previous year to 29 per cent (Skills Development Scotland, 2017a).

16+ Learning Choices is a guaranteed offer of a place in post-16 learning for every young person who wants it. 16+ Learning Choices looks to help reduce youth unemployment in Scotland and to contribute towards economic growth.

The Foundation Apprenticeship (FA) programme offers young people the opportunity to integrate their senior phase study with work-based learning opportunities in Social Services, Business Skills, Engineering, Financial Services and IT. In 2016, 351 young people started an FA.

There are over 80 Modern Apprenticeship frameworks – from healthcare and financial services to construction and IT. These have been developed by sector skills councils, in consultation with their industry. There were 26,262 Modern Apprenticeship starts in 2016/17 and 13 Graduate Level Apprenticeship (GLA) starts against the 26,000-annual target. The Scottish Government has made a commitment to increase apprenticeship starts to 30,000 by 2020. The majority of MA starts (76 per cent) were aged 16-24. The proportion of starts at level 3 and above has increased to 66 per cent in 2016/17 (a rise of +0.8 per cent from last year). Over a third (37 per cent) of all MA starts in 2016/17 were in STEM frameworks (+2.3 per cent on last year) and 82 per cent of these were at level 3 or above. (Skills Development Scotland, 2017b).

In 2016-17 there were 117,502 Full-time Equivalent (FTE) Scottish Funding Council funded student places including 50,086 full-time further education (FE) students enrolled on recognised qualifications (below HNC – level 4). Of the full-time FE students:

- 65.3 per cent successfully completed their course. This is 0.2 percentage points (PP) lower than 2015-16.
- Of the 26 colleges delivering full-time FE courses in 2016-17 nine had improved success rates in comparison to the previous year and seventeen saw a decline in the proportion successfully completing their course.

- A further 9.6 per cent completed their course in 2016-17, these students did not achieve the qualification they were aiming for by the end of the academic year but some may gain their award at a later time.
- The remaining 25.1 per cent of full-time FE students withdrew from their course and are accounted for by 9.0 per cent of students withdrawing before the funding qualifying date (colleges are not funded for these students) and a further 16.1 per cent between this point and the end of the course.

SFC had targeted colleges to further increase the FE full-time success rate to 69 per cent by 2016-17 as part of outcome agreement negotiations. With a 0.2 per cent decrease in success rates in 2016-17 the sector ended up falling below this target by 3.7 per cent.

Scotland has had higher levels of total participation in higher education than England for many years largely driven by the larger volume of activity at HNC/D level which takes place mainly in colleges. Although the gap in the participation between the two countries has narrowed since 2006, in 2013-14 it was 55.0 per cent for Scotland, compared to 46.6 per cent for England. Since 2016, this has increased by 1.8 percentage points (3.4 per cent proportionately) in Scotland and by 4.4 percentage points (10.4 per cent proportionately) in England (Hunter-Blackburn et al.,2016).

Adult learning

Skills Development Scotland (SDS) and the Department of Work and Pensions (DWP) have formulated a joint strategy – ‘Integrated Employment and Skills (IES)’ – which is designed to ensure that unemployed customers are supported through a Careers Information and Guidance (CIAG) service to develop Career Management Skills (CMS) to help them achieve sustainable employment training or learning. SDS focuses on enabling individuals to develop their own CMS, which will enable them to plan and pursue life, learning and work opportunities. A Career Management Skills Framework has been developed by SDS, Scottish Government, Education Scotland, SQA and other professional guidance practitioners and academics. The Framework outlines the knowledge, skills and behaviours that will help individuals manage and develop their careers throughout their working lives (SDS, 2016). It is used to inform the development and delivery of career information, advice and guidance services delivered by SDS. (Cedefop, 2016).

The Employer Skills Survey (UKCES, 2015) found that 71 per cent of employers in Scotland had offered training to their employees over the last 12 months. This was higher than the proportion across the UK as a whole where 66 per cent of employers had offered training. In total the training offered by employers meant that 62 per cent of the Scottish workforce received training (2014/2015). Employees of businesses based in Scotland received slightly less training than workers across the UK (where 63 per cent participated in training), despite more employers in Scotland offering training (UKCES, 2016). Compared to smaller employers, larger employers trained a greater proportion of

their workforce. Employers with 2-4 employees trained, on average, 43 per cent of their workforce. Whereas large employers (100-249 employees) trained 67 per cent and the largest employers (250+ employees) trained 70 per cent. The evidence suggests that the size of the business influences whether they offer training, and to what extent training is offered throughout the workforce. Of those that offered training, the most common training offer was job specific training (86 per cent). Almost half (49 per cent) of employers also offered training in new technology. Non-job specific training was also common with 74 per cent of employers offering health and safety/first aid training and 66 per cent provided basic induction training to employees (UKCES, 2016).

Funding

Colleges

As part of the Scottish Government’s programme of post-16 reforms, the Scottish Funding Council (SFC) started work on developing a new simplified approach to funding colleges in 2012. The aim was to implement the new system from Academic Year (AY) 2015-16. The drive to simplify the college funding method came initially from the post-16 reform proposals set out in ‘Putting Learners at the Centre’ in September 2011. The purpose of the new model was simplification. The new system was introduced in AY 2015-16.

The Scottish Government announced, in the draft Further Education (FE) Resource budget for financial year (FY) 2018-19, a £36.9 million (6.7 per cent) increase from FY 2017-18 in spending on the college sector allocated as follows:

Table 57: Funding allocation 2018-19

Revenue funding	AY 2018-19 £000
Core Teaching & fee waiver funding	413,972
National Bargaining Costs	34,158
Additional Financial Pressures	4,154
Rural & Remoteness uplift	1,000
ESOL transfer from Strategic funds	1,455
Total Teaching	454,739
Core Student Support	111,041
Student Support Review	5,200

SFC contribution to ESF programme activity	8,000
Flexible Workforce Development Fund	10,000
Strategic funds	14,881
Total Revenue funding	603,861

Source: Scottish Funding Agency, 2018

The draft Net College Capital budget was increased by £29.3 million to £76.7 million. In addition, funding of £5.8 million is available from project slippage to be allocated as follows:

Table 58: Capital Budget 2018-19

College Capital FY 2018-19	£M
Lifecycle maintenance	12.5
Very high priority backlog maintenance (as informed by the sector condition survey)	26.9
Forth Valley College – new Falkirk Campus project	42.0
New College Lanarkshire – loan repayment	1.1
Total	82.5

Source: Scottish Funding Agency, 2018

Universities

Universities in Scotland are classified as charitable bodies, not public bodies and have the ability to generate income from multiple sources. Significant amounts of public money are spent on higher education in Scotland, both in the form of direct funding to universities, and in financial support to individual students. The Scottish Government provided £1.1 billion to universities in 2014/15, and approximately £623 million for university student finance support, i.e. loans and grants for students and tuition fees.

Most of this £1.1 billion (97 per cent) was to fund day to-day running costs (resource funding), with the remaining three per cent, £30 million, for capital funding. The SFC is responsible for deciding how to apportion this funding across the different areas it funds and then allocating the funding to universities. The majority of the funding the SFC provided to universities in 2014/15 (62 per cent, £702 million) was for teaching Scottish and EU students. Research and knowledge exchange grants was the second largest area, at £296 million (of which, £279 million was for research). Overall Scottish Funding Council funding to universities has reduced by four per cent in real terms since 2010/11.

In contrast, Scottish Government funding for university student support increased by approximately 37 per cent in real terms over the same period (Audit Scotland, 2016).

Apprenticeships

A UK-wide apprenticeship levy came into force in April 2017, requiring larger companies and public-sector bodies that have pay expenditure of over £3m per year to pay 0.5 per cent of their annual bill to the government for apprenticeship training. However, because apprenticeships and training is a devolved area, Scotland's share of the money raised from the levy will be passed to the Scottish Government as part of the UK Government block grant that is allocated under the Barnett formula. The Scottish Government has indicated that it intends to invest Scotland's share of the levy, which amounts to £221m in 2017-18, £230m in 2018-19 and £239m in 2019-20, at a national level rather than give it directly to employers for training. Following a consultation in July and August last year, the Scottish Government published its plans for the levy in January 2017. This includes the intention to increase apprenticeships to 30,000 new starts by 2020. It has announced that the levy will be used through organisations such as Skills Development Scotland, colleges and other initiatives to support the creation of a £10m Workforce Development Fund which will help employers upskill and reskill their workforce and address skills gaps. It will also continue to expand the number of Modern Apprenticeships, increase the number of graduate level and foundation apprenticeships and provide funding for other initiatives such as Individual Learning Accounts and rural supplements for training providers in remote areas (Scottish Government, 2016).

Maintenance

For full-time university or college students in Higher Education (level 4 or above) funded by the Student Awards Agency Scotland (SAAS), the average annual support provided in 2016-17 was £5,830 made up as follows:

Table 59: Annual Support 2016-17

	2016-17	% change from 2015-16
Total Support		
Number of students	143,110	1.5%
Amount	£834.8 m	3.6%
Average per student	£5,830	1.9%
Bursaries and grants		
Number of students	52,165	4.7%
Total paid	£70.1 m	6.0%
Average paid per student	£1,340	0.8%
Fees		
Number of students	136,385	1.2%

	2016-17	% change from 2015-16
Total paid	£259.0 m	2.0%
Average paid per student	£1,900	0.5%
Loans		
Number of students	95,425	3.7%
Total authorised	£506.0 m	4.1%
Average loan authorised	£5,300	0.2%

Source: SAAS, 2017

2016-17 was the fourth year of student support following a number of changes made in 2013-14 to simplify the student support system as part of the Post 16 Education Reform programme. This included the introduction of a “minimum income guarantee” composed of an income assessed non-repayable bursary element and loan. The total amount of support provided in bursaries and grants reduced by a third, offset by a substantial increase in authorisations for student loans (61.4 per cent increase). For 2016-17 (as with 2015-16 and 2014-15), the same direction of change has continued though on a much smaller scale – the number of students receiving loan support has increased by 3.7 per cent from 92,005 in 2015-16 to 95,425 in 2016-17, with the average loan amount authorised increasing slightly from £5,390 to £5,300. At the same time, there has been a 4.7 per cent increase in the number of students receiving non-repayable grants and bursaries.

For young undergraduates (under 25), bursary and loans are available from the SAAS depending on the household income in their permanent home.

Table 60: Bursary and loans under 25

Household income	Bursary	Loan	Total
£0 to £18,999	£1,875	£5,750	£7,625
£19,000 to £23,999	£1,125	£5,750	£6,875
£24,000 to £33,999	£500	£5,750	£6,250
£34,000 and above	£0	£4,750	£4,750

Source: Student Awards Agency Scotland

Independent students (those over 25 or who have no family support) also have their fees paid directly to their university or place of study and can receive the following bursaries and loans:

Table 61: Bursary and loans over 25

Household income	Bursary	Loan	Total
£0 to £18,999	£875	£6,750	£7,625
£19,000 to £23,999	£0	£6,750	£6,750
£24,000 to £33,999	£0	£6,250	£6,250
£34,000 and above	£0	£4,750	£4,750

Source: Student Awards Agency Scotland

While the total funding is the same as for young undergraduates, a greater proportion comes from loans rather than bursaries.

