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The profile of learners in professional tertiary programmes

This chapter describes comparative data on the learners who pursue professional tertiary education and training. The age of learners is closely related to the function played by different programmes in skill systems. So where programmes, as in short cycle professional programmes in France, are primarily designed as part of initial education, learners are relatively young, mostly 25 or younger. Where such programmes often serve to upskill adult workers, as in Germany, there are many older learners. Similarly, upskilling short cycle programmes are often delivered part time (as in Switzerland) whereas when the programmes are part of initial education (as in Chile) full-timers dominate. The gender mix in professional programmes is closely related to fields of study: in the field of education, for example, there are more than three times as many women enrolled as men on average in OECD countries.

Introduction

As labour market demand for tertiary education graduates has increased over the past decades, widening access to tertiary education has become a priority in many countries, underpinned by a broader emphasis on social mobility. Programmes with professional orientation are often viewed as a particularly effective means of attracting non-traditional learners – learners who are first in their family to pursue tertiary education, those from lower socio-economic backgrounds or with a migrant background, as well as adult learners. A recent study of higher vocational education and training (VET) in Europe (Ulicna, Luomi Messerer and Auzinger, 2016^[1]) highlighted the role of these programmes to serve target groups that are under-represented in tertiary education.

First, the applied and practically-oriented content of programmes is likely to be more appealing to non-traditional learners, especially when the programme is connected to their prior vocational qualification. Second, professional programmes may be easier to access for non-traditional learners. Sometimes the academic entry barriers are lower – for example in Denmark, a system of entry quotas is designed in a way that allows professional programmes to take into account non-academic criteria (e.g. work experience, volunteer work) and assess individually each applicant, while university admissions are mostly driven by grade point average scores (OECD, 2021^[2]). For some learners professional programmes are the only easily accessible form of tertiary education. This is the case in countries where graduates of vocational upper secondary programmes have direct access only to professional programmes (or programmes offered in particular types of tertiary education institution) (see Table 2.1 for some examples). Finally, professional programmes are sometimes more affordable. In some countries, tuition fees are lower for short-cycle tertiary programmes than for bachelor’s or master’s programmes. This is the case, for example, in Korea (OECD, 2021^[2]) and the United States, where the average tuition fee for an associate degree in a community college is less than half of that in a four-year institution (NCES, 2021^[3]). This makes short-cycle programmes not only an affordable option to obtain a tertiary qualification, but if articulation arrangements exist, also a cheaper route to a bachelor’s (or higher level) qualification. In addition, in programmes that are pursued via a dual pathway, learners receive an income while studying, which makes participation more affordable.

As explained earlier, countries were invited through an OECD survey to comment on key challenges in terms of equity as part of the “Data collection on professional tertiary education” conducted for this project. Two equity challenges are commonly highlighted: first, increasing participation and completion among learners from lower socio-economic backgrounds, and second, addressing issues of gender imbalance in some professions. This chapter presents available comparative data on the profile of learners in professional programmes: the age and gender of students, participation in part-time education and some insights into the socio-economic background of students.

