Department for Education

International Comparisons of post-compulsory education systems

Final report

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- This project contributes to Department for Education's evidence base on post-18 education and funding.

Aims

- The primary aims of this project were:
    - To compare post-compulsory education in ten countries, outlining the educational choices available to individuals after they complete compulsory education and the funding/support systems available to them.
    - To review the available evidence to answer, in so far as possible, the agreed research questions for each country (see Section 1).

Methodology

- Evidence was gathered through online searches, relevant bibliographic databases and reference searches. Once potentially relevant studies had been identified, they were assessed for eligibility and then examined more closely to assess their quality to ensure that the best available evidence was used in the review. Any potential disagreement between the two reviewers were recorded and resolved by further discussion.
- The findings from the individual studies were summarised, synthesised and critically evaluated under the key research questions agreed with the DfE. This involved developing reports for each of the countries included in the review and then developing a comparative report that compares England with the other countries.

Key findings

<u>Educational system</u>

Flexibility

- The main means of qualifying for higher education in all the countries is through achieving academic qualifications at the secondary level. To varying degrees, however, all of the countries have sought to provide alternative pathways through which learners can qualify for admission to higher education. This involves bridging courses, special diplomas, credit transfer and recognition of prior learning.
- Most of the countries are encouraging the development of flexible programmes and courses involving part-time study and online/distance learning, although it appears that these developments are generally on the periphery at all stages of post-compulsory education and training.

- A number of countries (Canada, France, Australia) use apprenticeships as an approach to achieving qualifications which can also be achieved through college-based routes; in other countries (England, Scotland) apprenticeships are distinct from vocational qualifications.

Provision for low-attainers

- Most of the countries, including England, have national programmes that are designed to help low-attainers progress to post-compulsory courses or, in the case of Norway, provide an adapted version of the mainstream vocational qualification, which enables learners to achieve a lower level award.

Take up

- Over the last ten years participation rates in higher education have risen across all the countries and participation in vocational programmes at this level is growing. The emphasis placed on the vocational track (at all levels) is particularly striking in the cases of Germany, the Netherlands and Norway.
- Short cycle courses are responsible for higher participation rates in post-secondary education in many countries but credit and transfer for those wishing to continue to bachelor level are often unclear or difficult.
- Take up of higher level and graduate apprenticeships are increasing in many countries (France, England, Scotland) but overall, many countries are struggling to meet nationally set targets and are seeing take up of apprenticeships falling, especially at lower levels. Some have attributed this to improvements in the availability of jobs following the economic down turn.
- In most countries, those from a low socio-economic background are more likely to take up apprenticeships and less likely to go to university, particularly those considered to be the most prestigious.

Adult learning

- While there is limited information on participation rates in adult education across the countries, the high level of participation in adult education in Norway stands out.

<u>Funding</u>

Levels of expenditure per student

- In 2014, the UK together with Canada, France, the Netherlands, Norway, and the United States all spent more per student than the Organisation for Economic Co-operation and Development (OECD) average on both short-cycle tertiary

programmes and degree programmes at Bachelor level and above.[1] Australia and Germany spent more per student than the OECD average on the degree programmes at Bachelor level and above but below the OCED average in relation to short-cycle tertiary programmes (although the gap was extremely narrow in the case of Germany). New Zealand's expenditure on both groups of programmes was marginally below the OECD averages.

- In the UK, Australia, Canada, France, the Netherlands and Norway overall expenditure per student was higher than the OECD average regardless of whether research and development activities were included or excluded. Germany and New Zealand's expenditure per student was higher than the OECD average when research and development activities were included but not when they were excluded.
- The three countries with the highest annual expenditure per student by educational institutions for all services were the United States, Canada and the UK.

Sources of funding

- The United States (2.7%) spent the most on tertiary education as a proportion of GDP by a considerable margin, followed by the UK, Australia and New Zealand (1.8%), the Netherlands(1.7%) and Norway (1.7%), France (1.5%) and Germany (1.2%). Germany was the only country whose spending on tertiary education as a proportion of GDP was below the OECD average. Figures were not available for the constitutent countries of the UK.
- Public expenditure on tertiary educational institutions as a percentage of GDP was above the OECD average in Norway (1.6%), Canada (1.3%), France (1.2%) and the Netherlands (1.2%). It was in line with the average in Germany (1.1%) and below the average in the USA (0.9%), New Zealand (0.9%), Australia (0.7%) and the UK (0.6%)
- Private expenditure on tertiary educational institutions as a percentage of GDP was above the OECD average in the USA (1.7%), the UK (1.3%) Canada (1.3%), Australia (1.1%) and New Zealand (0.9%). It was in line with the average in the Netherlands (0.5%) and below the average in France (0.3%), Germany (0.2%) and Norway (0.1%).
- In six countries funding is either entirely (the UK, the Netherlands and New Zealand), overwhelmingly (Norway) or largely (Australia and France) centralised.

[1] Spending on tertiary education is defined as the total expenditure on the highest level of education, including private expenditure on schools, universities, and other private institutions delivering or supporting educational services. The measure is a percentage of total education spending. At the tertiary level educational institutions in OECD countries are mainly publicly funded, although there are substantial and growing levels of private funding. OECD (2018), Spending on tertiary education (indicator). doi: 10.1787/a3523185-en (Accessed on 15 June 2018)

In contrast in Germany and, to a lesser extent, the United States, 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.

Tuition fees, loans and grants and student debt

- With the exception of Germany, Norway and France (leaving aside *grandes écoles*), public universities in the countries included in the review charge tuition fees for higher education and, in some cases, post-compulsory vocational programmes.
- The tuition fees charged are noticeably higher in England, Wales, Australia, Canada, New Zealand and the United States than in the Netherlands and Scotland.
- Tuition fee loans are available across all of the countries in which tuition fees are charged by public institutions, however the terms and conditions vary in important respects.
- Maintenance funding in the form of grants and loans from government is largely means tested and/or targeted at specific groups.
- Higher education institutions in the United States and Canada often award more generous scholarships, grants and bursaries than their UK counterparts.
- Levels of student debt vary across the countries, with England having a higher level than most.

<u>Outcomes</u>

Student satisfaction

- Since 2005, the National Student Survey (NSS) has gathered 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. With the exception of New Zealand, the other countries included in this review also have large-scale initiatives designed to measure the satisfaction and engagement of students in higher education.

Institutional performance

- The available Anglophone literature on the mechanisms through which governments assess institutional performance does not extend much beyond descriptions of the organisations responsible for quality assurance in the tertiary sector.

Perceptions of value for money

- Searches for information on perceptions for value for money yielded limited information on perceptions of value for money

Disadvantage

- Despite a strong focus by governments on widening participation in higher education, the proportion of low socioeconomic student participation in higher education remains low across the countries.

Conclusions

- It can be difficult drawing comparisons across the countries because their post-compulsory education and funding systems differ markedly in terms of their scope, size and structure.
- Evidence from Germany indicates that establishing pathways between vocational and academic tracks, and to the higher levels of vocational education, does not guarantee that substantial numbers of students will take advantage of the pathways and that therefore supplementary initiatives may be needed to promote their use.
- Demand led higher education in some countries (in particular New Zealand and Australia) has created tensions between expanding access and increasing costs, as well as issues of quality.
- While student debt upon graduation is considerably higher in England than in some other countries, this does not take into account the income-contingent repayments and eventual debt write-off built into the English system. In addition, the levels of interest rates, terms and conditions and reforms in other countries may lead to the gap narrowing.

Section 1: Introduction

Policy context

ThThis literature review will feed into the Department for Education's evidence base on post-18 education and funding. It contributes to this evidence base by comparing post-compulsory education systems in different countries and reviewing evidence as to the access, retention and progression outcomes of these systems.

Aims and objectives of the research

Following a competitive tendering process, Professor David Greatbatch (working with Sue Tate) was appointed to conduct this evidence review. The primary aims of the review were:

- To undertake a comparison of post-compulsory education in ten countries, outlining the educational choices available to individuals after they complete compulsory education and the funding/support systems available to them.
- To review the available evidence to answer, in so far as possible, the following questions for each country.

Education systems

1. What sort of institutions provide education for academic, vocational/technical and apprenticeship routes and what are their entry criteria?

2. What degree of flexibility is available (e.g. distance learning, short courses, credit transfer)?

3. What provision is available to support those who have not reached sufficient attainment levels in their compulsory education?

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

5. What proportion of the population takes up academic, vocational/technical or apprenticeship routes vs employment? How has this changed over the past 10 years?

6. What proportion of the population take up learning later on in life and what options are available?

Funding

1. How much do countries spend/fund per head on their post-compulsory education and how does this differ for the different academic, and vocational/technical routes? [If available, is there any evidence on what this covers e.g. direct teaching costs, capital, support services etc and proportional split?]

2. 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?

3. How is this funding paid for (taxation, fees, employer levies)? Does this vary between different educational routes? What levels of debt do students have upon graduation? [Note the department already has a detailed review on how loan systems vary between countries thus covering how fees are financed.]

4. Do countries differentiate i) funding levels and ii) fee levels between subject areas and if so on what basis? To what extent is there cross-subsidy between subjects or between teaching and research?

5. How do governments define and monitor the efficiency of spending by institutions?

6. Is there a relationship between funding systems and national economies, in terms of skill levels, key sectors/industries and balance of imports/exports?

Outcomes

1. How do different countries assess student satisfaction, institutional performance and perceptions of value for money?

2. What impact does disadvantage play on participation in different educational routes? To what extent have government policies reduced this over time?

Methodology

Stage 1: Development of a research protocol

The evidence review was guided by a protocol that detailed the procedures to be followed in the review including: the search terms/keywords; the locations/sources to be searched; the screens each study will pass through for inclusion in the review; and the processes for recording and storing references and summarising literature. This ensured consistency and transparency in the execution of the review.

Stage 2: Literature searches

Evidence was gathered through online searches, relevant bibliographic databases and reference searches. The searches were limited to studies published in the English

language. Admissible literature included research studies (qualitative and quantitative), relevant reports and articles from authoritative sources.

Stage 3: Mapping relevant literature – interim report

Once studies had been identified, they were assessed for eligibility against the following inclusion criteria (using a three-stage approach to reviewing the title, abstract and full text):

- Includes reference to post-compulsory education in the selected countries
- Considers issues identified by the research questions

Once all potentially eligible articles had been collected, the articles were examined more closely to assess their quality. This was done to ensure that the best available evidence was used in the review.

Any potential disagreement between the reviewers were recorded and resolved by further discussion.

Stage 4: Synthesis and analysis

The findings from the individual studies were summarised, synthesised and critically evaluated under the key headings and research questions agreed with the DfE. This involved developing reports for each of the countries included in the review, using templates agreed with the DfE, and then developing a comparative report that compared England with the other countries. In doing so, ESQ/ISCED levels were used to ensure comparability across the different academic and vocational/technical routes in the different countries.

Section 2: Overview of post-compulsory education

Summary by country

- **Australia.** All young people are required to participate full time in education, training or employment until the age of 17. Vocational education and training in Australia is provided at the general secondary and tertiary education levels, in Technical and Further Education institutes and private Registered Training Organisations. Australian apprenticeships are also available and can be full-time, part-time or school-based. Admission to universities is largely based on a ranking system known as the ATAR (Australian Tertiary Admissions Rank).

- **Canada.** Compulsory education ends at 16 in most provinces, although in three it continues until 18. Vocational training leading to a variety of awards is provided by public colleges and by private schools. University entrance criteria vary from institution to institution.

- **England.** Young people are required to remain in education or training until the age of 18 but full-time attendance is not compulsory after the age of 16. A wide variety of vocational qualifications are available at all levels some of which are work-based and others primarily intended for college-based learning to support entry into work or further learning. University degrees are typically of three years' duration but in vocational subjects may include an additional work-placement year.

- **France.** Education is compulsory until the age of 16. Most tertiary vocational education is delivered through full-time study in the lycées professionels which combine classroom learning with practical workshop sessions and work experience. This track competes with the apprenticeship track in which learners can access precisely the same qualifications.

- **Germany.** Education is compulsory until the age of 18 in five of the German Lander and until 19 in the remaining twelve. Vocational track provision is offered by senior technical schools (*Fachschulen*), professional academies (*Berufsakademien*), and universities of applied science (*Fachhochschulen*). Entrance to university is through possession of the general university entrance certificate generally referred to as the *Abitur*.