The funding available to the following groups of students may be different from the standard funding package above:

- Students studying Medicine at St Andrews University (where students transfer to a University elsewhere in the UK for their clinical years)
- Students who are studying abroad
- Students on a practical placement (sandwich course) where payment will be for 50 per cent of the fees when in a placement year

New and continuing care experienced students undertaking an eligible undergraduate course are eligible to apply for a funding package of tuition fees and a non-income assessed Care Experienced Students Bursary. The amount available in 2018-2019 is £7,625.

If students act as carer for their husband, wife, civil partner, partner or other adult dependent SAAS will pay up to £2,640 to cover the full 52 weeks from the first day of the academic year of the course. This is conditional on the income of the dependant.

A Disabled Students Allowance (DSA) is a non-income assessed allowance to cover any extra costs or expenses students might have while studying which arise because of their disability.

The SFC also provides funding to colleges for bursaries, childcare, Education Maintenance Allowance and discretionary funds for students studying up to, but not including, Higher National Certificate (HNC) level. For the academic year (AY) 2018-19, SFC will provide £109 million, an increase of 1.5 per cent from AY 2017-18.

Source of funding

The Scottish Funding Council (SFC) is a Non-Departmental Public Body of the Scottish Government. The SFC invests around £1.8 billion a year in Scotland's 19

universities and 25 colleges for learning and teaching, skills development, research and innovation, staff, buildings and equipment. This money comes from central Government. The Scottish Government's share of the UK-wide Apprenticeship Levy, funded by larger employers, supports Modern Apprenticeships and other training (see above). A mixture of centrally funded grants and student loans support students in full-time higher education (see above). The total amount lent to Scottish higher education students in 2016-17 was £576.8 million, an increase of 5.2 per cent compared with the previous year.

Student debt

Statistics from the Student Loans Company (2017) show the average loan balance for those who began repaying at the end of 2016-17 was £11,740, up from £10,360 for the previous year. The average remaining Loan Balance at the end of tax year 2015-16 ranged from £6,600 for the 2000 cohort to £10,480 for the 2015 cohort.

This represents an average rise in debt for students leaving higher education in Scotland of 13 per cent compared with the previous year. This figure is lower than in other parts of the UK, with students in England having £32,220 of debt on average, those in Northern Ireland £20,990, and graduates in Wales £19,280.

Funding and fees by subject area

As noted above, funding is devolved to colleges and universities as block funding. The tuition fee element paid by the Government varies only between types of higher education course.

For eligible young undergraduates (under 25), the Student Awards agency will pay tuition fees at the current annual rate (2018-2019):

- £1,285 for Higher National Certificate and Higher National Diploma and any other sub-degree courses.
- £1,820 for first degree or Postgraduate Diploma in Education (PGDE) courses.
- £1,205 for courses at private colleges.

Monitoring

The Financial Memoranda with colleges and universities set out the formal accountability relationship between SFC and institutions, and the requirements that institutions are expected to comply with in return for funding.

Each college and university sets out in its Outcome Agreement what it plans to deliver (in line with Ministerial priorities and SFC's Strategic Plan) in return for SFC funding.

The Auditor General for Scotland has had powers since 2010 to perform value for money audits in bodies funded by the former 'higher education funding body for Scotland'. Universities are responsible for appointing their own external auditors, unlike Scottish public bodies, whose external auditors are appointed by the Auditor General for Scotland

and the Accounts Commission. In 2016, The Auditor General assessed how higher education is funded and delivered in Scotland, how it contributes to national strategic objectives, and how well equipped the sector is to deal with future financial challenges. The audit focused on higher education provision in the university sector as a whole. In addition, a separate audit of the college sector in Scotland was published in 2017.

Relationship with national economies

The Scottish economy consists of four broad sectors: services; production (incl. manufacturing); construction; and agriculture, forestry and fishing. In 2013, the services sector was the largest accounting for three quarters of the economy (75 per cent of GDP). Production was the next largest accounting for approximately one fifth of the economy (18 per cent). Construction was smaller accounting for six per cent and agriculture, forestry and fishing was the smallest sector accounting for one per cent of economic output (Scottish Government, 2017).

Scotland's economy showed resilience through the recession but it has had a challenging recovery. It has struggled to keep pace with the growth across the UK which has performed well, with the UK being broadly in line with the EU standards. Globally, economic conditions in 2016 were challenging and Scotland has suffered in particular from the fall in oil prices and the downturn in the important oil and gas sector.

Current Scottish Government Strategy for skills is in the form of strategies such as Scotland's Economic Strategy, Scotland's Labour Market Strategy and Scotland's Youth Employment Strategy and also the recent UK Industrial Strategy. These, alongside the Scottish Skills Planning Model influence skills investment.

Outcomes

Performance

Student satisfaction

As part of the development of a national performance framework for outcome agreements in 2013, the SFC considered approaches to monitoring student satisfaction and engagement. It was considered that a national approach to monitoring student satisfaction would provide a consistent basis for college regions to evidence impact and improvement within their outcome agreements. In 2014 work commenced to develop, with the support of the college sector and other key agencies, a national student satisfaction and engagement survey that would collect and report on summary satisfaction and engagement data from colleges.

The first (and, to date, only) publication of the Student Satisfaction and Engagement Survey (SSES) for Scotland's colleges covers the academic year 2015-16, reporting on students across all modes of attendance. It found that:

- The proportion of full-time students with overall satisfaction with their college experience was 90.1 per cent (response rate 36.8 per cent - 25,981 responses from a total full-time student sample population at the point of survey of 70,529).
- The proportion of part-time students with overall satisfaction with their college experience was 93.1 per cent (response rate 11.3 per cent - 5,138 responses from a total part-time student sample population at the point of survey of 45,604).
- Distance/flexible students were less likely to be satisfied with their experience with an overall satisfaction rate of 88.1 per cent but this was based on a much lower response rate (354 responses from a total distance / flexible student sample population at the point of survey of 5,550).

The National Student Survey (NSS) is an annual survey of final-year undergraduates studying for higher education qualifications at higher education institutions across the UK. In 2017, over 300,000 final year students took part in the survey and 84 per cent of respondents said they were satisfied overall with their course. St Andrews University came tenth in the survey and was the top Scottish institution with Dundee University next in 14th place.

Institutional performance

Colleges

SFC has published Performance Indicators (PIs) on college teaching activity for the past fifteen years. The purpose of the indicators is to inform stakeholders about the performance of the sector. The reported PIs allow for the evaluation of performance of students by level of course and hours of study both over time and against other similar colleges. The annual Performance Indicators report provides a broad coverage of activity and includes in addition to SFC funded student activity, Skills Development Scotland (SDS) employability fund and college-based university 'Associate' status students.

The PIs are based on student records submitted via the Further Education Statistics (FES) system. This is an automated data capture and record system which encompasses built-in iterative quality checks to ensure the data is correct and credible. In addition, every college Principal must also sign-off the data as a true and accurate record for their college. As an additional reassurance of consistency and quality, SFC has a contract with Education Scotland to perform external quality reviews of college performance. QAA Scotland has devolved responsibility for the work of the Quality Assurance Agency (QAA) in Scotland. Their work is informed by the Quality Enhancement Framework (QEF) which has been in place since 2003 and continues to develop under the guidance of the Universities' Quality Working Group (UQWG). UQWG membership includes all of the partners to the QEF: Universities Scotland, the National Union of Students (NUS) Scotland, Student Partnerships in Quality Scotland (sparqs), the Scottish Funding Council, the Higher Education Academy and QAA Scotland.

For Modern Apprenticeships, the Quality Standards assess the extent to which each provider maintains capacity and capability to successfully deliver quality provider services throughout the period of their contract. Providers are required to complete a Self-Assessment demonstrating how they meet each of the SDS Quality standards. An SDS Quality Assessor reviews the Self-Assessment and identifies strengths and any priority areas for improvement prior to undertaking a formal assessment. During the formal assessment, supporting evidence and feedback from interviews will be considered and any additional areas for improvement agreed. Any priority areas for improvement identified either by providers or the Quality Assessor should be included in the organisation's action/improvement plan (SDS, 2017 c).

Perceptions of value for money

For Scottish Universities, the Auditor General (2016) found that the Scottish Funding Council (SFC) “needs to do more to ensure that the funding it receives from the Scottish Government makes the maximum contribution to achieving the Scottish Government’s higher education policy ambitions. The current funding approaches to research, teaching, and widening access make achieving policy ambitions challenging. The SFC needs to review its strategies for key areas, such as research and innovation, to ensure funding is used to best effect.”

The Auditor General (2017) found that, in colleges, student attainment improved in 2015-16. The overall percentage of full-time further education students successfully completing their course increased in 2015-16 (from 64 to 65 per cent). The sector exceeded its targets for learning delivery. Most full-time students continue to be satisfied with their college experience. At least 83 per cent of students who achieve a qualification go on to a positive destination, such as further study, training or employment. However, the report recommended that colleges prepare longer-term financial plans in order to support financial decision-making that takes account of both immediate and future cost pressures.

Disadvantage

The gap in university participation between young people from the most and least advantaged areas is higher in Scotland than in the other home nations, although it has closed more quickly than elsewhere. However, Scottish 18-year olds from the most advantaged areas are still more than four times more likely to go straight to university than those from the least advantaged areas. In England, those from the most advantaged areas are 2.4 times as likely to go to university as those from the least, and three times as likely in Wales and Northern Ireland. Disadvantaged students are also much less likely to attend higher tariff universities although the provision of 720 funded places for disadvantaged students at the ancient universities since 2012 appears to have helped with recruitment to this group (Hunter-Blackburn et al., 2016).

Despite this, there has been improved access for disadvantaged students in Scotland but this has been met almost entirely by the expansion of sub-degree programmes in Scottish colleges. Since 2006, 90 per cent of all the growth in entry into Scottish higher education by disadvantaged students has been through sub-degree courses in colleges.

Outcome agreements incorporate widening access plans. Hunter-Blackburn et al. (2016) found that they varied in detail and clarity, with institutions drawing attention to the areas where they believed they were performing well, whilst paying less attention to areas where there might be room for improvement. There was a major focus on outreach activities, but little evidence of their effectiveness.