Insights from comparative data

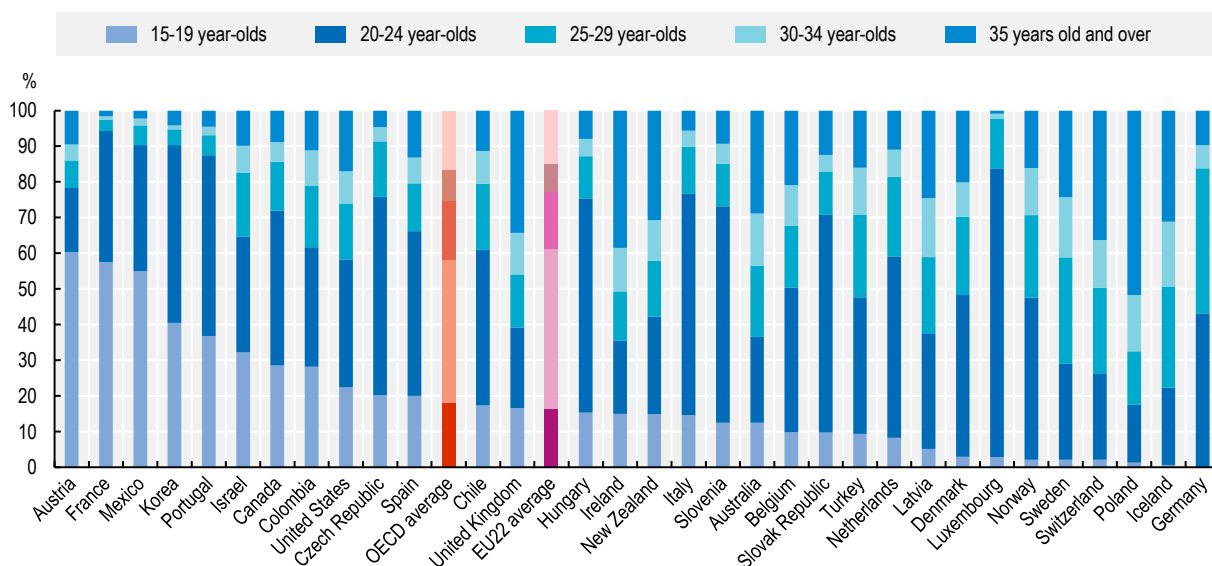
The age of students

Figure 3.1 shows the age distribution of current students enrolled in ISCED 5 programmes, illustrating the different functions these programmes play in national skills systems. In Austria, for example, ISCED 5 programmes are in effect a continuation of upper secondary VET (year 4-5 of BHS programmes are classified as level 5 and they follow-up on the first years of upper secondary VET) and are delivered within the same colleges. In Slovenia as well, short-cycle tertiary programmes are delivered within the same centres that provide upper secondary VET and students are mostly young adults. In both Austria and Slovenia a large share of students in ISCED level 5 programmes hold an upper secondary vocational qualification (see Chapter 2). Similarly, in France short-cycle programmes (BTS, BUT or formerly DUT) offer predominantly initial preparation for a first entry into the labour market and enrol young people. But

unlike Austria and Slovenia, students less often have a prior vocational qualification – two-thirds of students hold a general upper secondary qualification (see Chapter 2).

Conversely, in countries like Germany, Norway and Sweden adults aged 25 or more represent the majority of short-cycle tertiary students, reflecting a different function played by these programmes. In both Norway and Sweden, programmes of higher vocational education are concentrated at ISCED levels 4 and 5, and are not considered part of the higher education system. Most students in these programmes are aged 25 or more, and build on a relevant vocational qualification and work experience. In Germany master craftsman programmes in trade and technical schools provide upskilling to professionals with an upper secondary vocational qualification and several years of work experience.

Figure 3.1. Age distribution of short-cycle tertiary students (2018)



Note: Data for Belgium (French Community) exclude participants in adult higher education.

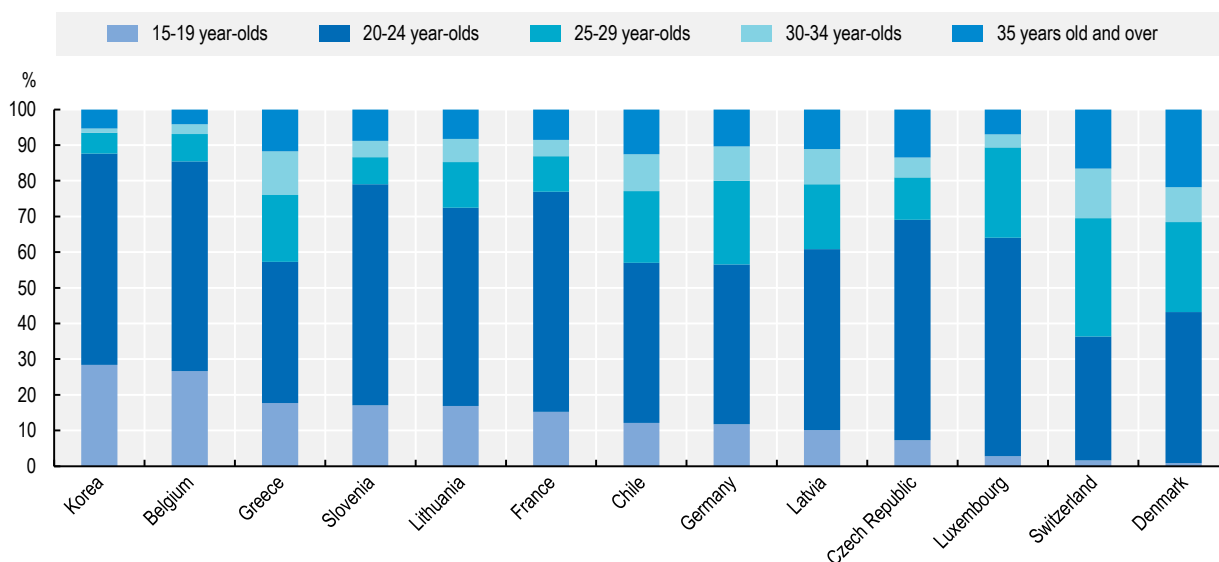
Source: OECD (2020^[4]), "Education at a Glance", Education and Training – Education at a Glance (database), <https://stats.oecd.org/>.