- **The Netherlands.** Compulsory education ends at the age of 18. Students with the necessary diploma may apply to undertake a Bachelor's level degree at one of the Netherland's research universities. The vocational track includes 39 public universities of applied science *(hogescholen*), which deliver a wide range of professional Bachelor and associate degree programmes. There are also a few hundred institutions providing a wide range of shorter courses.

- **New Zealand.** Education is compulsory until the age of 16. Universities offer a broad range of academic programmes at Bachelor level and above, while polytechnics provide professional and vocational education and training from introductory studies through to full degree programmes. In addition there are: Private Training Establishments and adult and community education providers offering a diverse array of practical programmes.

- **Norway.** Education is compulsory until the age of 16. Programmes lasting from six months to two years leading to European Qualifications Framework (EQF) level 5 vocational qualifications are available either through vocational schools or apprenticeships. At degree level, no distinction is made between academic and vocational streams.

- **Scotland.** Education is compulsory until the age of 16. A similar range of vocational qualifications to that in England and Wales are offered (although Scottish Vocational Qualifications rather than NVQs are available for work-based routes). Degrees at Scottish universities typically last four years rather than three as elsewhere in the UK.

- **United States.** The end of compulsory education varies between the ages of 16 and 18 depending on the individual state. Students may enter college or university for undergraduate academic study, which can be completed with a 2-year (associate) or 4-year (Bachelor) degree. Postsecondary vocational provision enables students to pursue: an associate degree; industry recognised certificate; non-credit courses to improve knowledge and skills; non-credit training customised for a particular employer; or continuing education credits to maintain licensure or certification.

- **Wales.** Education is compulsory until the age of 16. Post-secondary options largely mirror those in England.

In England, after reaching the official school leaving age of 16, students are required to remain in education/training until their 18th birthday. However, full-time attendance is not mandatory. Students can fulfil this obligation by participating in either full-time education or training, work-based learning or part-time education or training.

Compulsory education ends at different ages across the comparator countries. In the **Netherlands** and five of the **German lander (regions)** compulsory education ends at the age of 18 while in the remaining (twelve) **German lander** education is compulsory until the age of 19. In both these countries, between ages 15-16 and 18-19, students have the option of undertaking vocational programmes that combine part-time school based and part-time workplace courses.

At the other end of the spectrum, in **Canada** (in every province except Manitoba, Ontario, and New Brunswick, where the compulsory age is 18), **France**, **New Zealand**, **Norway,**

Scotland and **Wales,** compulsory education ends for all students at the age of 16; however a high proportion of 16-18/19 year olds in these countries continue to participate in education/training. A distinctive feature of the **Norwegian** education system is that following completion of lower secondary education at age 16, every young person aged 16-19 who has completed the lower secondary level has a right to upper secondary education or training leading to a university and college admissions certification or to a vocational qualification.

In **Australia**, all states and territories require young people to participate in schooling until they complete Year 10 (at the age of 15 or 16 usually, depending on the state or territory) and to participate full time in education, training or employment, or a combination of these activities, until the age of 17. In the **United States**, the end of compulsory education varies between the ages of 16 and 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.

The post-compulsory education and training providers in **England**, **Scotland** and **Wales** deliver broadly the same set of academic and vocational qualifications. In addition to work-based qualifications such as National Vocational Qualifications (NVQs) at Regulated Qualifications Framework (RQF) levels 4 and 5, other occupationally-focussed qualifications at RQF levels 1 to 7 are available; including Higher National Certificates (HNCs) and Higher National Diplomas (HNDs), which are at RQF levels 4 and level 5 respectively. HNCs take around one year to complete full-time and two years part-time. HNDs take two years full-time and can also be taken part-time, over a longer period. Both often allow credit against related degrees. Apprenticeships are available across a range of sectors from level 2 through to Bachelor and Masters degree level (RQF levels 6 and 7 respectively).

The academic equivalents of these qualifications - the Certificate of Higher Education (RQF level 4) and the Diploma of Higher Education (RQF level 5) - are also available in the three countries. There is also the option of studying for foundation degrees (RQF level 5), which provide a mix of work-related specialist skills and academic learning and can be used to progress on to a related Bachelor degree (RQF level 6). At Bachelor level, traditional academic degrees are supplemented by university sandwich courses, where students spend part of their course on placement with an employer as part of their degree course; work-based degrees, which differ from sandwich courses in that they are undertaken by people in employment and are generally employer-based rather than college-based; and employer sponsored degrees (sometimes referred to as closed degrees or corporate degrees); and higher and degree apprenticeships. Undergraduate degrees are generally a year longer in Scotland (typically 4 years) than in England and Wales, though it is often possible for students to take more advanced specialised exams and join the courses at the second year.

The post-compulsory education and training systems in the countries that are not part of the United Kingdom are diverse. In **Germany**, students with a general university entrance

certificate the *Allgemeine Hochschulreife* (generally referred to as *Abitur*) can opt to enrol on an academic programme at a university or university-equivalent institution. In the post-secondary vocational track, provision 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 and lead up to a state-administered examination. These courses may also prepare students for advanced vocational qualifications and/or the University of Applied Science (*Fachhochschule*) Entrance Qualification (*Fachhochschulreife)*. 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. Universities of applied science (*Fachhochschulen*) are more industry-oriented and focused on the practical application of knowledge than universities offering academic programmes. Courses at universities of applied science can lead to either a Diploma (*Diplomgrad*) or Bachelor's degree. The standard period of study for Bachelor's study courses is generally six or seven semesters, including one or two semesters of practical training. Several universities of applied science also offer dual study degree courses (similar to those offered by professional academies) which combine work-based learning with a Bachelor degree course, especially in the fields of engineering and business administration.

In the **Netherlands,** students with the necessary diploma may apply to undertake a Bachelor's level degree at one of the Netherland's research universities or at a university college, which is generally part of a university. The parallel vocational track includes 39 public universities of applied science *(hogescholen*), which deliver 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 and 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. Alongside the public universities of applied science there are a range of typically much smaller private institutions providing professional Bachelor degree programmes and associate degrees, and a few hundred institutions providing a wide range of shorter courses.

In **Norway**, tertiary vocational programmes equivalent to EQF level 5 are available for those who gained a vocational qualification equivalent to EQF level 4 at the upper secondary level either through an apprenticeship or a course at a vocational school. These programmes run from between six months to a maximum of two years. Higher education at Bachelor level in Norway is offered by universities, specialised universities, university colleges and a range of private university colleges. 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 lasts 3 years or more.

In the **United States**, following graduation from high school, students may enter college or university for undergraduate academic 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 2 years and receive a Bachelor's degree. US Bachelor's degrees obtained at both colleges and universities usually last 4 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.

Postsecondary vocational provision (referred to as career and technical education (CTE) in the United States) at sub-Bachelor level enables students to pursue: an associate degree; industry recognised certificate; non-credit courses to improve knowledge and skills; non-credit training customised for a particular employer; or continuing education credits to maintain licensure or certification.

Practitioners at the local, state and federal levels often organise CTE into 16 career clusters developed by the U.S. Department of Education. Generally, CTE occupations require two years or less of post-secondary education or training. In addition to these programmes, Bachelor level competency-based degrees 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 **Australia**, the primary selection method for school leavers is ranking based on academic achievement. In most states, this ranking is known as the ATAR. Universities and other tertiary institutions use this rank to help with selection for programmes. With the introduction in Australia of demand-driven funding from 2012, however, public universities can now determine the number of undergraduate student places they will offer and 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.

Vocational education and training in Australia is provided at the general secondary and tertiary education levels, in Technical and Further Education institutes and private Registered Training Organisations. Australian apprenticeships are also available and 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 wishing to change careers. Recent reforms have aimed to shape a more demand-driven vocational education and training (VET) system, introducing more flexibility in the length of apprenticeships and ensuring support through a common procedure for assessing them.

In **Canada**, there is no general entry examination for access to academic degree courses. Each university has its own criteria and specific entry requirements in Canada vary from one institution to another. Vocational and technical schools provide occupation-specific training - which can lead to an associate degree, diploma, certificate or other award - and there is a well-developed apprenticeship system. Alongside these pathways post-secondary institutions which are members of the Association of Canadian Community Colleges (which are officially known by a range of titles, including Community College, Technical Institute, University College, and *Cégep*) offer programmes that respond to the training needs of business, industry and the public service sectors. The two- to three-year (or shorter) college programmes typically offer specific, vocationally-oriented curricula, as well as general academic programmes. At least 18 of these institutions are now granting degrees and applied degrees.

In **New Zealand** universities offer a broad range of academic programmes at Bachelor level and above, while polytechnics, some recast as institutes of technology, provide professional and vocational education and training from introductory studies through to full degree programmes. In addition there are: Private Training Establishments, offering a diverse array of practical programmes; adult and community education providers; and three Maori controlled “houses of learning”. These providers offer Certificates, Diplomas, and Bachelor’s Degrees, with some providing programmes in specialised areas up to Doctorate Degree level.

In **France** most vocational education at tertiary level is provided for two years following graduation from upper secondary school and is delivered through full-time studies in the *lycées professionels*. Studies here combine classroom learning with practical workshop sessions and often include work experience (*stage en enterprise*). This track competes with the apprenticeship track in which learners can access precisely the same qualifications but do so through alternating periods working with in a business with studies at a *Centre de Formation pour Apprentis* (CFA).

In addition to the state qualifications, since the mid-1980s employer organisations and unions have been developing and promoting competence-based *Certificats de Qualification Professionelle* (CQP), which have a much narrower focus than other vocational qualifications and, in some instances, can be regarded as a license to practice. CQPs are often completed under *Contrats de Professionalisation* (training contracts) which can be regarded as a form of apprenticeship programme.

The French system of higher education is distinguished by a diversity of institutions, courses, organisational arrangements and admission requirements. *Instituts Universitaires Technologiques* (IUTs) are vocationally based higher education institutions attached to a university. Students typically study for the DUT (higher level vocational diploma) over two years. IUTs generally offer the *Diplôme Universitaire de Technologie* (DUT- Bac+2 years) or *the Diplôme d’Edudes Universitaires Scientifiques et Techniques* (DEUST). Students can continue on to degree studies after these qualifications or go into

employment. Some offer more intensive studies and offer qualifications up to Master's degree level; they are then called *Instituts Universitaires Professionnalisés* (IUPs).

Another feature of higher education in France is the *grandes écoles*, which are regarded as the training ground for the country's future elite. The usual qualifications awarded in the main schools are either *Diplôme d'ingenieur* or *Diplôme de Grande Ecole*. 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 *Etudes médicales*.

Other than universities, a large number of other establishments offer courses at higher levels. For example, large Business and Management schools opened their courses to apprentices in the last decade or so and now 10 per cent of their masters students are apprentices.

For more detailed overviews of the post-compulsory systems and the entry criteria for institutions, see the country reports in the appendices.

Section 3: Education systems

Summary by country

- **Australia.** Universities are autonomous and vocational education and training (VET) is under the aegis of the individual states and territories. Australia's tertiary education sector has seen immense change since the lifting of caps on student places in 2012, growing significantly and becoming more diverse and accessible with multiple pathways to entry and more students applying directly to institutions. Australia offers a combination of programmes to encourage and prepare young people for work including requirements for participation in education. More than half of the participants in government funded VET programmes are 25 years or older in age and almost half of apprentices are aged 25 plus. Australian Apprenticeships are thus not viewed as predominantly for school/college leavers transitioning to work.

- **Canada.** Each province and territory is responsible for its own education system. There is a particular emphasis on facilitating transition from lower level postsecondary programmes (such as one or two-year programmes) to higher level programmes (such as three to four-year bachelor programmes in universities) through credit transfer. 'Growth in higher education participation rates has been driven in part by the number of students with a career, technical or professional training diploma. Transitional' programmes for low attainers are often targeted at young people towards the end of their compulsory education. A new approach to address skills shortages has resulted in a competitive grants and contributions programme aiming to support the development of partnership based, industry-driven labour market information (LMI), National Occupational Standards (NOS) and certification programmes in sectors of the economy to address current and emerging needs.

- **England.** Access diplomas support older learners without formal academic qualifications to gain access to university. Foundation degrees in vocational subjects frequently allow students to 'top-up' to a full degree through additional credit. In 2016 the participation rate in higher education in England reached its highest level since the introduction of £9,000 tuition fees in 2012, equalling the previous high of 49 per cent since the annual estimates were first produced in 2006.