Outcomes for FE and HE students in colleges in 2016-17 found that success rates on 160 hours plus courses for students from the ten per cent and 20 per cent most deprived postcode areas were 66.1 per cent and 66.2 per cent respectively, with both falling below the comparator figure of 69.4 per cent for all enrolments. The overall sector figure indicates that those students from an ethnic minority (BME) background outperform the “all enrolments” comparator group and those with a disability underperform against the comparator group and have a similar success to those from the ten per cent and 20 per cent most deprived postcode areas (SFC, 2017).

In AY 2015-16, SFC undertook phase one of the Extended Learning Support (ELS) review, in which they reviewed ELS funds to better understand the benefits, how it works alongside other types of funds, and how it can be used to enhance outcomes for students. As the main outcome of this phase of the review this was enhanced and renamed the Access and Inclusion Fund. From AY 2017-18 onwards, each college region is expected to develop an evidence-based Access and Inclusion Strategy as part of their Outcome Agreement document. Funding for the Access and Inclusion Strategy is to be used to enhance colleges’ inclusive practices and meet their students’ particular needs.

Analysis of Modern Apprenticeship starts by Scottish Index of Multiple Deprivation (SIMD, 2016) decile shows that 25.4 per cent of MA starts in 2016/17 lived in the 20 per cent most deprived areas, compared to 13.3 per cent in the 20 per cent least deprived areas. This analysis follows a similar pattern to 2014/15 and 2015/16 (Skills Development Scotland, 2017b). Overall, those students in Scotland from a disadvantaged background are disproportionately likely to follow the apprenticeship route.

Appendix G: Country report, USA

Overview of post-compulsory education

In the United States, education is compulsory for all students until ages 16 to 18 depending on the individual state. In some states, students have to stay in school until they are 18 years old. In other states they may leave school at 16 or 17 with parental permission. In the United States, 88% of 15-19-year-olds are still enrolled in education, ranging from 82% in Alaska to 92% in New Hampshire. By comparison, on average across OECD countries, 85% of 15-19-year-olds are enrolled in education.

The US system is divided into three levels: elementary school (Grade 1–5 – from age 6-11), middle school (or “junior high school” (Grades 6–8 – from age 11-14) and high school or senior school (Grades 9–12 – from age 14-18). In senior school, the subject spread remains wide with general emphasis. Most schools provide education in sciences (biology, chemistry and physics), mathematics (including algebra, geometry, pre-calculus and statistics), English language, social sciences and physical education. Vocational education programmes (generally referred to as career and technical education programmes) are available in grades 7-12, with some variations between states. The majority of post-secondary vocational and technical training takes place in private career schools and community colleges, which present 2-year programmes, and courses transferable to 4-year university degree programmes as well.

Following graduation from high school, students may enter college or university for undergraduate study, which can be completed with a 2-year or 4-year degree. The 2-year associate’s degree is generally for students attending community colleges and interested in getting into paid employment quickly. Students with an associate’s degree may, however, choose to move into a 4-year college to complete another two years and receive a Bachelor’s degree.

State colleges and universities, also called “public universities,” were founded and subsidized by U.S. state governments to provide a low-cost education to residents of that state. Public universities generally offer access to research opportunities and classes in a wide variety of fields of study. These universities tend to be very large and generally admit a wider range of students than private universities. Each student’s interests will guide his/her choice among the many possibilities. Private colleges and universities are funded by a combination of endowments, gifts from alumni, research grants, and tuition fees. Private colleges and universities are usually smaller than public institutions and can have a religious affiliation or be single-sex schools.

During the 2016–17 academic year, there were 6,760 Title IV institutions in the United States and other U.S. jurisdictions. Of this total, 2,918 were classified as 4-year institutions, 1,995 were 2-year institutions, and the remaining 1,847 were less-than-2-year institutions. (Ginder et al., 2017).

US bachelor's degrees obtained at both colleges and universities usually last four years. Students take classes in a variety of departments before officially declaring a "major" (primary subject of focus) by the end of their 2nd year.

A Bachelor's degree can be obtained at either a college or university although the term 'college' is often used colloquially to refer to undergraduate study as a whole. Technically, universities differ from colleges in that they are research-oriented institutions that provide both undergraduate and graduate education whereas colleges offer undergraduate study only. However, for historical reasons, some universities with a wide variety of graduate programmes—such as Boston College and Dartmouth College—have retained the term "college".

Regardless of the institution type, in the United States, higher education students typically earn credits for courses they take and these credits count towards the completion of a programme. Courses are often divided into "core" subject areas to provide the foundation of the degree programme and "major" courses to provide specialisation in a subject area. Students can also take "elective" courses to explore other topics of interest for a well-rounded educational experience.

In the case of career and technical education (referred to as vocational education and training in other countries), this provides occupational and non-occupational preparation at the secondary, postsecondary, and adult education levels. Postsecondary provision covers career-focused associate degrees, certificates and certifications at sub-baccalaureate level and is, supported by a wide range of Federal and state policies and programmes.

Practitioners at the local, state, and federal levels often organise Career and technical education (CTE) into 16 career clusters developed by the U.S. Department of Education. CTE career clusters contain occupations that are in the same field of work and require similar skills, such as health science and manufacturing. According to a report from the National Association of State Directors of Career Technical Education, as of 2012, 94% of states and territories had either adopted career clusters or had adapted their own framework from the 16 career clusters.

Generally, CTE occupations require two years or less of postsecondary education or training. CTE students may pursue an associate's degree; an industry recognised certificate or other certificate; non-credit courses to improve knowledge and skills or signal knowledge to employers; non-credit training customised for a particular employer; or continuing education credits to maintain licensure or certification.

At the postsecondary level, CTE is offered by vocational schools; technical colleges (public and private less-than-two-year colleges); community colleges (public two-year colleges) and private two-year colleges; public and private four-year universities; employers, labor organisations, and industry groups through pre apprenticeships, apprenticeships and on-the-job training, and other training programmes; regional training

centers that are public or nonprofit centers coordinating workforce development, education, and training; adult workforce education centers, which provide customizable, labor market-driven, postsecondary workforce education and training services; and detention centers and correctional facilities.

CTE offers a range of industry-recognized credentials (IRCs). IRCs establish a set of competencies, skills, and/or knowledge that is recognized as necessary or desired for a particular occupation by the relevant industry. There are different types of IRCs and different requirements. IRCs include postsecondary degrees, postsecondary certificates, licenses, certifications, and Registered Apprenticeship certificates. The standards may be developed by an industry, industry association, state government, or product manufacturer. IRCs may variously require a certain amount of formal classroom instruction, hands-on experience, and/or a licensing or certification test. Some IRCs are recognized nationally, while others are recognized only regionally or locally. [SFA]

In addition to CTE, there are baccalaureate level competency-based degrees which, according to a recent report from the American Enterprise Institute (AEI), are being offered by a growing number of colleges and universities. These programmes offer credits in exchange for direct demonstrations of learning, allowing students (often experienced workers) to demonstrate knowledge and mastery of workplace skills at their own pace. In some cases, competency-based degree programmes are created in response to industry needs and are in the process of entering the mainstream of career-focused education programmes.

Education systems

Academic institutions

Entry criteria

Although admission policies vary from one university to the next, most determine admission based on several criteria, including a student's high school course of study, high school Grade Point Average (GPA), participation in extracurricular activities, SAT or ACT exam scores, a written essay, and possibly a personal interview.

- The university admissions office considers whether a student has taken courses in high school that have prepared him/her for more difficult coursework. A student's high school GPA is also considered. A GPA is a quantitative figure representing a student's accumulated grades. Each letter grade is assigned a number of points: A = 4 points, B = 3, C = 2, D = 1 and F = 0 points. A GPA is calculated by adding all of the points earned for each course grade and dividing the total points by the total number of courses taken. For example, a GPA of 3.0 is a "B" average for all of the courses taken.

- University admissions officers may also consider whether students have participated in extracurricular activities - such as scholastic clubs, athletic teams, student government, and philanthropic clubs, viewing these as potentially enhancing their teamwork skills, leadership skills and/or civic responsibility.
- Most students in the United States take the SAT Reasoning Text (formerly known as the Scholastic Aptitude Test) or the ACT (formerly known as American College Testing) during their final year of high school. Each university sets a minimum SAT or ACT score that a student must achieve in order to gain admission. These are standardized quantitative examinations. The SAT tests critical reading, mathematics, and writing skills. The ACT tests English, mathematics, reading, and science reasoning, and includes an optional writing test.
- Universities often require students to write an essay as part of the application process. Each admissions office determines the length and content of the essay. The applicant also may be required to have a personal interview with a representative from the admissions office.

Some four-year universities/colleges and most two-year colleges also offer open admissions, which means they will admit students as long as they have a High School Diploma or General Educational Diploma (a qualification for those without a High School Diploma). Open admissions are generally accompanied by remedial education.

Vocational/technical institutions and providers

Entry criteria

As noted above, most community colleges have open admissions policies. This also applies to other colleges that grant Associate degrees.

Programs that are selective with limited enrolment usually have specific admission requirements - such as SAT or ACT scores - and a separate application.

Many students struggle to bridge the gap between different standards for high school graduation and postsecondary entry. Recent efforts have focused on promoting achievement standards for all students and a system of sub baccalaureate credentials for those who do not seek a bachelor's degree; closer alignment of high school graduation requirements, state academic achievement standards, and postsecondary entrance requirements; and stronger links among assessments, accountability systems, and the expectations of postsecondary institutions and employers.

CTE educators have also been developing strategies to better align secondary and postsecondary CTE for more than two decades. Recent efforts, including dual enrolment and career pathways and clusters, are designed to offer broader preparation for postsecondary education.

Dual enrolment has grown in popularity as an alternative means of connecting high school and college course work and providing high school students with opportunities to earn college credit. Dual enrolment allows students to enrol in a college course, either at their high school or at a local community college and earn college credit. Once students successfully complete a course, college credit is conferred immediately and documented on a college transcript. Dually enrolled students also have access to college libraries and support services, including career guidance, advising, and tutoring.

Some dual enrolment programmes have been driven by the desire to provide high school students with access to the broader array of CTE programmes and courses available at community colleges. Such programmes are also more likely than those at high schools to have facilities that simulate workplaces and have up-to-date equipment. Dual enrolment requires high schools and colleges to work together, fostering collaboration between college faculty and high school teachers that can potentially lead to better alignment of curricula.

Career clusters and pathways are designed to connect broad career areas in secondary education to a range of postsecondary education and training opportunities. Their overarching goal is to provide students with knowledge and skills that can be applied to a variety of specific jobs within an occupational area.

Flexibility

In fall 2016, nearly one-third of undergraduate students (5.2 million) participated in distance education, with 2.2 million students, or 13 per cent of total undergraduate enrolment, exclusively taking distance education courses. Of the 2.2 million undergraduate students who exclusively took distance education courses, 1.3 million were enrolled at institutions located in the same state in which they resided, and 774,000 were enrolled at institutions in a different state (U.S. Department of Education, National Center for Education Statistics, 2017).