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Figure 3.2 shows the age distribution of students enrolled in programmes that are classified by countries as professional at ISCED level 6. In Korea, Belgium, Slovenia, France and Lithuania this category mostly corresponds to "professional bachelor" programmes, which provide initial preparation for a first skilled job and enrol mostly students aged 24 or less. At the other extreme, in Switzerland, Denmark and Germany most students are aged 25 or more. In Switzerland and Germany this reflects the role of professional examinations at this level, which build on several years of work experience and upskill existing professionals.

As illustrated by Figure 3.3, among the countries that chose to distinguish professional from academic programmes, students in professional programmes at ISCED level 6 tend to be older than those pursuing academic programmes (Greece is the only exception). In many countries, the difference is relatively small (one or two years). However, in Denmark and Switzerland that gap is more substantial (six and four years, respectively).

Figure 3.2. Age distribution of professional bachelor's or equivalent students (2018)

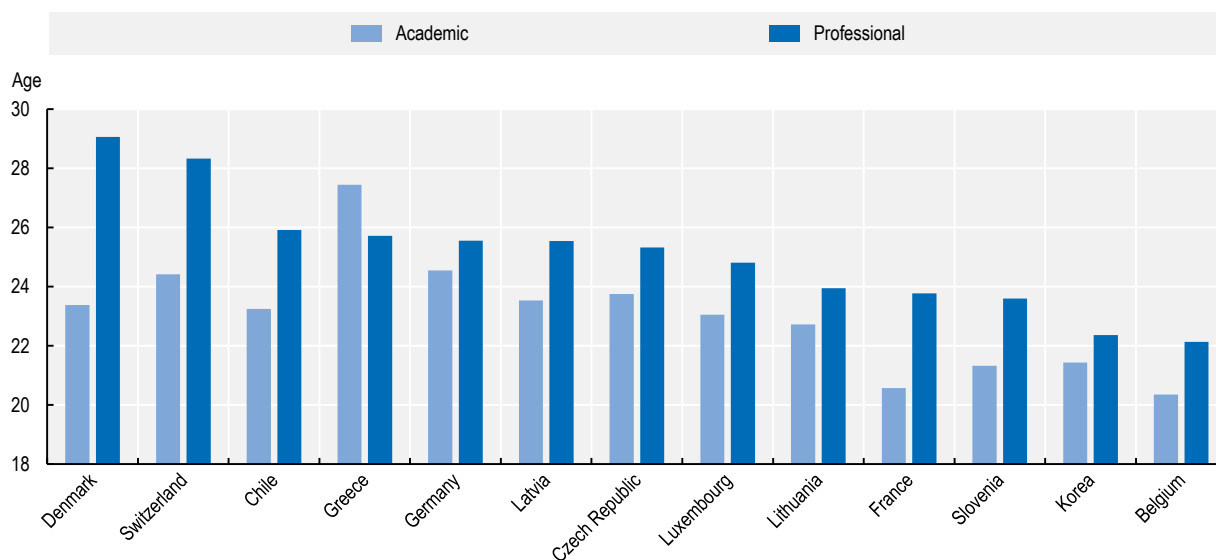


Note: Data are based on national definitions of programme orientation. Data for Belgium (French Community) exclude participants in adult higher education.

Source: OECD (2020₍₄₎), "Education at a Glance", Education and Training – Education at a Glance (database), <https://stats.oecd.org/>.