- **France.** The French system of higher education is distinguished by a diversity of institutions, courses, organisational arrangements and admission requirements. Despite failing to meet an earlier 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 by 2025. Many higher education institutions offer distance learning opportunities for qualifications at all levels as well as non-accredited training. There are also eight

virtual thematic universities in France supported by the French government. 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. France offers a number of financial incentives to encourage low-qualified individuals back into learning. 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 hours for low-qualified people).

- **Germany.** There has been a particular focus during the past 10 years on providing access routes to higher education for people who are vocationally qualified but do not possess a school certificate (Abitur) that entitles them to take up academic studies at university. Despite these developments, however, access to German higher education remains centred on the Abitur and alternative access routes continue to play a marginal role. In recent years the target to increase the proportion of first-year higher education students to 40–42 per cent of the age group has been significantly exceeded. Whereas the steering of higher education is a state responsibility, vocational training is subject to a mixed regime, including a private responsibility for the practical training in enterprises and a state responsibility for the vocational school as the other component. A transition system aims to address competence deficits and prepare young people for further vocational training.

- **The Netherlands.** The current legal framework for public provision discourages part time study. The private sector, although it performs a useful service in meeting the need of adults for part-time provision, cannot call on public funding. Support for low attainers is at local level and there is little information available. Supporting central government on VET policy is the Foundation for Cooperation on VET and the Labour Market (*Samenwerking Beroepsonderwijs Bedrijfsleven* - SBB), which represents all social partners (employers, employees and training providers) in the system and provides a unified, single voice on VET policy to advise the Ministry of Education, Culture and Science. The vast majority of 18-21 year olds enrolled in post-secondary education and training in the Netherlands are enrolled on higher education programmes.

- **New Zealand.** When enrolments in tertiary education in New Zealand 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. There are a number of distance learning options with many institutions offering programmes through this means. A weakness in the system is that it does not support students wishing to change their path or to have their credit or prior learning recognised. The system also does not make provision for those who, for various reasons, have missed out

on tertiary education. Concerns have been raised that adult learners are not well-served by the system which focuses on school-leavers and campus-based education. Tight central control of finances and regulation enable the Government to use funding mechanisms to prioritise identified skills needs in vocational training.

- **Norway.** Norway provides multiple pathways into higher education including from VET programmes and apprenticeships via a bridging course and through recognition of prior learning. All higher education institutions are required to have a consultative council for cooperation with working life and to develop a strategy for such cooperation. Norway also offers flexible provision including part-time study and a range of delivery modes for distance learning. The proportion of 19-24 year-olds in higher education has risen by just under 6 per cent in the10 years to 2017. Norway also has a high level of participation in education from adult learners possibly because adults without upper secondary education and training have a statutory right to receive it. Low attainers are able to enroll on the ’training candidature scheme’. The scheme gives learners a possibility to obtain a specially adapted qualification of a lower degree than a trade or journeyman's certificate. At national level, the National Council for VET (Samarbeidsrådet for yrkesopplæring) gives advice and takes initiatives within the VET sector.

- **Scotland.** Articulation arrangements exist between some courses at college and university to allow learners to enter university with advanced standing after successful completion of Higher National qualifications. The Employability Fund (EF) supports unemployed individuals to access specialist support to build their employability skills – the majority of whom are aged between16 and 24. Skills Development Scotland (SDS) is responsible for working with partners across the skills landscape in skills planning at both regional and sectoral level. An Employer Skills Survey (UKCES, 2017) found a higher proportion of employers in Scotland had offered training to their employees over the last 12 months than for the UK as a whole.

- **United States.** 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. Credit transfer features in the post-compulsory vocational education system, however the degree of flexibility in terms of credit transfer varies considerably between vocational programmes. Most higher education institutions provide flexible study options through distance learning programmes. The annual percentage of high school completers who enrol in 2- or 4-year colleges immediately following high school completion increased from 63 per cent in 2000 to 70 per cent in 2016. In 2016, 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 that are often vocationally oriented), and 1.3 per cent were

enrolled in less-than-2-year non-degree-granting institutions. The number of adult students aged 25 and over enrolled in degree-granting institutions is increasing but at a slower rate than for students aged under age 25. Support for low attainers is available through remedial courses in reading, writing, and mathematics, which are offered by many two-year and four-year colleges/universities.

- **Wales.** Learners in Wales, like in England, can take Access Diplomas or Foundation degrees to support progression to Bachelor degrees. New Regional Skills Partnerships are beginning to facilitate conversations between further education and higher education institutions around skills and employability. Although there has been an increase in full-time higher education participation over the past decade, participation rates have been consistently low in local authority areas with higher rates of socio-economic deprivation. Support for low attainers is available through the Traineeships programme. Targeted at young people aged 16 to 18 years old, this 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.

Flexibility of access and provision

The main means of qualifying for higher education in all the countries is through achieving academic qualifications at the secondary level. To varying degrees, however, all of the countries have sought to provide alternative pathways through which learners can qualify for admission to higher education. This can involve bridging courses, remedial courses, special diplomas, credit transfer and recognition of prior learning. Another common strand is that most of the countries are encouraging the development of flexible programmes and courses involving part-time study and online/distance learning, although it appears that these developments are generally on the periphery at all stages of post-compulsory education.

Developing alternative routes into higher education has been addressed through a number of initiatives in **England** and **Wales.** The Access to Higher Education Diploma, for example, 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 **England** and **Wales**. 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. There are no generally-set entry conditions for Foundation Degrees, which may be taught at universities or further education colleges (and are also offered by some companies, such as McDonald's, as training for employees). 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).

Foundation Degrees are not available in Scotland; however, there is an established progression route from Higher National (HN) Qualifications, which are at an equivalent level. 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.

In **Norway** 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 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 in **Norway** 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).

In **Australia** 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). The Department of Education's Students annual dataset provides enrolled student numbers and full-time equivalent load based on annual returns from all approved higher education providers, with a breakdown by institution, broad field of study, and various student demographics.

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 Australian Qualifications Framework (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.

For many higher education institutions in **France,** flexibility is afforded by distance learning, bridging courses and credit transfer. Many 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 10 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).

Apprenticeships in **France** 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 on to higher qualifications or degrees. The DUT offers credit against a full degree.

In recent years, 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).

In **Germany**, there has been a particular focus during the past 10 years on providing access routes to higher education for people who are vocationally qualified but do not possess a school certificate (Abitur) that entitles them to take up academic studies at university. 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 an entitlement to apply for admission to a university but this is limited to one subject and they are generally required to pass a university entrance examination. Despite these developments, however, access to German higher education remains centred on the Abitur and alternative access routes continue to play a marginal role.

As in Norway, there has also been an emphasis on 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; although, while the proportion of students enrolling in one of these 'hybrid' courses has increased, this has been only to a limited degree. As we have seen, there has also been a growth - at both universities of applied sciences and, to a lesser extent, general universities - in the provision of dual study higher education programmes that

combine academic learning and practical training at the workplace. 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.

In **Canada** there is a particular emphasis on facilitating transition from lower level postsecondary programmes (such as one or two-year programmes) to higher level programmes (such as three to four-year Bachelor programmes in universities) through credit transfer, thereby ensuring that the learning outcomes from the lower level are recognised through access and course exemptions. In Canada, in common with other OECD countries, credit transfer is recognised as a challenge. It is a challenge both among colleges, and between colleges and universities. Evidence suggests that about 20% of college and university students in Canada leave their studies by the fourth year of their programme, but more than half of them return within the following four years, of which between 30% to 50% change their tertiary education institution (OECD, 2012a:94). Some provinces built credit transfer programmes at the provincial level, and these could be built on through a process of peer learning between provinces over what works in credit transfer, as well as drawing on international experience.

Credit transfer features in the post-compulsory vocational education system in the **United States**, however the degree of flexibility in terms of credit transfer varies considerably between vocational programmes. Some 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. Other vocational programmes, however, 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.

Many higher education institutions in the **United States** offer flexibility to students through the provision of distance learning options. In 2016, nearly one-third of undergraduate students (5.2 million) participated in distance education, with 2.2 million students, 13 per cent of total undergraduate enrolment, exclusively taking distance education courses. Distance learning is especially prevalent in the private for-profit sector, especially at 4-year institutions.

There are a number of distance learning options in **New Zealand**, with many institutions offering programmes through this 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 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, the New Zealand Productivity Commission (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 between 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 measures and rewards provider performance means providers have little incentive to help students change their course of study.

The provision of part-time study options has been a particular problem in the **Netherlands**. 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

Most of the countries, including England, have national programmes that are designed to help low-attainers progress to post-compulsory courses or, in the case of Norway, provide an adapted version of the mainstream vocational qualification, which enables learners to achieve a lower level award.

Since 2013, all 16-19 provision in **England** has been delivered in the form of a study programme that is tailored to the needs of individual students. For low attainers this can involve following a study programme focussed on employability skills and a work placement and, in some cases, studying towards Entry Level/Level 1 technical qualifications, or life and social skills.

Looking to the future, the Government reforms to the post-16 technical education system in England includes a 'transitional stage' for those not yet ready to start on a T Level programme at the age of 16. This will provide these individuals with preparatory provision prior to entering further education, apprenticeship or other employment. It is anticipated that the transition stage will offer tailored support similar to the current study programme, but with a stronger focus on basic skills and progression (Williams et al., 2017).

The proposed transition stage in England resembles in some respects the transition system in **Germany**, which is 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 does not lead to vocational certificates or diplomas. It aims to address competence deficits and prepare young people for further vocational training.

Initiatives designed to offer tailored support to individuals who leave compulsory education without the qualifications needed to progress into further education/training or employment have also been introduced in **France**, **Australia**, **Canada**, **Scotland** and **Wales.** In **France** a flagship scheme designed to prevent young people leaving school prematurely with no qualifications (*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).

Other schemes introduced **in France** involve the use of financial incentives. In September 2016, the Higher Council of Education in France introduced a new financial incentive/allowance for returning to education for 16 to 18-year-olds with 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. This measure took particular account of factors of economic insecurity, which undermine school attendance by pupils from disadvantaged backgrounds. In addition, a new individual training account was introduced in 2015 (*Compte Personnel de Formation* – CPF). This 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 a 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. 36 per cent of all CPF training participants were qualified below Bac level (OECD, 2017 getting skills right). 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 (£437)

per year (€800 (£699) for unskilled employees), up to a limit of €5,000 (£4,368) (€8,000 (£6,988) for unskilled). Part-time employees will have the same rights as full-time employees.

In **Australia,** 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 the 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 (£561) 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 (£180.5 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 million) 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.

In **Canada** 'transitional' programmes for low attainers are often targeted at young people towards the end of their compulsory education. For example, the Options and Opportunities programme in Nova Scotia 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. Other examples are found in Ontario. These include: the Specialist High Skills Major programme which is designed to help senior secondary students 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 which intends to support students who may face challenges in graduating to earn credits toward both secondary graduation and a post-secondary diploma or apprenticeship certification; and the Ontario Youth Apprenticeship Program, which is a school-to-work transition programme offered through Ontario secondary schools that enables students in Grades 11 and 12 earn co-operative education credits through work placements in skilled trades (OECD, 2015b).

In **Scotland** the Employability Fund (EF) has supported 11,717 unemployed individuals to access specialist support to build their employability skills – the majority of whom (72%) were aged 16-24 in 2016/17. EF provides support through programmes jointly commissioned with partners locally. 70% of EF participants in 2016/17 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% moved into employment.

In **Wales** 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 in 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.

In **Norway** a different approach is taken. Low attainers are able to enroll on the 'training candidature scheme' which targets learners that for various reasons struggle to meet the requirements for the main upper secondary vocational qualification, the trade or journeyman's certificate at EQF 4. The scheme gives learners a possibility to obtain 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 examination 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 at EQF level 3 when completed.

In the **United States** 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.

In **New Zealand** and the **Netherlands** 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 above. In **New Zealand**, 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

In **Scotland,** 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.

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.

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 per cent 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 this is largely decoupled from the general and higher education system (Gessler and Herrera, 2015; Adam, 2017).

In **Australia,** while universities are autonomous and vocational education and training (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, the 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 VET, 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.

The **Dutch** and **Norwegian** skills systems are ones where policy is developed at the national level with the support and involvement of national and regional partners. In the **Netherlands** 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 Ministry of Education, Culture and

Science. 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.

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.

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 post compulsory education (including higher 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 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) and 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).

The **Norwegian** government also 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.