The percentage of undergraduate students enrolled exclusively in distance education courses varied by institutional level and control. In fall 2016, the percentage of students at private for-profit institutions who exclusively took distance education courses (52 per cent) was more than three times that of students at private non-profit institutions (15 per cent) and more than five times that of students at public institutions (10 per cent). In particular, the percentage of students at private for-profit 4-year institutions who exclusively took distance education courses (65 per cent) is larger than the percentages of students at 2-year institutions who exclusively took distance education courses (percentages at these institutions ranged from five per cent at private for-profit 2-year institutions to 35 per cent at private non-profit 2-year institutions) and also larger than the percentages of students at public 4-year institutions (seven per cent) and private non-profit 4-year institutions (15 per cent) who exclusively took distance education courses (U.S. Department of Education, National Center for Education Statistics, 2017).

The degree of flexibility in terms of credit transfer varies considerably between CTE programmes. Some CTE programmes are terminal and are designed to lead directly to employment. For instance, an associate's degree in court reporting includes few courses that are transferable for credit toward a bachelor's degree. Other CTE programmes offer stackable credentials (i.e. credentials leading to more advanced qualifications) that can be accumulated over time to build up an individual's qualifications and help them to move along a career pathway. For example, an associate's degree in respiratory therapy can lead to employment as a respiratory therapist or be transferred toward a bachelor's degree in respiratory therapy.

Provision to support low attainers

Most two- and four-year colleges offer remedial courses in reading, writing, and mathematics for low attainers. In 2014, about 20 per cent of students entering four-year colleges were placed into remedial English and mathematics courses, compared with around 60 per cent in two-year colleges. Remedial courses do not count for college credit (Education Commission of the States, 2014).

Apart from this, provision for low attainers appears to comprise a disparate collection of local initiatives and we have been unable to identify schemes of a similar scale to those outlined in relation to several of the other countries considered in this review.

Role of government

The federal government has a very limited role in administering education at any level. State governments, local and institutional authorities, and non-governmental organisations have major roles.

In the case of higher education, state governments exercise oversight and coordinating authority over public colleges and universities within their jurisdictions, through corporate charters to institutions, state-appointed boards of trustees, regulation of standards and quality to varying degrees, other state regulations of various types and budget allocations (U.S. Department of Education, No date). State governments also provide financial assistance programmes for higher education students who are state residents and help to administer federal funds provided to state residents and higher education institutions.

State governments also exercise oversight over vocational education and private career training in a variety of ways. Private career training providers are regulated via a variety of authorities depending on the state or territory (U.S. Department of Education, No date).

Practitioners at the local, state, and federal levels often organise CTE into 16 career clusters developed by the U.S. Department of Education. CTE career clusters contain occupations that are in the same field of work and require similar skills, such as health

science and manufacturing. According to a report from the National Association of State Directors of Career Technical Education, as of 2012, 94% of states and territories had either adopted career clusters or had adapted their own framework from the 16 career clusters.

CTE providers often collaborate with industry and business to develop programmes and to ensure curriculum relevance and employable graduates. However, there are no clear ways for employers, industry, labour to engage in programme and curriculum design and implementation.

Take up

High school completers

The annual percentage of high school completers who enrol in 2- or 4-year colleges in the fall immediately following high school completion is known as the *immediate college enrolment rate*. The overall immediate college enrolment rate increased from 63 per cent in 2000 to 70 per cent in 2016,²⁰ though the 2016 rate was not measurably different from that in 2010 (U.S. Department of Commerce, 2017).

Higher percentages of high school completers immediately enrolled in 4-year colleges than in 2-year colleges – which, as noted above, prepare students to continue studies for an undergraduate degree or help them gain occupational skills for immediate employment - in every year from 2000 to 2016. In 2016, about 46 per cent of high school completers enrolled in a 4-year college and 24 per cent enrolled in a 2-year college. The immediate college enrolment rates for 4-year and for 2-year colleges in 2016 were not measurably different from 2000 (U.S. Department of Commerce, 2017).

In 2016, the overall immediate college enrolment rate for males (67 per cent) was not measurably different from the rate for females (72 per cent). From 2000 to 2016, the immediate college enrolment rate for males increased from 60 to 67 per cent. The enrolment rate for females in 2016 was not measurably different from the rate in 2000. The immediate enrolment rates at 2-year colleges were not measurably different for males (25 per cent) and females (22 per cent). At 4-year colleges, the immediate college enrolment rate for females (50 per cent) was higher than the rate for males (42 per cent) (U.S. Department of Commerce, 2017).

²⁰ Of the 3.1 million recent high school completers in 2016, 70 per cent (some 2.2 million), enrolled in college by the following October.

Overall enrolment in post-secondary education

In fall 2016, over 20 million students were enrolled in post-secondary education institutions that are eligible for federal student financial assistance programmes. 68 per cent of students in post-secondary education were enrolled in degree-granting 4-year institutions, 30.7 per cent were enrolled in 2-year degree-granting institutions (offering associate degrees), and 1.3 per cent were enrolled in less-than-2-year non-degree-granting institutions (which include, for example institutions that offer only career and technical programmes of less than two years' duration) (Grinder et al., December 2017).

Between 2005 and 2015, enrolment in degree-granting postsecondary institutions increased 14 per cent, from 17.5 million to 20.0 million. The overall increase between 2005 and 2015 reflects an increase of 20 per cent between 2005 and 2010, followed by a decrease of five per cent between 2010 and 2015 (U.S. Department of Education, National Center for Education Statistics, 2018).

Similarly, the number of full-time students rose 21 per cent from 2005 to 2010, and then fell six per cent from 2010 to 2015, for an overall increase of 14 per cent between 2005 and 2015. The number of part-time students rose 20 per cent from 2005 to 2011, and then fell four per cent from 2011 to 2015, for an overall increase of 15 per cent between 2005 and 2015 (U.S. Department of Education, National Center for Education Statistics, 2018).

Between 2016 and 2027, undergraduate enrolment at 2-year institutions is projected to increase by 12 per cent (from 6.1 million to 6.8 million students), while enrolment at 4-year institutions is projected to be two per cent lower in 2027 than in 2016 (10.6 million students compared with 10.8 million students). (U.S. Department of Education, National Center for Education Statistics, 2018).

Disadvantage

In each year from 2000 to 2016, the immediate college enrolment rate for high school completers from high-income families was higher than the rates for students from middle-income and low-income families. In 2016, the immediate college enrolment rate for students from high-income families was 83 per cent, compared with 64 per cent for students from middle-income families and 67 per cent for students from low-income families. In every year since 2000 except in 2015 and 2016, the enrolment rate for students from middle-income families was higher than the rate for students from low-income families. (U.S. Department of Commerce, 2017).

The gap between the immediate college enrolment rates for students from high-income and low-income families narrowed between 2000 and 2016. The gap between the immediate college enrolment rates for students from high-income and low-income families was 14 percentage points smaller in 2016 (16 percentage points) than in 2000 (30 percentage points). However, the gap between the overall enrolment rates for

students from high-income and middle-income families in 2016 (19 percentage points) was not measurably different from the gap in 2000 (U.S. Department of Commerce, 2017).

Adult learning

Between fall 2005 and fall 2015, the percentage increase in the number of students enrolled in degree-granting institutions was lower for students age 25 and over than for students under age 25; and this pattern is expected to continue in the coming years. The enrolment of students age 25 and over increased by 13 per cent, while the enrolment of those under age 25 increased by 15 per cent from 2005 to 2015. From 2015 to 2026, NCES projects the increase for students age 25 and over to be eight per cent, compared with 17 per cent for students under age 25 (U.S. Department of Education, National Center for Education Statistics, 2018).

In the United States CTE for adults involves work-related courses that adults participate in to acquire, maintain, and upgrade their workforce skills. CTE for adults may consist of formal postsecondary CTE that does not lead to a credential, or it may incorporate adult basic education. In addition, older adults may engage in non-formal CTE to acquire, maintain, or upgrade workforce skills. Non-formal education occurs outside traditional educational institutions, sometimes through community organisations. Adult CTE providers include elementary schools, secondary schools, postsecondary schools, employers, professional associations, detention centers and correctional facilities, and community and government organisations.

The major argument in favor of competency-based degrees is that they offer nontraditional students a more direct, more affordable path to a degree. This argument is especially made on behalf of older students who can earn college credits based on prior workplace or life experience. The AEI report cited above, found that nine out of ten competency-based students are older than 25. From a racial, ethnic and gender standpoint, these colleges resemble college enrollments as a whole. This, conversely, makes them less "nontraditional" than some other mainly online programmes local skills and employing apprentices.

Funding

Spend by route

The Carl D. Perkins Vocational Education Act (1984) provides federal funds of more than \$1.1 billion to support career and technical education programmes in grades 7-12 and also in post-secondary institution. However, state and local funds support teachers' salaries and much of the CTE infrastructure. There is a "maintenance of effort" provision in the law which prevents states from supplanting state funds with federal money.

While the number of tertiary students was stable between 2010 and 2014 in the United States, the total expenditure on tertiary education increased by 6% over the same period. However, at the primary, secondary and post-secondary non-tertiary level a slight increase in student numbers over the same period was accompanied by a 3% decrease in expenditure (OECD, 2017 - Education GPS).

Table 62 shows that the USA spends around 45 per cent more on tertiary education per student than the average for both the OECD and EU22 countries. Excluding research and development activities, this figure rises to around 58 per cent.

Table 62: Annual expenditure per student by educational institutions for all services (2014) [OCED, 2017: 177]

In equivalent USD converted using PPPs for GDP, by level of education, based on full-time equivalents

Tertiary (including R&D activities)				
	Short cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	All tertiary (excluding R&D activities)
USA	N/A	N/A	29,328 (£22,074)	26,256 (£19,762)
OECD Average	10,423 (£7,845)	16,674 (£12,550)	16,143 (£12,150)	11,056 (£8,321)
EU22 Average	11,239 (£8,459)	16,189 (£12,185)	16,164 (£12,166)	10,781 (£8,115)

Source: OECD/UIS/Eurostat (2017).

As can be seen in Table 63, the USA spends above the OECD and EU22 averages on educational core services (55/56 per cent more) and ancillary services (98 per cent more) but less (by around 40%) on research and development on a per student basis. Overall expenditure per student was 45% higher than the two averages.

Table 63: Annual expenditure per student by (tertiary) educational institutions for core educational services, ancillary services and R&D (2014)
In equivalent USD converted using PPPs for GDP, by level of education and type of service, based on full-time equivalents

	Educational core services	Ancillary services (transport, meals, housing provided by institutions)	R&D	Total
USA	23,014 (£17,322)	3,242 (£2,440)	3,072 (£2,312)	29,328 (£22,074)
OECD average	10,348 (£7,789)	710 (£534)	5,084 (£3,827)	16,143 (12,150)
EU22 average	10,123 (£7,619)	694 (£522)	5,346 (£4,024)	16,164 (£12,166)

Source: OECD/UIS/Eurostat (2017).