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Figure 3.3. Mean age of students enrolled in bachelor's or equivalent level, by programme orientation (2018)



Note: Data are based on national definitions of programme orientation.

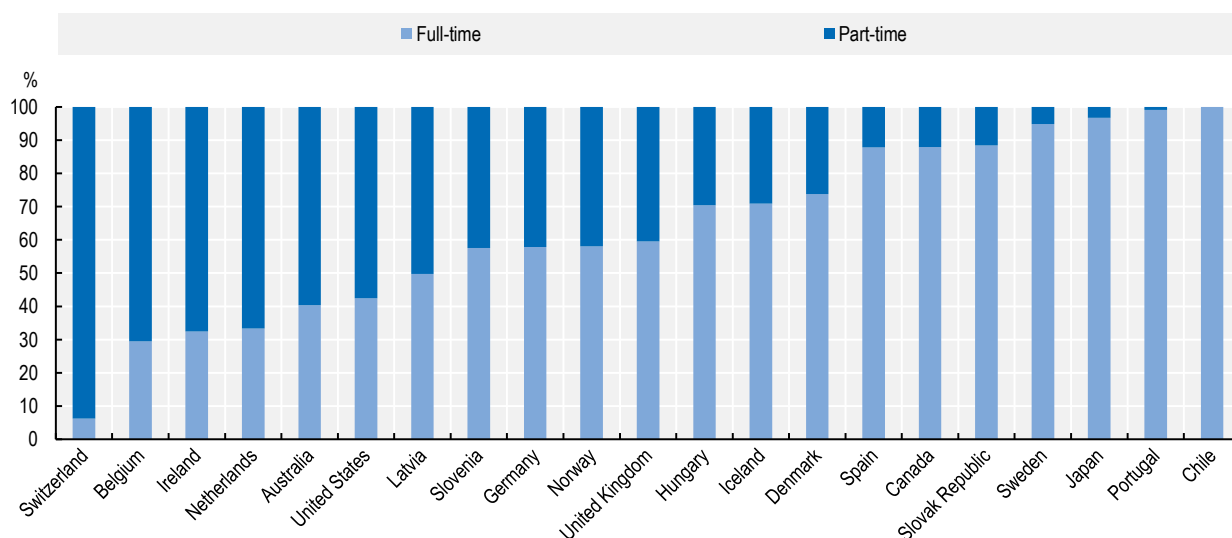
Source: OECD (2020₍₄₎), "Education at a Glance", Education and Training – Education at a Glance (database), <https://stats.oecd.org/>.

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Part-time participation

Short-cycle tertiary programmes are much more frequently than bachelor's programmes pursued part time across OECD countries. In Switzerland, nearly all participants in short-cycle tertiary education pursue part-time programmes (although this sector is a very small part of the tertiary sector). In Norway there is some variation across fields of study – almost all students in the fields of health and welfare, primary sector studies and pedagogical programmes are in part-time programmes, while in technical fields about 50% of students are enrolled part time (OECD, 2021^[2]). These data do not capture some modularised approaches. In Chile for example, participation is reported as 100% full time, but programmes are modularised and about a third of professional tertiary students pursue their studies via evening courses (CNEC, 2021^[5]).

Figure 3.4. Share of full-time and part-time students in short-cycle tertiary programmes (2018)