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 **New Zealand,** tight central control of finances and regulation enable the Government to use funding mechanisms to prioritise identified skills needs. Anticipating supply and demand in the labour market is a core service of the Evidence, Monitoring and Governance Branch of the Ministry of Business, Innovation and Employment. The Ministry uses a short-term employment model that draws on the latest macroeconomic forecasts to derive forecasts of industry level economic activity and productivity to derive forecasts of industry employment. The industry level employment forecasts are then used to forecast employment by occupations and by skill levels. Medium and long-term employment forecasts are based on GDP growth and other macroeconomic forecasts and productivity assumptions at the industry level, and are indicative of the likely growth path of employment.

The 2015 Budget provided a further NZD$112.3 million (£58.7 billion) 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 New Zealand 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 for business and innovation through the development of relevant skills and research, and improved outcomes for all. 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."

The **Canadian** and **United States** education systems are large, diverse, and decentralised. **Canada** is a federation of ten provinces and three territories, each responsible for its own education system. Provincial governments provide on average over 80% 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 federal government also has responsibility for the education of Canada's First Nations population living on reserves.

A new approach to address skills shortages was announced in 2011 in **Canada**. The former Sector Council Program's goals were to support the development of a high quality workforce by increasing industry investment in skills; a learning system more responsive to industry's needs; the reduction of barriers to labour mobility; and, enhanced ability of industry to recruit and retain workers. Under the title of Sectoral Initiatives Program (SIP), the refocused approach resulted in a new competitive grants and contributions programme aiming to support the development of partnership based, industry-driven labour market information (LMI), National Occupational Standards (NOS) and certification programmes in sectors of the economy to address current and emerging needs.

The federal government in the **United States** has a very limited role in administering education at any level. State governments, local and institutional authorities, and non-governmental organizations 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. 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.

Practitioners at the local, state, and federal levels often organise vocational education into 16 career clusters developed by the United States Department of Education. These 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 per cent of states and territories had either adopted career clusters or had adapted their own framework from the 16 career clusters. However, there are no clear ways for employers, industry, labour to engage in programme and curriculum design and implementation.

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

To date we have been unable to locate comparable figures for the proportions of the population taking up academic or vocational routes or employment when they complete compulsory education. However, it is clear that over the last ten years participation rates in higher education have risen across all the countries and that participation in vocational programmes at this level is growing. The emphasis placed on the vocational track (at all levels) is particularly striking in the cases of Germany, the Netherlands and Norway.

In **England** Government statistics released in October 2017 (Department for Education (2017a, 2017b) indicate that there were 2,233,200 learners aged 19 and over participating in government-funded further education in the 2016/17 academic year, a decrease of 3.7 per cent from 2,318,700 reported at the same time the previous year for 2015/16. However, 33 per cent (73,800) of these were on course at level 4 or above, an increase of 26.0 per cent from (58,600 in 2015/16).

An OECD review published in 2015 estimates that the post-secondary VET sector in England (regarded as being at levels 4 and 5) is small by international standards, at well under 10 per cent of the cohort, compared to other OECD countries where sometimes up to one-third of the cohort have post-secondary VET qualifications as their highest qualification. The Association of Colleges attributes this to an over-emphasis in England on residential full-time three-year degree courses, arguing for a more diverse HE system with more emphasis on higher technical and professional education.

Government statistics indicate that in 2016 the participation rate in higher education in England reached its highest level since the introduction of £9,000 tuition fees in 2012 equalling the previous high of 49 per cent since the annual estimates were first produced in 2006. The figures show that the participation rate rose by 1.4 percentage points since 2015, due to a 10,000 rise in the number of those aged 17-30 enrolling at a university for

the first time in 2015-16, including full-time and part-time learners. The participation rate among people entering higher education immediately after leaving school also reached a record level in 2016, with more than 27 per cent of all 18-year-olds entering higher education.

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 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.

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. The number of students enrolling for higher education academic and vocational programmes has substantially increased while the number of entrants in the dual system of vocational training has slightly declined. In 2013, for the first time, access to higher education exceeded access to the dual system, although there is evidence to suggest that the number of new entrants in dual vocational training is again likely to exceed the number of new higher education students in the next few years. With regards to entrants to higher education, the proportion of students registered on vocational programmes has been increasing. 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 (1,756,452/65 per cent) attended research-oriented universities.

In the **Netherlands** the vast majority of 18-21-year olds enrolled in post-secondary education and training 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.

In **Norway** 35 per cent (293,123) of 19-24-year-olds were in higher education in 2017, compared with 35 per cent in 2016 and 30 per cent in 2007– so the proportion of this age group in higher education had risen by just under 6 per cent in 10 years. The vast majority of tertiary level vocational students are enrolled in higher education. In 2015, 5 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.

In **Wales**, 51.1 per cent of 19-21 year olds were in education and work-based learning in 2016, which is 2.9 per cent higher than ten years previously in 2006 (when the proportion was 48.2 per cent). This reflected higher proportions of the age group being in full-time programmes, as lower proportions were enrolled on part-time education and work-based learning programmes than in 2006. The proportion 19-21-year olds in higher education in 2016 was 78.6 per cent, 9.2 per cent higher than in 2006 (when the proportion was 69.4 per cent), which reflects a steady increase in the numbers of students entering higher education. 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.

In **New Zealand** when enrolments in tertiary education in New Zealand 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 per cent fewer domestic enrolments in provider-based tertiary education in 2015 than in 2005. However, 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 6,800, nearly 19 per cent, since 2012. 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).

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 target has now been re-set to 60 per cent by 2025 following publication of a higher education strategy devised by an expert panel to ensure France's global competitiveness (Ministère de l'Education, 2015). France differs from many countries, however, in that short-stream higher education programmes (ISCED 5) 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. French graduates are far more likely to have a short cycle diploma (ISCED 5) than their EU peers. 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). However, France lags behind numerous European peers. OECD data from 2016 shows 4.9 percent 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.

In **Canada** just under half (48 per cent) of enrolments in Canadian postsecondary institutions in 2014/2015 were in higher education programmes at the Bachelor level at

universities and degree granting colleges, and approximately a fifth (20 per cent) of enrolments in programmes at this level or above were in career, technical or professional training programmes. 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. 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.

In **Australia** student numbers in all course levels in tertiary education have grown strongly over the past decade. The majority of students at universities and non-university FEE-HELP providers are enrolled in Bachelor degrees. 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.

In the **United States** the annual percentage of high school completers who enrol in 2- or 4-year colleges immediately following high school completion increased from 63 per cent in 2000 to 70 per cent in 2016,[2] although the 2016 rate was not measurably different from that in 2010. 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.

In 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 2 years' duration).

[2] 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.

Adult learning

While there is limited information on participation rates in adult education across the countries, the high level of participation in adult education in Norway stands out, especially when viewed in against the background of decreases in state-funded adult education in England.

In **England** participation in state-funded adult education courses fell from 2,318,700 reported in October 2016 to 2,233,200 in October 2017, a decrease of 3.7 per cent. This followed decreases of 11.1 per cent in 2015-16, compared with 2014-15 and a previous 10.8 per cent fall between 2013-14 and 2014. Between 2011-12 and 2015-16 there was a 26 per cent drop in the number of people participating in the wider suite of adult skills and education.

Among adult learners, the reductions have been across a number of different types of provision, but particularly lower level courses and training. For example, the number of adult learners on level 2 provision fell by 35 per cent between 2011/12 and 2015/16, which contrasts with a fall of 14 per cent for level 3 and an increase of 49 per cent of learners on courses above level 3.

In contrast, 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 €5,000 (£4,368) per year per apprentice, compared to approximately €13,900 (£12,142) 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 25-29 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).

In the **United States** between fall 2005 and fall 2015, the percentage increase in the number of students enrolled in degree-granting institutions was lower for students aged 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, The National Centre for Education Statistics projects the increase for students age 25 and over to be 8 per cent, compared with 17 per cent for students under age 25.

In **Australia** more than half of the participants in government funded VET programmes are 25 years or older in age and 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.

In **Canada** 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).

In **France**, 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. 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 1 million had undertaken training. However, this initiative has recently been reformed to replace hours of training with monetary credit.

Nearly four out of five New Zealanders now have formal qualifications. 10 per cent of adults in **New Zealand** aged between 30 and 39 were enrolled in education in 2013, well above the OECD average of 6 per cent (OECD, 2015). At the time of the last census, almost 15 per cent 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. This chimes with views expressed by stakeholders who were consulted as part of the recent review of post-compulsory education and training in **Wales** (2016), which was commissioned by the Welsh Government. Most learners in further education in Wales are adults over the age of 19 and in 2014-15, 57 per cent of colleges' learners were adults

over the age of 19 and most studied part-time. However, the review reported that stakeholders in the sector expressed concerns 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”.

The Employer Skills Survey 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).

To date we have been unable to locate recent and reliable information in relation to **Germany** and the **Netherlands**.

Section 4: Funding

Summary by country

- **Australia** spent more per student than the OECD average on degree programmes at Bachelor level and above but below the OCED average in relation to short-cycle tertiary programmes. The majority of university students are enrolled on Commonwealth supported places (CSPs), which are subsidised by the Australian government. Tuition fees vary between universities and the type of course on which the student is enrolled. University students can apply for Australia's income-contingent Higher Education Loan Program (HELP) for the payment of university fees, which provides a tuition fee loan up to the value of the course undertaken. Administered by the government, the loans bear no real interest, but are indexed to the Consumer Price Index. Recent figures suggest that average debt upon graduation has been increasing significantly over recent years. 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 euros. 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). Students are entitled to tuition fee loans up to a capped amount from the VET Student Loans programme provided they are enrolled on an approved course.

- **Canada** spent above the OECD average on both short-cycle tertiary programmes and degree programmes at Bachelor level and above**.** Overall expenditure per student was higher than the OECD average regardless of whether research and development activities were included or excluded. Surveys conducted by Statistics Canada show that tuition fees vary significantly, not only by subject area but also by province. Student fees account for a growing portion of revenue for both colleges and universities. Student grants provide up-front non-repayable grants for tertiary education to students from socio-economically disadvantaged backgrounds. Student loans are available, although details vary between the provinces. Individuals have to start paying back the loan six months after they graduate or leave their studies. Loans and grants are also available to apprentices.

- **England.** Students are eligible for tuition fee loans to cover the full cost of tuition fees that are charged by public higher education institutions (which are currently capped at a maximum of £9,250) and up to £6,165 of tuition fees charged by private institutions. They are also entitled to a needs-based maintenance loan and higher education institutions offer a range of bursaries and scholarships, especially for students from disadvantaged backgrounds. Students start repaying their student loans the April after they leave their course, if their income is over a repayment threshold (£25,000 a year or more), with the repayments depending on

the size of their salary. Students in England have £45,000 of debt on average on graduating, the highest level in the UK. Loans issued since 1 September 2012 will normally be written off 30 years after graduation. Different terms and conditions apply in relation to earlier loan plans.

- **France** spent above the OECD average on both short-cycle tertiary programmes and degree programmes at Bachelor level and above. Overall expenditure per student was higher than the OECD average regardless of whether research and development activities were included or excluded. Overall spending as a proportion of GDP was in line with the OECD average but lower on Bachelor degrees and above and higher on short-cycle programmes, reflecting the strength of the latter in France. Tuition fees are not charged by public universities. Grants are provided based on family or individual resources. Loans are offered by most of the High Street banks with the State offering a guarantee of 70 per cent of the loan. In 2014 the national expenditure for continuous professional training and apprenticeships amounted to €31.6 billion (£27.6 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).

- **Germany** spent more per student than the OECD average on the degree programmes at Bachelor level and above but below the OCED average in relation to short-cycle tertiary programmes (although the gap was extremely narrow). Expenditure per student was higher than the OECD average when research and development activities were included but not when they were excluded. Germany was the only country whose spending on tertiary education as a proportion of GDP was below the OECD average for the countries reviewed. 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. Tuition fees are not charged by public universities. 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 the dual system of vocational training in Germany, about 70% of the total cost (school education and industry training) is borne by business.

- The Netherlands spent above the OECD average on both short-cycle tertiary programmes and degree programmes at Bachelor level and above. Overall expenditure per student was higher than the OECD average regardless of whether research and development activities were included or excluded. 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. Student grants 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. About 50 percent of graduates in the Netherlands have debt, and the average debt is about €15,000 (£13,103). The Dutch government has announced that it is planning to halve tuition fees for first-year students in higher education in 2018/2019. Students from the age of 18 are required to pay a statutory fee for secondary level (MBO) vocational courses provided in public institutions. In the private sector, tuition fees are often at least two to three times higher for comparable programmes. Public subsidies are also provided to students in school-based upper secondary VET and in postsecondary vocational education to partially cover their private educational expenses. In addition, a public loan system is in place for those with additional financial needs.