Table 64 shows that expenditure on compensating teachers was below the OECD average, while compensation for other staff was higher than the average. Total expenditure on compensation of staff was below the OECD and EU22 averages, while other current expenditure was above the averages.

Table 64: Current expenditure by resource category (2014) [OECD, 2017: 231]
Distribution of current expenditure by public and private educational institutions as a percentage of total current expenditure

Compensation of all staff				
	Compensation of teachers	Compensation of other staff	Total	Other current expenditure
USA	30	35	64	36
OECD average	41	26	67	33
EU22 average	m	m	67	33

Source: OECD/UIS/Eurostat (2017).

The USA spends proportionally more on staff in public institutions compared with private ones and its spend is broadly in line with the OECD and EU22 averages. The share of current expenditure on compensation of teachers in public institutions is below the OECD average, while the share of expenditure on compensation of other staff is higher in public institutions.

Table 65: Share of current expenditure by resource category and type of institution (2014)

Distribution of current expenditure by educational institutions

Compensation of all staff as a percentage of current expenditure						
	Compensation of teachers		Compensation of other staff		Total	
	Public	Private	Public	Private	Public	Private
USA	31	28	35	34	66	62
OECD average	38	m	29	m	67	64
EU22 average	m	m	m	m	68	63

Source: OECD/UIS/Eurostat (2017).

Maintenance

In the U.S., student loans are an important source of college education funding, apart from grants, work-study and tax benefits. Student loan programmes have been in place for decades (the first federal student loan programme was introduced in 1958). In 2013-14, the fraction of federal and non-federal loans in total student aid was 42.7 per cent (College Board, 2014).

Most of the student lending in the US is done through federal student loan programmes, although there is also a market for private student loans. The size of the private market is estimated to be USD 91.0 billion (£68.71 billion), or 7.2 per cent of the USD 1.27 trillion (£0,96 trillion) in outstanding balances for the entire student loan market (Arvidson et al., 2013).

Full-time undergraduates starting their courses from August, 2015 at public universities are entitled to a federal tuition fee loan of up to US\$12,500 [£9.439]. Under the William D Ford loan scheme, the main scheme, four types of loan are available: direct subsidised loans (where financial need can be demonstrated), direct unsubsidised loans (where it need not), direct PLUS loans (payable to parents of children whose other loans do not cover university costs) and direct consolidation loans (which amalgamate all eligible loans into a single loan).

In the US, loan repayment rates are generally higher than in the UK and loan fees are often applied. William D Ford loans are subject to an interest rate of 4.29%, with a loan fee of just over 1%. Direct PLUS loans are subject to an interest rate of 6.84%, with a loan fee of over 4%. Perkins loans have an interest rate of 5% and do not incur a loan fee. The majority of the loans in the US, however, are not income contingent; meaning that borrowers are forced to repay, even during financially fallow periods.

As Susan Dynaski has noted, “The approach [to student loan repayments] of some countries, including England and Australia, is to link payments directly to income so that borrowers pay little to nothing during hard times. The United States also has income-based repayment options, but relatively few student borrowers – currently 19 per cent of Direct Loan borrowers – are enrolled in them”. Part of the reason for this low uptake, Dynaski suggests, is that applying and maintaining an income-based repayment schedule is a complex and involved process, which deters many. By way of solution, Dynaski and Kreisman have suggested the introduction of a singular, income-contingent repayment model across the board. (...) Under this model, payments would rise and fall with borrowers’ earnings, and would include the ability to increase payments and repay loans more quickly to minimise financing over the lifetime of the loan”.

In addition, a higher proportion of loan providers in the US are private. According to the latest data from the Institute for College Access and Success, about one-sixth (17%) of the Class of 2014’s debt was comprised of private loans, which provide fewer consumer protections and repayment options and are typically more costly than federal loans

Other grants are available to those with ‘exceptional’ financial needs (Pell Grants, Federal Supplemental Educational Opportunity Grants), training in teaching (Teacher Education Assistance for College and Higher Education Grant), with a parent/ guardian killed during military service in Iraq or Afghanistan (Iraq and Afghanistan Service Grant).

US institutions often award more generous scholarships, grants and bursaries than their UK counterparts. At Harvard, for example, “Close to 60% of our undergraduates receive Harvard Scholarship”, 20% of our parents have total incomes of less than \$65,000 [£45,900] and are not expected to contribute (...) Families with incomes between \$65,000 [£49,074] and \$150,000 [£113,247] will contribute from 0-10% of their income, and those with incomes above \$150,000 [£113,247] will be asked to pay proportionately more than 10%, based on their individual circumstances.” The most recent data suggests that the average full-time US student studying at a four-year institution receives a little under US\$10,000 [£7,100] in grants and scholarships from all providers, including federal.

Source of funding

The USA spent around 44 per cent more than the OECD average and 48 per cent more than the EU22 average on tertiary education as a proportion of GDP.

**Table 66: Expenditure on educational institutions as a percentage of GDP, by level of education (2014) [OECD, 2017: 187]
From public and private sources of funds**

	Tertiary (including R &D activities)		
	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary
USA	N/A	N/A	2.7
OECD Average	0.2	1.4	1.5
EU22 Average	0.1	1.3	1.4

Source: OECD/UIS/Eurostat (2017).

Public expenditure and, to a lesser extent, private expenditure on tertiary educational institutions as a percentage of GDP was above the OECD and EU22 averages.

**Table 67: Public and private expenditure on educational institutions as a percentage of GDP, by level of education (2014) [OECD, 2017: 189]
From public and private sources, by level of education and source of funds**

	Public expenditure on tertiary education institutions	Private expenditure on tertiary education institutions	Total expenditure on tertiary education institutions
USA	0.9	1.7	2.7
OECD Average	1.1	0.5	1.6
EU22 Average	1.1	0.3	1.4

Source: OECD/UIS/Eurostat (2017).

The USA expenditure on tertiary educational institutions is above than the OECD and EU22 averages and the gap increases if research and development activities are excluded.

**Table 68: Total public expenditure on education (2014) [OECD, 2017: 209
Direct public expenditure on educational institutions plus public subsidies to
households and other private entities,1 as a percentage of total government
expenditure, by level of education**

Includes R&D activities

	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	All tertiary (excluding R&D activities)
USA	N/A	N/A	3.5	3.0
OECD Average	0.3	2.7	3.1	2.3
EU22 Average	0.2	2.4	2.7	1.6

Source: OECD/UIS/Eurostat (2017).

In the USA the proportion of funding that comes from local government is well above the OECD and EU22 averages, whereas the proportion of funding emanating from central government is well below the averages.

**Table 69: Share of sources of public funds by level of government (2014)
Before and after transfers, by level of education [OECD, 2017: 211]**

	Initial funds (before transfers between levels of government)			Final funds (after transfers between levels of government)		
	Central	Regional	Local	Central	Regional	Local
USA	50	39	11	50	39	11
OECD Average	87	12	1	85	13	2
EU22 Average	86	12	1	85	13	2

Source: OECD/UIS/Eurostat (2017).

Tuition fees

Tuition fees vary not only between universities, but between the type of university (public or private) and a student's residential status (in-state students that are studying in their home state generally pay less than out-of-state students). Average tuition and required fees for full-time, first-time degree/certificate-seeking undergraduates at 4-year

institutions increased across all institutional controls from 2014–15 to 2016–17. After adjusting for inflation, public institutions reported a roughly five per cent increase for in-state students (to about \$8,200/£6,172) and for out-of-state students (to approximately \$18,400/£13,850.). Non-profit institutions reported an increase of approximately five per cent (to about \$27,300/£20,550). For-profit institutions reported average tuition and required fees of approximately \$16,000 (£12,044) for 2016–17, which represents an increase of over one per cent when compared with the inflation-adjusted figure from 2014–15. The annual average tuition fees for full-time national students charged by public and private tertiary institutions and shows that average fees were over 60 per cent higher in private institutions than in public institutions (OECD 2017).

Student debt

Student debt in the United States has increased substantially over recent years. The total student debt burden in the United States now stands at over US\$1 trillion [£706 billion] (Kirby, 2016).

It is important to differentiate between debt levels at public and private (profit/non-profit) universities. The latest figures from the Institute of College Access and Success suggest that, while 69 per cent of graduates at public and non-profit private universities hold debt, the figure for the latter alone is 74 per cent. Figures for graduates from private for-profit universities are less recent, but as of 2012 were estimated at 88 per cent (Kirby, 2016). In 2015 typical debt on graduation was US\$29,000 (£21,827) (public, private, non-profit), US\$27,100 (£20,397) (Public), US\$32,600 (£24,537) (private non-profit) and US\$41,200 (£31,010) (private for-profit) (Kirby, 2016).

Given the higher proportion of student debt held by private providers in the US, which the latest estimates place at 17% of all student debt, there are signs that the current arrangement is putting increasing pressure on borrowers and threatening financial security later in life: “Nearly one third of the borrowers in repayment are delinquent on student debt, a fact that is masked by the large numbers of borrowers who are in either deferment or grace periods... it appears that the higher burden of student loans and the associated high delinquency rate negatively affect borrowers’ home purchases, other debt repayments and access to credit” (Kirby, 2016).

The Center for American Progress, describing the US situation as a ‘student debt crisis’, note that students from particular backgrounds fare worse than others, with poverty mapping onto race in particular ways: “African American and Latino students are especially saddled with student debt, with 81 per cent of African American students and 67 per cent of Latino students who earned bachelor’s degrees leaving school with debt. This compares to 64 per cent of white students who graduate with debt (Johnson et al., 2012)”

Lauren Rivera of Northwestern University describes the situation at the United States’ top universities, where economically disadvantaged students are also fairing particularly

poorly, as follows: “As of 2014, at many elite colleges it [undergraduate university tuition] approached \$60,000 [£42,400 annually, including room, board, and fees [...] Including fees, living expenses, and the social activities and trips that are an essential part of the informal curricula of these schools (and of the social networks formed within them) pushes the bill closer to \$100,000 [£70,600] per year. Costs such as these lead many students to take on six-figure debt to fund their degrees. Unless they claim a financial hardship deferral, students must begin making loan payments several months after graduation.” (Kirby 2016:224).

Funding and fees by subject area

In the United States, tuition fees vary not only between universities, but also between the type of university (public or private) and a student’s residential status (in-state students that are studying in their home state generally pay less than out-of-state students).

Table 70 shows the annual average tuition fees for full-time national students charged by public and private tertiary institutions and shows that average fees were over 60 per cent higher in private institutions than in public institutions.