- **New Zealand** spent slightly below the OECD average on both short-cycle tertiary programmes and degree programmes at Bachelor level and above. Expenditure per student was higher than the OECD average when research and development activities were included but not when they were excluded. Loans and grants are available with lifetime limits. Provider-funded scholarship and grants vary according to university. The New Zealand Union of Students' Association (NZUSA) totalling found that the average graduate had a $50,000 combined loan for fees and living costs. In addition, one quarter of New Zealand students had credit card debt, and two thirds had two or more forms of debt. From 1 January 2018 all New Zealand students who finish school in 2017, or will finish school during 2018, qualified for a year of free provider based tertiary education. As well as university students, this will also cover the costs for students in apprenticeships, industry training or studying at a polytechnic. Adults who have previously studied for less than half full-time year of tertiary education or industry training also will qualify. Grants for new apprentices towards costs are also available with a capped number per annum.

- **Norway** spent above the OECD average on both short-cycle tertiary programmes and degree programmes at Bachelor level and above. Overall expenditure per student was higher than the OECD average regardless of whether research and development activities were included or excluded. Tuition fees are not charged by public universities. Student loans carry no interest charges during the period of study. In 2010-11, 70 percent of students in Norway had a loan and the average debt at graduation was, according to the OECD, USD 25,188 (£18,958) Spending on vocational training in workplaces has increased by more than 7 per cent since 2014 due to a rise in the number of apprentices and training candidates and to higher grants per apprentice. There are no tuition fees at state higher education institutions for mainstream programmes. VET is also cost-free for pupils and students in public education and training institutions. 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.

- **Scotland.** Scotland differs from England and Wales in that tuition fees are paid by the Government for Scottish domiciled students. For young undergraduates (under 25) and independent students, bursary and loans are available from the Student Awards Agency Scotland (SAAS) depending on the household income in their permanent home. For full-time university or college students in Higher Education (level 4 or above) funded by the SAAS, the average annual support provided in 2016-17 was £5,830. 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.

- **United States** spent above the OECD average on both short-cycle tertiary programmes and degree programmes at Bachelor level and above. Overall expenditure per student was higher than the OECD average regardless of whether research and development activities were included or excluded. Of all the countries reviewed, the United States spent the most on tertiary education as a proportion of GDP by a considerable margin (2.7% against an OECD average of 1.5%). 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). Loan repayment rates are generally higher than in the UK and loan fees are often applied. In 2015 typical debt on graduation was US$29,000 [£21,827] but this was lower for those graduating from public universities than private ones.

- **Wales.** The tuition fees of Welsh students are partially subsidised, regardless of where they study in the UK. The current baseline annual basic student support package for full-time Welsh domiciled undergraduate students includes a combination of both loans and grants to cover tuition fees and support living costs (often referred to as 'maintenance'). Loan repayment terms and conditions are the same as in England, except that individual tuition fee debt burdens are generally lower because of Welsh Government Learning Grants and the Welsh Partial Cancellation of Maintenance Loan Scheme. In 2015 the typical borrower debt at graduation was £19,000. Recently, the Welsh Government announced that the focus of grant finance for undergraduate support will move towards support for maintenance, with the cost of tuition fees being met in full through loans, starting in the academic year 2018/19.

Spend by route

Tertiary education

OECD (2017) provide information on expenditure on tertiary education[3] in 2014 in OECD countries, which includes details in relation to the overseas countries included in this review. However, figures are only provided for the United Kingdom as a whole and so it is not possible to make specific comparisons with England, Scotland and Wales.

Table 1 presents the annual expenditure per student by educational institutions for all services. It shows that the UK, together with Canada, France, the Netherlands, Norway, and the United States, all spent above the OECD average on both short-cycle tertiary programmes and degree programmes at Bachelor level and above. Australia and Germany spent more per student than the OECD average on the degree programmes at Bachelor level and above but below the OCED average in relation to short-cycle tertiary programmes (although the gap was extremely narrow in the case of Germany). New Zealand's expenditure on both groups of programmes was marginally below the OECD averages.

In the UK, Australia, Canada, France, the Netherlands and Norway overall expenditure per student was higher than the OECD average regardless of whether research and development activities were included or excluded. Germany and New Zealand's expenditure per student was higher than the OECD average when research and development activities were included but not when they were excluded.

The three countries with the highest annual expenditure per student by educational institutions for all services were the United States, Canada and the UK.

[3] Tertiary-type A education (minimum cumulative theoretical duration, at tertiary level, of three years' full-time equivalent) (ISCED 5A) and Tertiary-type B education (short-cycle) (ISCED 5B)

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

In equivalent USD converted using PPPs for GBP, 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	
Australia	9,299 (£6,999)	19,772 (£14,882)	18,038 (£13,577)	11,434 (£8,606)
Canada	14,377 (£10,821)	25,185 (£18,956)	21,326 (£16,051)	15,004 (£11,293)
France	14,122 (£10,629)	17,178 (£12,929)	16,422 (£12,360)	11,310 (£8,513)
Germany	10,107 (£7,607)	17,181 (£12,932)	17,180 (£12,931)	10,048 (£7,563)
Netherlands	11,477 (£8,638)	19,188 (£14,442)	19,159 (£14,420)	11,948 (£8,993)
New Zealand	10,312 (£7,762)	16,219 (£12,208)	15,088 (£11,356)	12,063 (£9,079)
Norway	12,813 (£9,644)	21,262 (£16,003)	20,962 (£15,777)	13,059 (£9,829)
United Kingdom	x	x	24,542 (£18,472)	18,743 (£14,107)
United States	x	x	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). (www.oecd.org/education/education-at-a-glance-19991487.htm).

Table 2 shows the annual expenditure per student by tertiary educational institutions for core educational services, ancillary services and research and development. Once again, the three countries with the highest overall annual expenditure per student are the United States, the UK and Canada.

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)
Canada	13,808 (£10,393)	1,196 (£900)	6,323 (£4,759)	21,326 (£16,051)
France	10,474 (£7,883)	836 (£629)	5,112 (£3,848)	16,422 (£12,360)
Germany	9,252 (£6,964)	796 (£599)	7,132 (£5,368.)	17,180 (£12,931)
Netherlands	11,948 (£8,993)	x	7,211 (£5,427)	19,159 (£14,420)
New Zealand	x	x	3,025 (£2,277)	15,088 (£11,356)
Norway	12,843 (£9,667)	216 (£163)	7,903 (£5,948)	20,962 (£15,777)
United Kingdom	13,868 (£10,438)	4,875 (£3,669)	5,799 (£4,365)	24,542 (£18,472)
United States	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). (www.oecd.org/education/education-at-a-glance-19991487.htm).

Table 3 shows the distribution of current expenditure by tertiary educational institutions on compensation of teachers and other staff as a percentage of total current expenditure.

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
Canada	38	29	66	34
France	43	38	81	19
Germany	x	x	67	33
Netherlands	x	x	71	29
New Zealand	x	x	x	x
Norway	x	x	71	29
United Kingdom	35	28	63	37
United States	30	35	64	36
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).

Table 4 shows the distribution of current expenditure by tertiary educational institutions on compensation of teachers and other staff as a percentage of total current expenditure. In the case of the UK, comparisons between public and private institutions cannot be made because figures are only provided for private institutions. With the exception of Australia, the other countries spend proportionally more on staff in public institutions compared with private ones.

Table 4: 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
Australia	33	42	28	39	62	81
Canada	38	38	30	24	67	62
France	41	55	41	22	82	77
Germany	x	x	x	x	**67**	**63**
Netherlands	x	x	x	x	70	78
New Zealand	x	x	x	x	x	x
Norway	x	x	x	x	68	65
United Kingdom	x	35	x	28	x	63
United States	31	28	35	34	66	62
OECD average	**38**	**x**	**29**	**x**	**67**	**64**
EU22 average	**x**	**x**	**x**	**x**	**68**	**63**

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

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'.[4]

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

- Average gross costs per apprentice: €17,933 (£15,664).
- Average returns per apprentice (from productive inputs): €12,535 (£10,949)
- Average net costs incurred per apprentice: €5,398 (£4,715)

Gross costs

The breakdown of gross costs across the cost categories is as follows[5]:

- Apprentice-related personnel costs: The apprentice-related personnel costs, at an average of around €11,000 (£9,609) (62 per cent) make up the largest share of 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 (£3,603) 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 (£808) (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 (£1,630) (ten per cent) per apprentice in the training year 2012/13. These include, among other things, chamber fees,

[4] The study is primary concerned with establishing whether the decline in training participation by German companies since 2009 could be due "a deterioration in the cost-- benefit ratio of providing initial vocational education and training?
[5] Jensen et al 2015:Page 3

the costs of teaching and learning materials and of external courses, and the costs of in-company training administration.

The complexity and devolved nature of apprenticeship funding in **France** makes it difficult to establish the overall costs. A CNFPTLV (National Council for Lifelong Vocational Training) (2013) report set out the difficulties in arriving at the true cost of apprenticeship training because of the different methodologies used by different bodies to arrive at figures. 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 (£27.6 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 (£1.5 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 who will contract with 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.

The funding system for Apprenticeships in Australia is also complex and includes contributions from the national Government as well as from states and territories, the amount and nature of which vary 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 (£1.6 billion), or a little over AUS$7,000 (£3,924 per apprentice or trainee in training per year (NCVER 2011)). More recent figures have not been found.

In **Norway** county councils spent a total of NOK27.3 billion (£2.5 billion) on upper secondary education institutions in 2015. The figure includes the cost of teaching, premises, specially adapted tuition, the Follow-up Service, and the educational psychology service (Norwegian Directorate for education and Training, 2016). This figure does not distinguish between academic and vocational routes. County councils spent an additional NOK2.9 billion (£0,27 billion) on vocational training at workplaces – an increase of more than 7 per cent from 2014. The increase is due to a rise in the number of apprentices and training candidates and to higher grants per apprentice.

Source of funding

Table 5 shows expenditure on educational institutions from public and private sources of funds as a percentage of GDP, by level of education. The United States (2.7%) spent the most on tertiary education as a proportion of GDP by a considerable margin, followed by the UK, Australia and New Zealand (1.8%), the Netherlands and Norway (1.7%), France (1.5%) and Germany (1.2%). Germany was the only country whose spending on tertiary education as a proportion of GDP was below the OECD average. Figures were not available for the UK.

Apart from France and Germany, the countries' spending on degree programmes as a proportion of GDP was above the OECD average. In the case of expenditure on short-cycle programmes as a proportion of GDP, Australia, Canada, and France were above the OECD average, while Germany, the Netherlands and Norway were below it.

Table 5: Expenditure on tertiary 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[6]	**Bachelor's, master's and doctoral degrees**	**All tertiary**
Australia	0.3	1.6	1.8
Canada	0.9	1.7	2.6

[6] Tertiary-type B programmes (ISCED 5B) are typically shorter than those of tertiary-type A and focus on practical, technical or occupational skills for direct entry into the labour market, although some theoretical foundations may be covered in the respective programmes. They have a minimum duration of two years full-time equivalent at the tertiary level.

Tertiary (including R &D activities)			
	Short-cycle tertiary[6]	**Bachelor's, master's and doctoral degrees**	**All tertiary**
France	0.3	1.2	1.5
Germany	0.0	1.2	1.2
Netherlands	0.0	1.7	1.7
New Zealand	0.2	1.6	1.8
Norway	0.0	1.6	1.7
United Kingdom	m	m	1.8
United States	x	x	2.7
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).

Table 6 shows public and private expenditure on tertiary educational institutions as a percentage of GDP, by level of education. Public expenditure on tertiary educational institutions as a percentage of GDP was above the OECD average in Norway (1.6), Canada (1.3), France (1.2) and the Netherlands (1.2). It was in line with the average in Germany (1.1) and below the average in the USA (0.9), New Zealand (0.9), Australia (0.7) and the UK (0.6).

Private expenditure on educational institutions as a percentage of GDP was above the OECD average in the USA (1.7), Canada (1.3), the UK (1.3) Australia (1.1) and New Zealand (0.9). It was in line with the average in the Netherlands (0.5) and below the average in France (0.3), Germany (0.2) and Norway (0.1).

Table 6: Public and private expenditure on tertiary 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
Australia	0.7	1.1	1.8
Canada	1.3	1.3	2.6
France	1.2	0.3	1.5
Germany	1.1	0.2	1.2
Netherlands	1.2	0.5	1.7
New Zealand	0.9	0.9	1.8
Norway	1.6	0.1	1.7
United Kingdom	0.6	1.3	1.8
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), Table B2.3. (www.oecd.org/education/education-ata- glance-19991487.htm).

Table 7 shows total public expenditure on education (including direct public expenditure on educational institutions, public subsidies to households and other private entities) as a percentage of total government expenditure, by level of education. Public expenditure on tertiary educational institutions as a proportion of total government expenditure was above the OECD average, regardless of whether research and development activities were included or excluded, in Canada, the Netherlands, Norway, New Zealand and the United States. In France and Germany it was below the OECD average with and without the inclusion of research and development activities. The UK was below the average unless research and development activities were included, while Australia fell below the average when research and development was taken into account.

Table 7: Total public expenditure on education (2014) [OECD, 2017: 209]

	Short-cycle tertiary	Bachelor's, master's and doctoral degrees	All tertiary	All tertiary (excluding R&D activities
Australia	0.7	3.1	3.8	2.2
Canada	1.6	3.1	4.6	3.4
France	0.5	1.7	2.2	1.5
Germany	0.0	3.0	3.0	2.0
Netherlands	0.0	3.6	3.7	2.6
New Zealand	0.6	4.8	5.4	4.7
Norway	0.1	4.7	4.8	3.8
United Kingdom	x	x	3.0	2.4
United States	x	x	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). (www.oecd.org/education/education-at-a-glance-19991487.htm).

Table 8 shows the share of sources of public funds by level of government before and after transfers. In six countries funding is either entirely (the UK, the Netherlands and New Zealand), overwhelmingly (Norway, where there is only one exception) or largely (Australia and France) centralised. In contrast in Germany and, to a lesser extent, the United States, 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 8: Share of sources of public funds by level of government (2014)

	Initial funds (before transfers between levels of government)			Final funds (after transfers between levels of government)		
	Central	**Regional**	**Local**	**Central**	**Regional**	**Local**
Australia	95	5	0	93	7	0
Canada	x	x	x	x	x	x
France	86	10	5	86	10	5
Germany	25	73	2	20	78	2
Netherlands	100	0	x	100	0	x
New Zealand	100	x	x	100	x	x
Norway	99	0	1	99	x	1
United Kingdom	100	x	0	100	x	0
United States	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). (www.oecd.org/education/education-at-a-glance-19991487.htm).

Tuition fees, student loans/grants and student debt

Table 9 provides an overview of tuition fees, student loans/grants and levels of student debt in the countries included in the review. More details are provided underneath the table.

Table 9: Post-compulsory education and training fees and funding by country [7]

Tuition fees, per annum	Loans/ grants available to all, per annum	Loans/ grants available to low-income students/ others, per annum	Summary of loan repayment terms	Typical/ average borrower debt at graduation
England				
£9,250 max. (England, Wales, N. Ireland, Scotland)	Tuition fee loan - £9,250 max. Maintence loan - £7,324 max for students living at home; £8,700 max per year for students living away from home, outside London; £11,354 max for students living away from home, in London.	Maximum maintence loan. Other grants include childcare grant, parents' learning allowance, adult dependants' grant, disabled students' allowance)	Interest - RPI plus 3% (tuition fee / maintenance loan) Students start repaying their student loans after graduation, if their income is over a repayment threshold of £25,000 a year or more. Loans issued since 1 September 2012 will normally be written off 30 years after graduation.	£25,000 (pre-£9,000 tuition fees, repayment cohort of 2015) £45,000 (post-£9,000 tuition fees)
Wales				
University - £9,000 max. (England, Wales, N. Ireland, Scotland)	Tuition fee loan - £9,000 (£9,250 if studying in England)	Maximum government grants Special support grant - £5,161	Interest - RPI plus 3% (tuition fee / maintenance loan)	£19,000 (pre-£9,000 tuition fees, repayment cohort of 2015)

[7] Currency conversion to £GBP was based on average exchange rates over the period from August 2017 to July 2018. As this was based on exchange rates, this comparison does not necessarily account for differences in the cost of goods or services in different economies. Additionally rates were drawn from a variety of different sources covering different years and have not been adjusted for inflation, so figures should be used for an indicative comparison only.

Tuition fees, per annum	Loans/ grants available to all, per annum	Loans/ grants available to low-income students/ others, per annum	Summary of loan repayment terms	Typical/ average borrower debt at graduation
	Combined Welsh Government Learning Grant and Maintence loan – £7,650 for students living at home; £9,000 per year for students living away from home, outside London; £11,250 for students living away from home, in London. (The amount of grant awarded depends on household income, all students are eligible for a grant of at least £1,000, student loan element is optional)			

Scotland				
University - £1,820 max. for domestic students University - £9,000 max. for students from other parts of the UK Sub-degree courses, including HNC, HND and any other sub-degree courses - £1,285 (2018/2019).	University tuition fee grant, Scotland -£1,820 max. University tuition fee loan; England, Wales, N. Ireland) £9,000 max. Government pays fees for eligible students on sub-degree courses (under 25).	Young students' bursary - £1,750 max. Young students' loan - £5,750 max. Independent students' bursary - £750 max. Independent students' loan - £7,500 max. Other grants include dependants' grant, lone parents' grant, vacation grant for care leavers, disabled students' allowance	0.9% interest rate, income contingent (tuition fee / maintenance loan)	£9,400 (pre-£9,000 tuition fees in rest of UK, repayment cohort of 2015) Average loan balance for those who began repaying at the end of 2016/17 - £11,740. 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.
United States				
Public universities (public, instate) - US$8,200 [£6,172] ave. Public universities (public, out-of state) - US$18,400 [£13,850] ave. Non-profit institutions - $27,300 (£20,550) ave.	Full-time undergrads starting their courses from August 2015 at public universities are entitled to a federal tuition fee loan of up to US$12,500 [£9,408] max. (William D Ford loan; direct unsubsidised) US$ var. (direct PLUS loan; cost of school attendance,	US$5,775 [£4,347] max. Pell Grant US$12,500 [£9,408] max. William D Ford loan; direct subsidised Perkins loan - US$5,500 [£4,140] max. Other grants (FSEOG grant, TEACH grant, Iraq and Afghanistan service grant)	William D Ford loans - 4.29% interest rate, 1.068% loan fee Direct PLUS loans - 6.84% interest rate, 4.272% loan fee Perkins loans - 5% interest rate, no loan fee	In 2015 typical debt on graduation was US$29,000 [£21,827] (public and private non-profit) US$27,100 [£20,397] (public) US$32,600 [£24,537] (private non-profit)

For-profit institutions - $16,000 (£12,044) (2016/17)	less other monies received)			US$41,200 [£31,010] (private for-profit)
Canada				
CAN$6,200 [£3,538] (2015/16) Tuition fees for undergraduate programmes for Canadian full-time students was, on average, CAN$6,571 (£3,750) in 2017/2018.	CAN$ 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 Grant for full-time low-income and middle-income undergraduate students - up to CAN $3,000 (£1,712) (dependent on family income) per year 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. Apprenticeship Incentive Grant and Apprenticeship	Undergraduate student loans - 5% fixed / 2.5% floating interest rate (Canada student loan) The Canada Apprentice Loan – interest free	Average education-related debt in 2015 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). CAN$28,500 [£16,267]

		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 Other grants (inc. dependants' grant, part-time studies grant, disabled students' grant)		
Australia				
Undergraduate tuition fees vary between universities and the type of course - AUS$7,900 (£4,429) ave. (2015) Course fees for VET programmes generally lie between AUS $4,000 (£2,243) annually up to $25,000 (£14,016).	[Commonwealth supported students] AUS$6,256 - 10,440 (£3,507 - £5,853) max. (HECS-HELP) AUS$ 10% of tuition fees (HECS-HELP; up-front discount on tuition fees of AUS$500 (£280+)) AUS$99,389 - 124,238 (£55,721-69,653) max. (FEE-HELP; lifetime limit)	AUS$ var. (Youth Allowance, grant for young students, dependent on income, assets) AUS$559. (£313) max. (Austudy, grant for students 25+, dependent on income, assets) AUS$ var. (Abstudy, grant for Aboriginal/ Torres Strait Islanders) AUS$1,025 [£540] (Start-up scholarships [loans], grant for low-income students)	2.1% var. indexed interest rate, income contingent (HELP loans)	AUS$39,700 (£22,258) 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 (£30,800) compared with $45,397 (£25,451) for other SES groups combined
New Zealand				
University tuition fees vary according to the	NZ$ var. (tuition fee loan;	Student allowance; per week -	Interest free, NZ$40 (£21) admin. fee	Typical Bachelor's degree

university attended and course undertaken - NZ$5,400 (£2,823) ave. (2015/16) VET students contribute about 30 per cent of the cost of their courses.	dependent on state and cost of school attendance) NZ$35,372 (£18,490) max. (maintenance loan; lifetime limit) NZ$1,000 [£523] max. (course loan)	NZ$350.20 (£183) max. Accommodation benefit - NZ$ var. University scholarship/ grants - NZ$ var. New apprentices grant - $1,000 (£523) towards their on-job and off-job costs, or $2,000 (£1,045) if they are in priority trades	(tuition fee / maintenance / course costs loan; income contingent) 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	student in 2017 - NZ$50,000 (£26,140) (combined loan for fees and living costs)
Netherlands				
For 2018-2019, statutory fee for full-time Bachelor / Associate Degree programmes - €2,006 (£1,752) per year Statutory fee for part-time Bachelor / Associate Degree programmes - €1,722 (£1,504) per year Tuition / course fees in 2017/18 for vocational courses at secondary level (for students aged 18+) - €1,137 (£993) per year (in addition items needed for the training can cost	Tuition fee loan - a monthly loan equivalent to the amount of the tuition fees Students over the age of 18 are usually eligible for a student grant and a public transport student concession card Publicly funded loans for adults wishing to return to education	Voucher system for some target groups allowing them to spend their voucher on selected postsecondary VET programmes	Student grants are initially paid out in the form of a loan, but become non-repayable if the student graduates within ten years. Students who fail to graduate have to repay all the finance - repayment of loans will depend on the students' income after graduation.	Average debt is approx. €15,000 (£13,103).

between €500 (£437) and €1000 (£874) Unsubsidised private sector-tuition fees are often two to three times higher for comparable programmes				
Germany				
Public universities (undergrad.) - no tuition fees, apart from a small fee per semester for enrolment, confirmation and administration – usually between €150 (£131) and €250 (£218) depending on the university Tuition fees at private universities – up to €30,000 (£26,205) or more for a Bachelor's degree Postsecondary VET - €1,268 (£1,108) for upgrading courses, and €692 (£604 for courses at Fachschulen)	Maintenance funding for students in the form of grants and loans from government is largely means tested and/or targeted at specific groups. Specific programmes include: Education scholarships for qualified professionals aged under 25 years - up to €2,000 (£1,747.). Scholarships for experienced professionals on university courses - full-time €670 (£585) per month; part-time extra-occupational courses up to €2,000 (£1,747) per year. Federal States may offer their own incentives	General public student support (BAföG) is awarded, half as a grant, and half as an interest free loan - amounts range from €10 (£8.7) to €670 (£585) per month.	BAföG - a maximum of €10,000 (£8,735) needs to be paid back.	Borrowing for college and university is not widespread.

France				
In the main university sector - €184 (£161) per year for undergraduates. Fees at the grandes écoles generally between €5,000 (£4,367) and €15,000 (£13,103) depending on the course and institution	The main student grant is available on a means tested basis - amount per year ranges from around €1,000 (£873) to circa €5,500 (£4,804) Students receiving a state grant are entitled to 100% reduction in tuition fees at state universities. Grant for students who, due to family issues cannot count on parental support. - ranges from €4000 (£3,494) annually to €5000 (£4,367) annually. Students can obtain a low interest loan from a bank of up to €15,000 (£13,103)	Higher students grants which are means tested	Low interest bank loans are repayable on a delayed basis (with the State offering a guarantee of 70% of the loan)	No data available
Norway				
No public university tuition fees apply, although students are required to pay a fee of approx. €50 (£44) per semester to the student union	Student loans - for the academic year 2015-16, the maximum amount one student could borrow was €12,000 (£10,482).	No data available	The normal repayment term is 20 years and all graduates can apply for delayed repayment for up to 3 years (during that time of deferment, however,	Average debt - €18,530 (£16,186) (2015/16).