Table 70: Annual average tuition fees for full-time national students charged by institutions

	Public institutions			Private institutes		
	All tertiary			All tertiary		
	Total	Of which: Bachelor's or Equivalent level	Of which: master's or equivalent level	Total	Of which: Bachelor's or Equivalent level	Of which: master's or equivalent level
USA	6,347 £4,793	8,202 £6.193	11,064 £8,354	19,127 1£4,446	21,189 £16,003	17,084 £12,903

Source: OECD (2017).

Monitoring

State governments monitor budget allocations and administer both state and federal financial assistance programmes. These funds and assistance programmes are required to be administered by public authorities that can account for the monies distributed as loans and grants and for the repayment of loans issued to residents of each state (U.S. Department of Education, National Center for Education Statistics, 2018).

Outcomes

Performance

Student satisfaction

The National Survey of Student Engagement (NSSE) is a large-scale annual survey used to measure the level of student participation at colleges and universities in the United States and Canada. The results provide an estimate of how undergraduates spend their time and what they gain from attending college. Institutions use their data to identify aspects of the undergraduate experience inside and outside the classroom that can be improved through changes in policies and practices more consistent with good practices in undergraduate education. This information is also used by prospective college students, their parents, college counsellors, academic advisors, institutional research officers, and researchers to learn more about how students spend their time at different colleges and universities and what they gain from their experiences.

Institutional performance

The U.S. Department of Education does not accredit educational institutions and/or programmes; however, the Department provides oversight over the postsecondary accreditation system through its review of all federally recognised non-governmental accrediting agencies.

These agencies develop and enforce standards designed to insure acceptable levels of quality for institutions and programmes at the non-degree and degree levels. Accrediting agencies, which are private educational associations of regional or national scope, develop evaluation criteria and conduct peer evaluations to assess whether or not those criteria are met. Institutions and/or individual programmes located within an institution that request an agency's evaluation and that meet an agency's criteria are then "accredited" by that agency. Many states have requirements that institutions and programmes be accredited by recognised accrediting agencies in order for graduates to obtain state recognition. The federal government may recognise certain accrediting agencies for the purposes of supporting student assistance programmes and institutional eligibility for assistance.

Alongside this accreditation system, many states have instituted performance measures that focus on evaluating a university's success in teaching. As of 2017, 35 states allocate a portion of state funding to colleges based on student outcomes (using metrics such as graduation rates or degree production). However, research findings about the effectiveness of state-based performance funding so far have been mixed and suggest that these schemes can have unintended consequences. On recent study (Li and Kennedy, 2018) found that because awarding more short-term certificates is a relatively quick and cost-effective way to capture performance funds, colleges concentrate on short-term certificates rather than medium-term certificates and two-year associate's degrees, which offer greater labour market benefits. Another study (Hillman, N. and Corral. D., 2017) reported that minority-serving institutions in states with performance formulas on average lose "significant funding" on a per-student basis compared with other colleges in those states or with minority-serving ones in states without performance funding.

Perceptions of value for money

No robust evidence has been found on this topic..

Disadvantage

According to a report by the New America think tank, since the late '90s, nearly two-thirds of public universities have reduced their share of students enrolled from low-income families (earning less than \$37,000 a year) (Bird, 2017).

Most states support at least one need-based financial aid programmes designed to counter this trend by promoting access for students who might not otherwise be able to afford university or postsecondary education more generally. This financial support for postsecondary education is awarded on the basis of student or family income or the Expected Family Contribution calculated by a federal application. In some states, the cost to attend a postsecondary institution may also be taken in to account in the determination of financial need (Education Commission of the States, May 2017).

Nationally, expenditure by states on need-based programmes has steadily increased from around \$6.1 billion in 2003 to more than \$8.8 billion in 2015. In contrast, the share of state-funded dollars awarded through federal student financial aid programmes based on need has remained relatively stable - only fluctuating by about four percentage points. Within individual states, greater degrees of variation in need-based aid exist. While most states maintain relatively stable funding from year-to-year, several states stand out as making significant investments or disinvestments from need-based grant and scholarship programme (Education Commission of the States, May 2017).

Alongside state and federal needs-based financial aid programmes, higher education institutions have their own policies and programmes to address disadvantage, including need-based financial aid and outreach policies designed to promote access for low-income students. The impact of these initiatives, however, varies considerably and Chetty et al.'s (2017) research on social mobility in higher education shows that while overall more low-income students are going to university/college, the majority are enrolling in community colleges and for-profit institutions, whereas wealthier students are far more likely to attend elite public and private four-year universities.

Appendix H: Country report, Wales

Overview of post-compulsory education

Education in Wales is compulsory from the ages of five to sixteen. While the English state-school system has diversified over the past few years, the Welsh system has remained committed to comprehensives. Wales is currently developing a new National Curriculum which is set to be available to schools in September 2018 and fully rolled out by 2021.

All the Cambridge International Examinations, such as the IGCSE, the International AS and A Level, and the Pre-U, are certified to be taught in Wales. The International Baccalaureate is also becoming increasingly popular in independent Welsh schools. The Welsh examination board WJEC board provides Welsh Government-regulated qualifications for all state schools and colleges in Wales. It also offers qualifications in England and Northern Ireland through its Eduqas subsidiary, established to reflect the increasing divergence of the Welsh and English systems. The WJEC is also the awarding organisation for the Welsh Baccalaureate, which is delivered at National/Foundation (Key Stage 4), Foundation (post-16), National (post-16) and Advanced levels.

The post compulsory education and training sector in Wales has become increasingly multifaceted and diverse as new types of providers have entered the sector and an increasing number of HE courses have started to be taught in FE colleges. Hazelkorn (2016) identifies six different types of organisations in the sector:

- Sixth form colleges.
- Further education institutions (FEIs) providing 16-19 education.
- FEIs providing 16-19 education, work-based learning and adult and community learning.
- Local authorities providing adult and community learning.
- Higher education institutions (HEIs) providing further education.
- HEIs focused on higher education.
- Private providers of work-based learning, and technical and professional qualifications, some of which are in receipt of public funds.

At the end of compulsory education, students can apply for a specific programme at a secondary school, sixth form college, or further education college. Programs that provide access to higher education are at level 3 of the national qualifications framework and include both academic programmes - GCE A levels forming the biggest group of these, with students typically take three of subjects after the second year of study - and vocationally oriented programmes. There are also training and apprenticeship programmes, which incorporate with employment and training at a place of work with part-time study at a college or with a training provider.

Further Education institutions in Wales offer a wide range of qualifications, including both academic qualifications, such as A levels or the Welsh Baccalaureate, and technical and vocational courses. Some specialise in particular vocational sectors, such as land-based, marine engineering, and food technology. Some place a particular emphasis on engaging particular sections of the population, for example, adults returning to learning or training for businesses.

Another important strand of the post-16 sector are apprenticeships, with apprentices dividing their time between training in a workplace and more theoretical training with an approved training provider. Apprenticeships include:

- An appropriate competency qualification to at least Level 2 of the Credit and Qualifications Framework for Wales (CQFW).
- Essential Skills Wales qualifications, e.g. communications, application of number and an optional information and communication technology (ICT).
- A technical knowledge qualification (relevant to the specific Apprenticeship).
- Other qualifications or requirements as specified by the particular occupation.

The foundation apprenticeship is at level 2 of the Credits and Qualifications for Wales Framework (CQFW), which is equivalent to 5 GCSEs or NVQ Level 2, while the standard apprenticeship is at level 3 of the CQFW (equivalent to 5 GCSEs, 2 A-Levels).

The Welsh Government's Traineeships learning programme sits alongside these post-16 pathways. The programme is designed to prepare young people, aged 16 to 18, to get a job or progress to further learning at a higher level, such as an Apprenticeship or further education. Traineeships consist of three distinct levels elements: Engagement, Level 1 and Level 2.

Apprenticeships are also a key element of post compulsory education at level 4 and above). The higher apprenticeship (levels 4-7 of the CQFW) involves individuals working towards a qualification equivalent to a foundation or honours degree and is available across a range of sectors including Accountancy, Aerospace, Construction and Creative Media. Degree apprenticeships combine full-time work with studying towards the equivalent of a full Bachelors or Master's degree. Degree apprenticeships are studied at CQFW levels 6-7 of the CQFW and can take anywhere from one to six years to complete. In recent years there has been an increase in the take up of Welsh and Bilingual apprenticeships.

Nine universities, including the Open University in Wales, offer a range of undergraduate and postgraduate provision, although many Welsh students opt to cross the border to universities in England (a Welsh Government subsidy means that Welsh students do not have to pay full university fees). Alongside their academic programmes, these

universities offer many programmes for the health, legal and other professions and are expected by the Welsh Government to increase their work-focussed or apprenticeship-based provision. Moreover, a range of providers in Wales currently provide occupationally-focussed courses at level 4 and above, including Higher National Certificates (HNCs) and Higher National Diplomas (HNDs), which are vocational qualifications at level 4 and level 5 respectively. HNCs take about one year to complete full-time and two years part-time. HNDs take two years full-time and can also be taken part-time, which takes longer. HNCs and HNDs are can be acquired at both further and higher education colleges. There is also the option of studying for foundation degrees (at level 5), which provide a mix of work-related specialist skills and academic learning and can be used to progress on to a related honours degree. Foundation degrees are also available at both higher and further education institutions.

Most students studying higher education programmes in further education colleges study part-time, with many already in employment. In 2014/15, there were 5,275 enrolments on HE courses in FE institutions; of these, 3,195 (60 per cent) were studying part-time. This activity is mostly franchised in from HE institutions. A number of models of partnership working exist between colleges, universities and training providers, which are designed to ensure that students experience a smooth transition between level 4 and 5 to higher education programmes and undergraduate degrees.

The Welsh Government has commissioned a number of reports that have suggested the growing complexity of the post-compulsory education and training system in Wales is a significant problem. The Welsh Government has therefore announced its intention to reform the sector in order to reduce this complexity and create greater coherence. This includes the introduction of a new strategic body, the tertiary education and research commission for Wales, to provide oversight, strategic direction and leadership for the post-compulsory education and training sector. Based on feedback from the consultation on the White Paper, the Cabinet Secretary for Education in Wales has accepted that there are some areas where the Government's proposals need 'further work' and noted that one area where opinion is 'divided' is whether one common quality assurance framework for the whole of the post-compulsory education and training system would be the right way forward.

Education systems

Academic institutions

Entry criteria (level 4 and above)

Institutions determine their own admissions policies and the minimum entry requirements for each programme. For bachelor's degrees, the minimum entry requirement is usually two or three General Certificate of Education Advanced-level (GCE A level) passes, as

well as a minimum number of General Certificate of Secondary Education (GCSE) passes at grade C or above. These remain the most common form of entry qualification held by young entrants to higher education, however a wide range of other qualifications is acceptable for entry. They include the International Baccalaureate and some vocational options such as GCE A levels in applied subjects and Edexcel BTEC National Qualifications.