Tuition fees at private universities - €8,000 (£6,988) – €9,500 (£8,298) per annum No tuition / course fees apply for VET programmes	The Norwegian State Educational Loan Fund also offers financial support for higher education students aged between 18 and 65.		interest still accumulates) 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.	

Tuition fees and tuition fee loans

With the exception of Germany, Norway and France (leaving aside *grandes écoles*), public universities in the countries included in the review charge tuition fees for higher education and, in some cases, post-compulsory vocational programmes. The fees charged are noticeable higher in England, Wales, Australia, Canada, New Zealand and the United States than in the Netherlands and Scotland. Tuition fees and maintenance loans with varying terms and conditions are available across the countries. Maintenance loans and grants are also widely available, although these are generally means-tested. The student debt burden varies across the countries, with England having a higher burden than most. However, the varying terms and conditions attached to student loans and grants, and recent reforms to funding systems in some countries means, that this could change.

Tuition fees at public higher education institutions in **England** are currently capped at a maximum of £9,250. Students are eligible for tuition fee loans to cover the full cost of these fees and up to £6,165 of tuition fees charged by private institutions. They are also entitled to a maintenance loan, which is calculated on the basis of the gross annual income of the household in which they live, minus some pension contributions and allowances for dependent children. The maximum maintenance loans available for September 2018 entry for students who live in England will be £7,324 for students living at home, £8,700 per year for students living away from home, outside London and £11,354 for students living away from home, in London. Higher education institutions also offer a range of bursaries and scholarships, especially for students from disadvantaged backgrounds. Students start repaying their student loans the April after they leave their course, if their income is over a repayment threshold, with the repayments depending on the size of their salary. As of April 2018, the repayment threshold for student loans was £25,000 a year or more. Students in England who entered higher education after 2012 have £45,000 of debt on average on graduating, the highest level in the UK. Loans

issued to students starting their courses since 1 September 2012 will, however, normally be written off 30 years after graduation. Different terms and conditions apply in relation to earlier loan plans.

Universities in **Wales** are allowed 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. 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. Tuition fees for Welsh students studying at public higher education institutions in other parts of the UK are up to £9,250.

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.

Scotland differs from England and Wales in that tuition fees are paid by the Government for Scottish domiciled students. 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.

In the **Netherlands** 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 (£1,752) per year for full-time Bachelor/Associate Degree programmes and €1,722 (£1,504) 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 (£900) in 2018/2019 instead of €2,060 (£1,752).

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 (£993) per academic year. Teaching materials, clothing or other items needed for the training can cost between €500 (£437) and €1000 (£873) per year. Students over the age of 18 are usually eligible for a student grant and a public transport student concession card.

In the private sector, tuition fees are often at least two to three times higher for comparable programmes. Approximately half of the students in the private sector pay their tuition fees themselves while most of the remainder have their fees paid by employers. The government provides publicly funded loans to adults wishing to return to education and there is a voucher system for some target groups allowing them to spend their voucher on selected postsecondary VET programmes.

In **Norway** 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 €8,000 (£6,988) and €9,500 (£8,298) per year. VET is also cost-free for pupils and students in public education and training institutions.

In **Australia**, the majority of university students are enrolled on Commonwealth supported places (CSPs), which are subsidised by the Australian government. Eligibility for CSPs is determined by several citizenship and residency requirements. Student contribution amounts for CSPs 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, as in England, few (if any) do so and this makes the cap the effective price for students. Tuition fees vary between universities and the type of course on which the student is enrolled. 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)). According to the Australian government, the average tuition fee charged across Australian higher education institutions is AUS$7,900 (£4.429).[8]

If awarded a CSP place, university students can apply for Australia's income-contingent Higher Education Loan Program (HELP) for the payment of university fees, which

[8] 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.

provides a tuition fee loan up to the value of the course undertaken. Administered by the government, the loans bear no real interest, but are indexed to the Consumer Price Index. The Australian Taxation Office (ATO) calculates the individual HELP repayment income (HRI)[9] and publishes regularly the income thresholds and corresponding repayment rates. Below AUSD 51,309 (£28,766), no payment is due. The maximum yearly payment is 8 per cent of HRI. Most graduates do not begin to make repayments until their third year of full time work.

Tuition fees for vocational courses in Australia can vary widely depending on the course, institute and location. Generally they lie between AUS$4,000 (£2,243) annually up to AUS$25,000 (£14,016). Students are entitled for tuition fee loans up to a capped amount from the VET Student Loans programme provided they are enrolled on a VET Student Loans approved course at a VET Student Loans approved training provider. 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 2016-2017 income year was AUS$54,869 (£30,763).

The VET Student Loans programme commenced in January 2017, replacing the VET FEE-HELP scheme. 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 billion (£1.35 billion) per annum by 2019—20 (Parliament of the Commonwealth of Australia 2016).

There is also variation in university tuition fees charged according to the university attended and course undertaken in **New Zealand**. OECD (2017) found that tuition fees in New Zealand varied within a range of USD 3,789 to 6,131 with Health and Welfare programmes charging the highest fees and Social Sciences, Journalism and Information the least. In 2015/16 the average university tuition fees stood at around NZ$5,400 (£2,823) per annum.

From 1 January 2018 all New Zealand students who finish school in 2017, or will finish school during 2018, qualified for a year of free provider based tertiary education. As well as university students, this will also cover the costs for students in apprenticeships, industry training or studying at a polytechnic. Adults who have previously studied for less

[9] The minimum Help Repayment Income (HRI) thresholds change each year. For 2017-18, the threshold is set at $55,874 for the income at which individuals have to make loan repayments. Where income exceeds this threshold, a compulsory repayment of at least 4% of income (up to a maximum of 8%) takes effect as part of tax assessment. The percentage increases in tandem with income.

than half full time year of tertiary education or industry training also will qualify. The changes for 2018 are the first step in the Government's stated intent to provide a full programme of 3 years' fee free tertiary education and training for New Zealanders by 2024.[10]

Students in the VET sector are also required to contribute about 30 per cent of the cost of their courses. Average or typical costs for VET courses do not appear in the literature, probably because of the wide diversity of provision and the large number of private providers.

In 2013 87 per cent of students benefitted from public loans or scholarships/grants and 37 per cent benefitted from both. The Student Loan Scheme Annual Report (2017) noted that 176,938 students took out a loan in 2016, 70 per cent of those eligible, with students using 67 percent of the total they borrowed to pay for course fees. Borrower uptake reflected a 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. 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).

In **Canada** surveys conducted by Statistics Canada show that tuition fees vary significantly, not only by subject area but also by province. Statistics Canada (2018) report that 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. 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. 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 3 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.

[10] https://www.education.govt.nz/news/details-of-fees-free-tertiary-education-and-training-for-2018-announced/

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). (For more details, see Table 7 in country report on Canada -: Weighted average undergraduate tuition fees for Canadian full-time students, by field of study).

Student fees account for a growing portion of revenue in **Canada.** While revenues from provincial governments have been declining, college revenues from tuition and fees have been increasing. 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 (£1.2 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 where 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.

In the **United States**, 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 5 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 5 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 1 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 shows that average fees were over 60 per cent higher in private institutions than in public institutions (OECD 2017).

Full-time undergraduates staring their courses from August, 2015 at public universities are entitled to a federal tuition fee loan of up to US$12,500 (£9,408). 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 per cent, with a loan fee of just over 1 per cent. Direct PLUS loans are subject to an interest rate of 6.84 per cent, with a loan fee of over 4 per cent. Perkins loans have an interest rate of 5 per cent 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.

Other student loans and grants

Maintenance funding for students in the form of grants and loans from government is largely means tested and/or targeted at specific groups. In **Germany**, for example**,** 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 (£8.7) to € 670 (£585) per month for 12 months per year. A maximum of €10,000 (£8,735) 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.

In the vocational system, the German federal qualification initiative provides support by way of the Advanced Further Training Assistance Act, also called master BAföG, which 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. Craftspersons 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 (£8,967) 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 (£503 million).

Other schemes include:

- The Ministry of Education continuing education scholarships for young qualified professionals under 25 years for continuing education scholarships in their discipline or across disciplines. Each year, up to 6,000 scholarships of up to €2,000 (£1,747) per person are granted. Individuals are required to contribute 10% per programme.

- 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 (£1,747) 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 (£17,470) may receive a bonus voucher of up to €500 (£437). 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 (£585); part-time extra-occupational students receive up to €2,000 (£1,747) 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.

In **Norway** 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 for students attending private VET who are required 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 NOK15,900 (£1,468) each.

The Norwegian State Educational Loan Fund also offers financial support for higher education students aged between 18 and 65. Student loans carry no interest charges during the period of study. 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 €12,000 (£10,482). The normal repayment term is 20 years and all graduates can apply for delayed repayment for up to 3 years (during that time of deferment, however, interest still accumulates).

Up to 40 percent 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 NOK162,769 (£15,035) in 2015 and/or less than NOK168,059 (£15,523) in 2016. Assets must not exceed NOK370,304 (£34,203) in 2015 and NOK382,339 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 examinations.

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 socio-economically disadvantaged backgrounds. 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. 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. These include a grant for full-time 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. 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.

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 CAN$4,000 (£2,282) 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). To encourage industry to take on apprentices, the government also offers a business tax credit equal to 10 per cent of the wages paid to apprentices.

In the **United States** student loan programmes have been in place for decades. 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. Full-time undergraduates starting their courses from August, 2015 at public universities were entitled to a federal tuition fee loan of up to US$12,500 (£9,408), 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 per cent, with a loan fee of just over 1 per cent. Direct PLUS loans are subject to an interest rate of 6.84 per cent, with a loan fee of over 4 per cent. Perkins loans have an interest rate of 5 per cent and do not incur a loan fee. The majority of loans in the US, however, are not income contingent; meaning that borrowers are required to repay, even during financially fallow periods.

US institutions often award more generous scholarships, grants and bursaries than their UK counterparts. At Harvard, for example, approaching 60 per cent of undergraduates receive a Harvard Scholarship. Recent data suggests that the average full-time US student studying at a four-year institution receives a little under US$10,000 (£7,526) in grants and scholarships from all providers, including federal sources.

In **France** 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 (£873) to circa €5,500 (£4,804) (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 receiving a state grant is automatically entitled to 100 per cent reduction in Tuition Fees at state universities. Other grants are also available including ‘Assistance to independent young persons’ (*Aide aux jeunes en situation d'autonomie avérée*), which is designed to assist students who, due to family issues (separation, divorce or death) cannot count on parental support. The grant ranges from €4000

(£3,494) to €5000 (£4,367) annually. It is also possible for students to obtain a low interest loan from a bank of up to €15,000 (£13,102) 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.

In **New Zealand** maintenance loans are available, with a lifetime limit of NZ$35,372 (£18,492), 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 (£523) 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) 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. With regard to vocational education and training, new apprentices enrolled since 2013 have been eligible for a grant of $1,000 (£523) towards their on-job and off-job costs, or $2,000 (£1.045) 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 to the first 14,000 who applied.

In **Scotland** 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. 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 £5,300 to £5,390. 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) and independent students, bursaries and loans are available from the SAAS depending on the household income in their permanent home. These range from a £1,875 bursary and £5,750 loan for those with a household income of £18,999 or less to a loan of £4,750 for those from a household income of £34,000 or more. While the total funding for independent students is the same as for young undergraduates, a greater proportion comes from loans rather than bursaries. A range of other schemes are available including the provision of funding from the SFC 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, the SFC will provide £109 million, an increase of 1.5% from AY 2017-18.

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 recieve 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.

In the **Netherlands** there is a grace period of two years after graduation during which students do not have to make repayments to student loans. 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.

Public subsidies are also provided to students in school-based upper secondary VET and in postsecondary vocational education to partially cover their private educational expenses. In addition, a public loan system is in place for those with additional financial needs. The Netherlands also incentivises individuals to engage in vocational learning by allowing them to deduct training costs between €250 (£218) and €15,000 (£13,1030) from their income tax and claim the costs back in their annual tax submission.

Student debt

Students in England have £45,000 of debt on average on graduating, the highest level in the UK. In **Scotland** 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 graduates in England having £32,220 of debt on average, those in Northern Ireland £20,990, and graduates in Wales £19,280. In **Wales**, loan repayment terms and conditions are the same as in England, except that individual tuition fee debt burdens are generally lower because of Welsh Government Learning Grants

and the Welsh Partial Cancellation of Maintenance Loan Scheme (see above). In 2015 the typical borrower debt at graduation was £19,000.

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 $28,861 in 2006 (plus CPI) to $37,217 in 2012. Undergraduates from a low socio-economic status (SES) estimated that they would graduate with higher levels of debt on completion of their studies than those from middle or higher SES backgrounds; this was particularly the case for low SES part-time students who reported an average estimated debt of $54,938 compared with $45,397 for other SES groups combined (Kirby, 2016; Universities Australia, 2013). It should be borne it 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.

In **New Zealand** the Student Loan Scheme Annual Report (2017) noted that 176,938 students took out a loan in 2016, 70 per cent of those eligible. The average student loan balance of all those with a student loan was NZ$21,467 (£11,221) in June 2017. 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 NZ$7,385.64 (£3,861) for tuition fees each year (totalling NZ$23,500/£12,283 over three years); borrow for fees (74 per cent do) and the maximum NZ$176.86 (£92) a week in loan living costs to pay for rent and other weekly expenses, totalling NZ$50,000 (£26,136) 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.

In the **United States**, 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).

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 in 2015 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 50 percent of graduates in the **Netherlands** have debt, and the average debt is about €15,000 (£13,103). This is likely to increase in some additional €6,000 (£5,241) on average after the reform of the system of student aid due next September.

In 2010-11, 70 percent of students in **Norway** had a loan and the average debt at graduation was, according to the OECD, €18,530 (£16,186) (Del Rey and Schiopu, November 2015).

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.

We were unable 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).

Monitoring

To date we have been unable to locate robust information on how governments define and monitor the efficiency of spending by institutions. Some information is available, however, in the country reports on Australia, Canada, New Zealand, Scotland and the United States.

Relationship with national economies

Little information has been identified in relation to this section, although some relevant insights are provided in the section on the role of government in post-compulsory education and training above and the country reports on Australia, Canada, France and Norway.

Section 5: Student satisfaction, institutional performance and HE access for disadvantaged students

Summary by country

- **Australia.** The Government's Quality Indicators for Learning and Teaching (QILT) programme brings together data from higher education students and graduates around Australia. The QILT website 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, and the median salary received by recent graduates. The National Student Outcomes Survey is an annual survey of Australian vocational students. The Government has set a target that by 2020, 20 per cent of higher education enrolments at undergraduate level will be people from low socio-economic status

- **Canada.** Large numbers of colleges and universities participate in the National Survey of Student Engagement, a large-scale annual survey used to measure levels of student participation to enhance understanding of how students spend their time at different colleges and universities and what they gain from their experiences. Colleges and universities use the survey results to identify aspects of the undergraduate experience inside and outside the classroom that can be improved through changes in policies and practices. The Canadian University Survey Consortium regularly conducts surveys which include measuring student satisfaction rates. There is no pan-Canadian approach to tackling disadvantage and improving participation in post-secondary education that we could find.

- **England.** Since 2005, the National Student Survey (NSS) has gathered 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. The FE choices survey consists of nationally collected and published performance indicator data that measures learner and employer satisfaction in the post-16 sector. It includes learner satisfaction data derived from a learner survey. Those from the most advantaged areas are 2.4 times as likely to go to university as those from the least. Disadvantaged students are also much less likely to attend higher tariff universities.

- **France** participates in the Eurostudent project (co-funded by the Erasmus programme of the European Union), which collects data on higher education

students' socio-economic backgrounds, living conditions, and levels of satisfaction with the quality of teaching, amongst other things. The primary intended users of the findings of this programme are higher education policy-makers at national and European level, researchers, managers of higher education institutions and students across Europe. Disadvantaged students tend to be steered more towards initial VET than the general route leading to higher education.

- **Germany** participates in the Eurostudent project (co-funded by the Erasmus programme of the European Union), which collects data on higher education students' socio-economic backgrounds, living conditions, and levels of satisfaction with the quality of teaching, amongst other things. The primary intended users of the findings of this programme are higher education policy-makers at national and European level, researchers, managers of higher education institutions and students across Europe.There is a strong focus on widening participation in higher education in Germany, 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 Netherlands** participates in the Eurostudent project (co-funded by the Erasmus programme of the European Union), which collects data on higher education students' socio-economic backgrounds, living conditions, and levels of satisfaction with the quality of teaching, amongst other things. The primary intended users of the findings of this programme are higher education policy-makers at national and European level, researchers, managers of higher education institutions and students across Europe.

- **New Zealand.** We could find no surveys of student satisfaction but, according to the NZPC (2017), students should have more power in driving quality and innovation within the system than currently. 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.

- **Norway** participates in the Eurostudent project (co-funded by the Erasmus programme of the European Union), which collects data on higher education students' socio-economic backgrounds, living conditions, and levels of satisfaction with the quality of teaching, amongst other things. The primary intended users of the findings of this programme are higher education policy-makers at national and European level, researchers, managers of higher education institutions and students across Europe. Despite a strong focus by government on iwidening participation, students from lower income groups have low tertiary participation.

- **Scotland.** Since 2005, the National Student Survey (NSS) has gathered 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. The gap in university participation between young people from the most and least advantaged areas is higher in Scotland than in England, Wales and Northern Ireland. Despite this, there has been improved access for disadvantaged students but this has been met almost entirely by the expansion of sub-degree programmes in Scottish colleges.

- **United States.** Large numbers of colleges and universities participate in the National Survey of Student Engagement, a large-scale annual survey used to measure levels of student participation to enhance understanding of how students spend their time at different colleges and universities and what they gain from their experiences. Colleges and universities use the survey results to identify aspects of the undergraduate experience inside and outside the classroom that can be improved through changes in policies and practices. In addition to state and federal needs-based financial aid programmes, higher education institutions have their own policies and programmes to promote access for low-income students. However, although overall more low-income students are going to university/college, the majority are enrolling in community colleges and for-profit institutions rather than elite public and private four-year universities.

- **Wales.** Since 2005, the National Student Survey (NSS) has gathered 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.

Performance

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

Student satisfaction

Since 2005, the National Student Survey (NSS) has gathered 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. With the exception of New Zealand, the other countries included in this review also have large-scale initiatives designed to measure the satisfaction and engagement of students in higher education. Thus, for example, **France**, **Germany**, **the**

Netherlands and **Norway** are all participating in the Eurostudent project (co-funded by the Erasmus programme of the European Union), which collects data on higher education students' socio-economic backgrounds, living conditions, and levels of satisfaction with the quality of teaching, amongst other things. The primary intended users of the findings of this programme are higher education policy-makers at national and European level, researchers, managers of higher education institutions and students across Europe.

In the **United States** and **Canada** large numbers of colleges and universities participate in the National Survey of Student Engagement, a large-scale annual survey used to measure levels of student participation to enhance understanding of how students spend their time at different colleges and universities and what they gain from their experiences. Colleges and universities use the survey results to identify aspects of the undergraduate experience inside and outside the classroom that can be improved through changes in policies and practices. The information also used by prospective college students, their parents, college counsellors, academic advisors, institutional research officers, and researchers.[11]

In **Australia**, the Government's Quality Indicators for Learning and Teaching (QILT) programme brings together data from higher education students and graduates around Australia. The QILT website 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, and the median salary received by recent graduates.

In **England**, **Australia** and **Canada** surveys are also conducted in the vocational education and training sectors. The FE choices survey in **England** consists of nationally collected and published performance indicator data that measures learner and employer satisfaction in the post-16 sector. It includes learner satisfaction data derived from a learner survey. In **Australia** the National Student Outcomes Survey is an annual survey of Australian vocational students awarded a qualification (graduates), or who successfully complete part of a course and then leave the VET system (subject completers).

Institutional performance

The available Anglophone literature on the mechanisms through which governments assess institutional performance does not extend much beyond descriptions of the organisations responsible for quality assurance in the tertiary sector. Descriptions of the

[11] Statistics Canada also regularly undertakes surveys of students at colleges and universities in Canada, while the Canadian University Survey Consortium regularly conducts surveys which include measuring student satisfaction rates.

quality assurance systems used in Australia, Canada, France, Germany, the Netherlands, New Zealand, Norway, Scotland, the United States and Wales are provided in the country reports. The country report on the Netherlands also provides details of the performance agreements that the Dutch Ministry of Education and Science has with each higher education institution.

Perceptions of value for money

Searches for information on perceptions for value for money have yielded limited information on perceptions for money

Disadvantage

The gap in university participation between young people from the most and least advantaged areas is higher in **Scotland** than in **England**, **Wales** and Northern Ireland, 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).

The improved access for disadvantaged students in **Scotland** 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. The least deprived are almost three times more likely to enter a university than a college.

Outcome agreements in Scotland 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. In 2016-17, success rates for FE and HE students in colleges on 160 hours plus courses for students from the 10 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 (SFC, 2017).

There is limited detailed information available internationally (in the Anglophone literature) on the impact of disadvantage on participation in post-compulsory education and training and the initiatives designed to reduce this. Points of interest that have emerged to date include:

- In **Australia**, the Government has set a target that by 2020, 20 per cent of higher education enrolments at undergraduate level will be people from low socio-economic status. The Government administers the Higher Education Participation and Partnerships Program (HEPPP), which aims to increase enrolments from people with such backgrounds by providing 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. In addition, the Government funds the National Centre for Student Equity in Higher Education (NCSEHE) at Curtin University, which aims to inform public policy design and implementation, and institutional practice, in order to improve higher education participation and success for marginalised and disadvantaged people. However, 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.

- Since the late 1990s, nearly two-thirds of public universities in the **United States** have reduced their share of students enrolled from low-income families (earning less than $37,000/£27,851 a year). Most states support at least one need-based financial aid programme 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. 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. 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.

- In **Norway** 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, 60% of 19-24 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.

- In the **Netherlands** 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 percent of disadvantaged students went on to study compared to 69 per cent of non-disadvantaged children.

- There is a strong focus on widening participation in higher education in **Germany**, 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. 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).

- 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 and appear to be mainly targeted at high schools with particularly low college transition rates.

- 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.

Section 6: Conclusions

It can be difficult drawing comparisons across the countries because their post-compulsory education and funding systems differ markedly in terms of their scope, size and structure. Nonetheless, despite these differences, it is clear that common issues prevail in each of the countries. In particular, while the drive to increase participation in higher education has been largely successful, all of the countries continue to experience difficulties in relation to take up of postsecondary education by students from socio-economically disadvantaged backgrounds. These problems are firmly entrenched, despite a range of national and local initiatives involving, for example, needs-based financial aid offered by governments and individual institutions, outreach activities by universities and other post-secondary institutions and flexible modes of delivery at bachelor and sub-bachelor levels across the countries.

Most of the countries are also experiencing problems in relation to establishing pathways both between vocational tracks and academic tracks and to the higher levels of vocational education. The main exceptions are Norway and, to a lesser extent Germany, where flexible modes of study and pathways to and through higher education have been established. Even so, the evidence from Germany suggests that the availability of such flexibility and pathways does not guarantee that substantial numbers of students will take advantage of them and that therefore supplementary initiatives may be needed to promote their use.

Demand led higher education in some countries (in particular New Zealand and Australia) has created tensions between expanding access and increasing costs, as well as issues of quality. Moreover, many countries (for example, Australia and France) are changing, or have recently changed, funding mechanisms. These changes have largely been driven by one of two considerations: firstly, the need to reduce the contribution of the tax payer to higher education especially when graduates accrue financial benefits over their lifetime; secondly, to remove incentives to providers, especially in vocational learning, for taking on learners who are unlikely to complete their course.

With regard to tuition fees, it is noticeable that the countries fall into three broad groups: countries with relatively high tuition fees (England, Wales, Australia, Canada, New Zealand and the United States), countries with relatively low tuition fees (Scotland, France and the Netherlands) and countries with no tuition fees for mainstream higher education in public institutions (Germany, where tutition fees were abolished due to the pressure of public opinion, Norway and France). It remains unclear to what extent the different approaches adopted across the countries are sustainable.

All of the countries offer a variety of student loans and grants for tuition fees (for those countries that charge them) and maintenance, with the latter being largely means-tested and targeted at specific groups. Overall, it remains unclear what the implications of the various approaches will be in terms of student debt. It is clear, however, that while student debt upon graduation is considerably higher in England than in the other

countries, the levels of interest rates, terms and conditions and reforms in other countries may lead to the gap narrowing and this needs to be taken into account when considering the implications of this.

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