Most HEIs do not routinely interview applicants for most programmes. However, applicants for entry to professional and vocational programmes such as initial teaching training and medicine are usually required to attend a selection interview.

No qualifications are required for entry to Open University courses.

Vocational/technical institutions and providers

Entry criteria (level 4 and above)

Enrolment for a Higher National Certificate (level 4) course requires A level or equivalent and three GCSEs at grade C or above, including Mathematics and English language.

Enrolment on an Higher National Diploma (level 5) course normally requires 3-4 GCSEs at grade A-C. plus one of the following - an A Level, an AVCE, a BTEC National Diploma, or an Access course

Enrolment on a Foundation degree courses (level 5) normally requires around 80 UCAS points from any of the following - an A Level, an AVCE, a BTEC National Diploma or an Access course.

Apprenticeship providers

Entry criteria

Higher apprenticeships usually require relevant Level 3 qualifications, such as two or more A levels, or related Diplomas or NVQs, as well as GCSEs (A*-C) or equivalent.

Degree apprenticeships require at least two A levels. Specific subjects and grades may be set by the employer and university/college offering the degree apprenticeship.

Flexibility

In Wales (and England) the Access to Higher Education Diploma provides a route for mature learners to gain access to higher education. This is designed for learners who wish to go into higher education, but who do not have the necessary academic qualifications. They can be accessed through further education colleges and are

available in a range of different subjects. They can be studied either full-time or part-time. A full-time Access to Higher Education Diploma will usually take a year to complete.

Foundation Degrees, which integrate academic and work-based learning and are typically two years full-time study but can be taken part-time over a longer period, provide another point of access to higher education for non-traditional students in Wales (and England). Students may be registered and taught at a higher education institution; registered at a higher education institution but taught at a further education college; or registered and taught at a further education college. They are also offered by some companies, such as McDonald's as training for employees.

Foundation Degrees are at Level 5 and are designed to equip students with a comprehensive knowledge in a subject to enable them to go on to employment or further study in that field and can normally provide entry to the final year of a first degree or to further work-based learning. According to figures from Higher Education Statistics Agency, over half of foundation degree graduates are in further study six months after graduating, many presumably 'topping up' to a bachelor's degree, and more than 60% are in employment (there is an overlap of slightly over 20% who are both working and studying).

There are no generally-set entry conditions for Foundation Degrees. Commercial or industrial experience may be more important in gaining a place than formal qualifications, and experience is always taken into account. Many higher education institutions give credit for prior study and informal learning acquired through work or other experiences: Accreditation of Prior Learning (APL) or Accreditation of Prior Experiential Learning (APEL).

Provision to support low attainers

Support for low attainers is available through the Traineeships programme. This programme, which is targeted at young people aged 16 to 18 years old, aims to give individuals the skills needed to get a job or to progress to further learning at a higher level, such as an apprenticeship or further education. Participation on the Traineeships programme is available at three distinct levels - Engagement, Level 1 and Level 2. Traineeships are not time-bound and can be tailored to the needs of low attainers. The Traineeships programme also supports each individual learner by providing an allowance.

Role of government

According to stakeholders who contributed to Hazelkorn's (2016) review of post compulsory education and training in Wales, education and social-economic planning capacity and capability in Wales is limited and economic intelligence underdeveloped.

While a lot of data was being gathered, it was said that it was not being thought about in a coherent cross-governmental way. Likewise, there was no formal space in which to have discussions about such issues; in so far as discussions did take place, they usually occurred on the margins of other events or meetings. However, the new Regional Skills Partnerships were beginning to facilitate such conversations between further education and higher education institutions around skills and employability.

Take up

In her review of post-compulsory education and training in Wales, which was commissioned by the Welsh Government, Hazelkorn (2016) observes that student participation levels have shown volatility over recent years, with the number of Welsh-domiciled young people under 20 years entering FE and mature and part-time students declining while those entering HE have been steadily increasing (Hazelkorn, 2016).

The decline in the number of people participating in part-time education is reflected in the participation rates in post-compulsory education for 2016 and ten years previously in 2006. As Tables 71 and 72 show, in 2016, 78.8 per cent of 16-18-year olds and 51.1 per cent of 19-21-year olds were in education and work-based learning, which is respectively 3.3 per cent and 2.9 per cent higher than ten years previously in 2006. In both cases this reflected higher proportions of the age groups being in full-time programmes, as lower proportions were enrolled on part-time education and work-based learning programmes than in 2006. (The Welsh Government indicates nearly half of 16-year olds who continue in full-time education do so in school sixth forms. (Welsh Government, June 2017).

Table 71 Proportion of 16-18-year olds in education and work-based learning

	2006	2016
Full-time education	71,550 (60%)	72,430 (68.4%)
Part-time education	9,770 (8.2%)	4,190 (3.95%)
Work-based learning	8,760 (7.3%)	6,830 (6.5%)
Total	90,080 (75.5%)	83,450 (78.8%)
Population	119,300 (100%)	105,900 (100%)

Source: Statistics Wales

Table 72: Proportion of 19-21-year olds in education and work-based learning

	2006	2016
Full-time education	42,520 (34.7%)	52,400 (42.7%)
Part-time education	10,590 (8.6%)	4,490 (3.7%)
Work-based learning	6,030 (4.9%)	5,820 (4.7%)
Total	59,140 (48.2%)	62,710 (51.1%)

	2006	2016
Population	122,500 (100%)	122,600 (100%)

Source: Statistics Wales

The same pattern of higher proportions in full-time programmes and lower proportions in part-time programmes in 2016 compared to 2006 can be seen in Tables 73 and 74, which present the proportions of 16-18-year olds and 19-21-year olds in full-time and part-time further education programmes.

Table 73 Proportion of 16-18-year olds in further education

	2006	2016
Full-time education	30,400 (25.5%)	32,021 (30.2%)
Part-time education	7,820 (6.5%)	3,750 (3.5%)
Total	38,220 (32%)	35,771 (33.7%)
Population	119,300 (100%)	105,900 (100%)

Source: Statistics Wales

Table 74 Proportion of 19-21-year olds in further education

	2006	2016
Full-time education	4,380 (3.6%)	5,000 (4.1%)
Part-time education	7,300 (5.9%)	2,220 (1.8%)
Total	11,680 (9.5%)	7,220 (5.9%)
Population	122,500 (100%)	122,600 (100%)

Source: Statistics Wales

According to Welsh Government, the participation rates in further education and work-based learning show variation across Wales. In general, the participation rates in further education are higher in those local authority areas with higher rates of socio-economic deprivation, being particularly so for the 16-24-year-old age group. The same is true of participation in work-based learning. However, the participation rates for the over 25s show a more marked correlation with socio-economic deprivation (Welsh Government, June 2017).

Tables 75 and 76 show that the proportions of 16-18-year olds and 19-21-year olds in higher education in 2016 was 1.1 per cent and 9.2 per cent higher than in 2006 respectively, which is consistent with the steady increase in the numbers of students entering HE noted above.

The proportions of 16-18-year olds in full-time higher education were higher in 2016 than ten years previously in 2006, the proportions of 16-18-year olds in part in part-time education were lower than in 2006.

Table 75 16-18-year olds in higher education

	2006	2016
Full-time education	11,450 (9.6%)	12,540 (11.8%)
Part-time education	1,830 (1.5%)	360 (0.4%)
total	13,280 (11.1%) ⁹	12,900 (12.2%)
Population	119,300 (100%)	105,900 (100%)

Source: Statistics Wales

Table 76 19-21-year olds in higher education

	2006	2016
Full-time education	38,050 (64.3%)	47,360 (75.5%)
Part-time education	3,030 (5.1%)	1,920 (3.1%)
Total	41,080 (69.4%)	49,280 (78.6%)
Population	59,140 (48.2%)	62,710 (51.1%)

Source: Statistics Wales

Recently the Welsh Government has highlighted that, although there has been an increase in full-time higher education participation over the past decade (2006/07 – 2015/16), there are notable disparities in participation rates across Wales, at both undergraduate and postgraduate levels. The full-time undergraduate participation rates have been consistently low in local authority areas with higher rates of socio-economic deprivation (Welsh Government, June 2017). In contrast to full-time study, the participation rates in part-time higher education have decreased over the past decade. There are also some notable variations in the rates of part-time undergraduate study, with higher rates in the more income deprived areas (Welsh Government, June 2017).

Around 40 per cent of full-time undergraduates from Wales choose to study elsewhere in the UK, with many returning to Wales following graduation (Welsh Government, June 2017).

Adult learning

Most learners in Welsh further education are adults over the age of 19. In 2014-15, 57% of colleges' learners were adults over the age of 19 and most studied part-time (<http://collegeswales.ac.uk/>). However, Hazelkorn 's (2016) review of post-compulsory education and training for the Welsh Government reported that stakeholders in the sector expressed concerns about that mature students and part-time learners were being to some extent overlooked in Wales: "With the exception of the Open University, most attention was given to 16-22 years old learners. (...) No one was looking at the post-22-

year-old learner – either the Masters or doctoral student or other mature learners, including those seeking to enter or re-enter the educational system”.

Funding

Maintenance

Higher education

In Wales students are eligible to maintenance support from the Welsh Government’s Learning Grant and maintenance loans. The size of student grants and loans depends on a student’s household income. For example whereas a student living away from home, outside London, with a household income of £18,370 or less is eligible for a £6,885 grant plus a £2,053 maintenance loan per year, a student living away from home, outside London, with a household income of £59,200 or more is eligible for a grant of only £1000 and a loan of £8,000 per year. Most students receive a grant of at least £1000 per annum.

The Welsh Government also offers a Special Support Grant, which is intended to help less well-off students with costs such as books, course equipment and travel. Unlike the Welsh Government Learning Grant, this does not affect the amount of Maintenance Loan that students may be entitled to. Additionally, it does not count as income when students calculate other income-related benefits or Tax Credits. The maximum amount of Special Support Grant available in academic year 2018/19 is £5,161 per year.

The Diamond Review’s (Diamond, 2016) overarching recommendation, subsequently accepted by the Welsh Government, was that the focus of grant finance for undergraduate support should move towards support for maintenance, with the cost of tuition fees being met in full through loans. As the Diamond Review’s proposals are implemented from academic year 2018/19 onwards, maintenance support will be improved for all Welsh-domiciled students, with the highest level of grant support directed towards those who are most in need. This has the potential to widen access to HE by under-represented groups – specifically students from low income backgrounds. The reforms also have the potential to improve retention and completion, by ensuring that all students – regardless of their background – have sufficient maintenance support to meet their living costs while studying (Welsh Government, June 2017).

Further education

Whilst studying at FE level there are various funding support schemes available:

- Education Maintenance Allowance (EMA) This is a weekly allowance of £30 per week to help students whilst studying. Students have to be on a full-time Further Education course at either a college or a school to receive the EMA. They may also receive bonuses for attendance and progress. they need to be 16-18 when

they start the academic year. All young people in care should automatically qualify for the EMA .

- Welsh Government Grant for Further Education scheme. This is a payment of up to £1,500 if students are studying full-time and up to £750 if they are part-time. It is dependent on the student's household income and students have to be aged 19 or over and their course must be at least 275 hours and lead to a nationally recognised qualification.
- Financial Contingency Funds (FCF). This is for students aged 16+ on part-time or full-time courses in Further Education Colleges. It can cover things such as transport, equipment costs, books and/or childcare. It is a discretionary fund administered by individual colleges.
- Dance and Drama Awards for students aged 16 or over who want to work in performing arts
- Support towards the cost of transport costs

Source of funding

Funding for FE (and 6th form)

Funding for further education institutions (FEIs) and school sixth forms are funded in different ways:

- FEIs receive their allocation of funding directly from the Welsh Government on an academic year cycle.
- Funding for school sixth forms is allocated by the Welsh Government to local authorities, on a financial year basis, who then pass this funding on to individual sixth forms. A local authority can retain up to three per cent (PDF46KB) of its total allocation for centrally retained services which relate to post-16 education (Champion, April 2018).

It is important to note that post-16 sixth form funding provision is separate from pre-16 school funding, which is mainly provided to local authorities through the largely un-hypothecated Local Government Settlement Revenue Support Grant Champion (April 2018).

Since 2015–16 (financial) and 2015/16 (academic), funding allocations for both FEIs and school sixth forms have been determined under the new Post-16 Planning and Funding Framework, which replaced the former National Planning and Funding System (NPFS), as a result of the Post-16 Planning and Funding Review (Welsh government, June 2017).

In a paper to the Children, Young People and Education Committee ahead of its draft budget scrutiny on 16 November 2017, the Cabinet Secretary for Education highlighted that in relation to FEIs:

- recurrent funding for the sector decreased by £23.665 million between 2013/14 and 2017/18, a reduction of 7.63 per cent in cash terms;

- Funding for part-time provision has fallen by almost 70 per cent in real terms since 2013/14, reflecting the Welsh Government's decision to prioritise its funding to support schools and young people;
- Provision for 16-18-year olds has been protected within the allocations for FEIs; and allocations for FEIs for 2016/17 and 2017/18 include one-off allocations of £796,000 to reflect growth in level 3 provision (A-level standard) for learners aged 16-19.
- The Welsh Government's indicative 2019-20 budget highlights that overall the post-16 education budget will be reduced by £9.827 million, through 'a reduction to the schools sixth form budget' as part of its 'local government grants rationalisation exercise'. The Welsh Government reports that it will work closely with the sector to ensure any efficiency has minimal impact on the choices offered, the quality of provision and the outcome for learners (Champion, April 2018).

Student debt

Student loan repayment terms and conditions in Wales are the same as in England, except that debt burdens are generally lower because of Welsh Government Learning Grants and the Welsh Partial Cancellation of Maintenance Loan Scheme, although the latter will no longer be available after the current academic year.

Funding and fees by subject area

The Welsh Government allows universities in to charge tuition fees of up to £9000 per annum. In the past, Welsh students were able to apply for a grant that covered around half of this sum. However, as of the 2018/19 academic year, these grants will no longer be available to new students. Either way, most first-time students can apply for a tuition fee loan. Private universities and colleges can set their own tuition fee level and there is no restriction on the amount they can charge. A course at a private university or college needs to have been specifically designated by the Welsh Government for students to be eligible for student finance, however. Tuition fees for Welsh students studying at public higher education institutions in other parts of the UK are up to £9,250.

Monitoring

How do governments define and monitor the efficiency of spending by institutions?

In order to deliver the highest quality provision for learners and safeguard the significant public investment they receive, PCET providers must have robust and effective financial management and governance arrangements in place (Welsh Government (June 2017)).

With current arrangements, HEFCW is required, under the Higher Education (Wales) Act 2015, to publish a financial management code and ensure that regulated higher education providers comply with any requirements placed on them under this Code.

HEFCW also provides assurance that institutions adhere to principles of good governance. The Welsh Government is responsible for monitoring the financial health and governance arrangements of FEIs in accordance with its Financial Memorandum with institutions and for monitoring work-based learning providers under its existing contractual arrangements. (Welsh Government (June 2017).)

Outcomes

Performance

Student satisfaction

Since 2005, the National Student Survey (NSS) has gathered data on higher education students' opinions on the quality of their undergraduate courses across the four countries of the UK. The purpose of the survey is to contribute to public accountability, help inform the choices of prospective students and provide data that assists institutions in enhancing the student experience.

Institutional performance

While oversight of post compulsory and education sector is undertaken by a mix of bodies, the organisations with key responsibilities are the Welsh Government, the Higher Education Funding Council for Wales (HEFCW), Estyn, the Quality Assurance Agency (QAA) and Qualifications Wales, though local authorities also have a role with regard to sixth form education and ACL. An assortment of oversight activities is therefore undertaken by a variety of bodies. As a consequence, there are different arrangements for, different degrees of engagement with, and different levels of effectiveness in the delivery of oversight functions. As well as inconsistency in the way different elements of the post compulsory and education sector are overseen and monitored, the powers available to government and other bodies in relation to that oversight also vary (Welsh Government, June 2017).

Hazelkorn (2016) notes that the governance, regulation, quality assurance and performance review in the post-compulsory and education sector "is overseen and monitored by a myriad of organisations, some of which are Welsh-based, while others operate within the broader English or UK post-compulsory system. The core architecture comprises the Welsh Government, HEFCW and ESTYN; local authorities also have a role with respect to secondary and 6th form education. Hazelkorn (2016) summarises the responsibilities of the different agencies as follows:

- Department for Education and Skills (DfES), inter alia, has overall responsibility for policy, strategy and funding for post-compulsory education, including sponsorship of HEFCW, and for statutory regulation and approval of all qualifications, except for HE.

- Sixth form education falls under the remit of the Welsh Government; it is provided in a variety of institutional settings including being integrated within secondary schools or separately as 6th form colleges or within FE colleges.
- Further education has been directly governed and funded by the Welsh Government, via the Department for Education and Skills (DfES), since 2006. Prior to that, responsibility for FEIs had rested with local authorities, followed by the Further Education Funding Council for Wales (FEFCW) as of 1992, and National Council for Education and Training for Wales (ELWa), 2001-2006.
- The Higher Education Funding Council for Wales (HEFCW) is a Welsh Government Sponsored Body, established by the Further and Higher Education Act 1992, with responsibility for HE, research and related activities, and quality at eight universities, and the teaching activities of the Open University in Wales. It also funds HE, and HE courses at FEIs.
- Estyn (HM Inspectorate of schools and colleges in Wales) is responsible for inspecting quality and standards in education and training providers in Wales, which includes further education, work-based learning, and adult and community education.
- Sêr Cymru Is the Welsh Government's initiative to expand the research capacity of research-intensive universities in Wales. It is joint funded by Welsh Government and HEFCW with contributions from the individual recipient universities and aims to deliver according to the Welsh Government's Science for Wales strategy which was written by the Chief Scientific Advisor for Wales and published in 2012. Science for Wales defines three Grand Challenge areas of importance to Wales and expansion of research in these areas is funded at a tactical level through the Sêr Cymru programme.

In addition, the QAA, HEA, HESA, UCAS, HEFCE and the various UK Research Councils all have overlapping and hence significant responsibilities within the Welsh HE and research landscape. The Research Excellence Framework is a UK-wide process currently. As part of the UK system and to facilitate greater coherence and information sharing/learning, the different ministerial offices meet together under different arrangements, and members of the intermediary bodies (HEFCW, SFC and HEFCE as well as DELNI) sit on each other's boards (Hazelkorn, 2016).

Perceptions of value for money

Robust evidence not available on this issue.

Disadvantage

The Welsh Government reports that arrangements have been in place for over a decade to ensure that higher education institutions spend some of their income from student fees on measures to encourage and support learners into higher education, particularly learners from groups under-represented in higher education (Welsh Government, June 2017).

The Higher Education (Wales) Act 2015 requires that all higher education providers, who wish for their courses to be automatically designated for statutory student support, must commit to activities and investments which support the promotion of equality of opportunity in connection with access to higher education and the promotion of higher education. Higher education providers are required to set out these activities and investments in fee and access plans which are submitted to HEFCW for approval. In this context, promotion of equality of opportunity, in connection with access to higher education, relates to removing potential barriers to higher education experienced by under-represented groups. Some learners may also need additional support to remain and succeed in higher education (Welsh Government, June 2017).

Higher and further education institutions, schools and other stakeholders work collaboratively as members of the Reaching Wider Partnerships in Wales initiative. Reaching Wider Partnerships were established by HEFCW in 2002 as a Wales-wide long-term programme to break down perceived barriers and widen access to higher education and higher-level skills. The Reaching Wider programme aims to increase higher education participation from targeted groups and communities in Wales by raising educational aspirations and skills and creating innovative study opportunities and learning pathways to higher education (Welsh Government, June 2017).

The Diamond Review (2016) recommended that funding should be provided to HEFCW to drive change in areas associated with Welsh Government priorities, including widening access. The Review stated that “there is a strong case for funding, probably on a joint basis with HE providers or consortia of HE providers, to promote and incentivise aspiration-raising and the social aspects of widening access” (Welsh Government, June 2017).

In the case of further education, work-based learning and adult and community learning, in addition to the wide-ranging offer of provision at all levels, Educational Deprivation funding is provided to support further education colleges (as well as local authority sixth forms) to recruit, engage and progress learners living in the most educationally deprived areas in Wales. This funding is based on the Education domain of the Welsh index of Multiple Deprivation, supporting learners across all levels of provision and providing nearly £17m for educationally deprived learners (Welsh Government, June 2017).

As part of their conditions of funding, further education institutions and work-based learning providers are required to have equality policies which ensure that learners with protected characteristics are not disadvantaged in any way. To assist the WBL provider network in planning their strategies and implementing their action plans, Welsh Government are funding an Equality and Diversity Champion. The aim is to increase participation of protected groups on apprenticeships and to instigate a culture change on the programme that embraces diversity. Targeted action, in conjunction with wider specialist organisations such as Remploy, is also taking place to reduce barriers faced by those with protected characteristics when accessing the Apprenticeship programme. Welsh Government (June 2017).

Estyn inspections include a focus on the progression and outcomes for specific groups of learners, including those from deprived backgrounds and protected groups; and benchmarking data is available to help learning providers to measure and compare success rates for different groups of learners. There is, however, a need for more analysis and research to understand the outcomes for learners from different backgrounds and to ensure that post-compulsory education and training providers have all the information they need to advise and support these learners to reach their full potential (Welsh Government, June 2017).

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