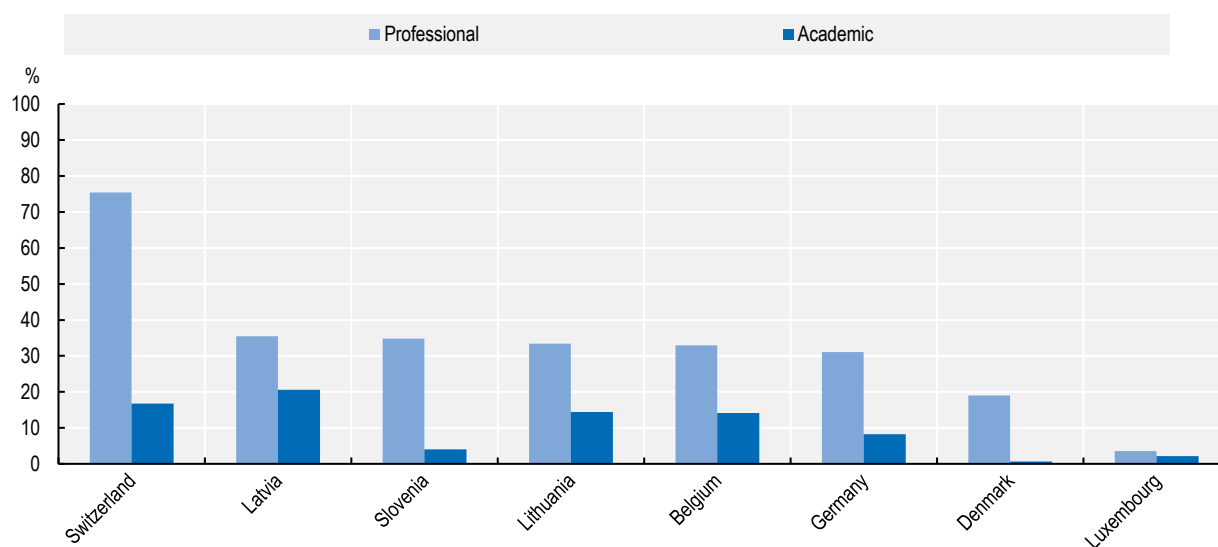


Source: OECD (2020^[4]), "Education at a Glance", Education and Training – Education at a Glance (database), <https://stats.oecd.org/>.

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Among countries that choose to report data separately for professional and academic programmes at ISCED level 6, part-time enrolment is much more common in professional programmes (see Figure 3.5). In some countries, part-time enrolment is systematically combined with relevant work experience. In Denmark, for example part-time professional programmes (at all tertiary levels) require both a specific entry qualification and at least two years of relevant experience. Learners are typically experienced adults who study with the support of their employer (OECD, 2021^[2]). Similarly, in Switzerland the part-time learners include adults preparing for professional examinations (see Box 1.5 for a description), for which work experience is an entry requirement (typically 2 years for ISCED level 6 examinations and 4-5 years for ISCED level 7 examinations). The remaining students in professional ISCED level 6 programmes in Switzerland study in professional education and training (PET) colleges, which similarly to Danish institutions require relevant work experience for part-time enrolment (OECD, 2021^[2]).

Figure 3.5. Share of part-time students in bachelor's or equivalent level, by programme orientation (2018)



Note: Data are based on national definitions of programme orientation.

Source: OECD (2020^[4]), "Education at a Glance", Education and Training – Education at a Glance (database), <https://stats.oecd.org/>.

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In answers to the "Data collection on professional tertiary education", many OECD countries reported a common equity framework for both professional and academic tertiary programmes, with similar arrangements in terms of financial support or other targeted measures designed to facilitate access and support completion in tertiary education. In addition to such overarching measures, a number of countries have introduced specific measures to offer flexible learning options within professional programmes – Box 3.1 provides some examples.

Box 3.1. Measures to foster inclusion in professional programmes

Norway: Increasing access through more flexibility

Vocational college programmes (ISCED levels 4 and 5) are delivered by a large range of providers, administered and financed at county level. 62% of colleges are private and many are small (47% have less than 50 students). Their offer is highly diverse, ranging from technical and maritime programmes to arts and Bible studies. In technical programmes, most students are male, while there are almost only female students in health and social studies. Most students have some work experience and build on upper secondary education in a technical field, health and welfare. About two-thirds of students pursuing an ISCED level 4 or 5 qualification study part time, as many combine studies with work. A number of measures are designed to increase participation and completion rates, and were combined with increased funding and admission in recent years. These include flexible modes of delivery, such as session-based teaching and part-time education. The regional structure of vocational colleges combined with the option of online learning (almost half of the programmes are partly or completely web-based). Applicants without an upper secondary qualification may be admitted through recognition of prior learning. Audiobooks containing learning material have been introduced to help students with reading or writing difficulties.

Switzerland: Supporting people with disability in professional examinations

People with disabilities can apply for a disadvantage compensation for federal professional examinations. The relevant examination boards are responsible for assessing the applications and implementing the examinations. The Confederation has developed a tool to help providers of federal professional examinations to ensure compensation for disadvantages. This might take the form, for example, of a specially organised examination (examination at own workplace, individual instead of group examination) or an adjusted design of the examination (additional time, longer breaks, etc.).

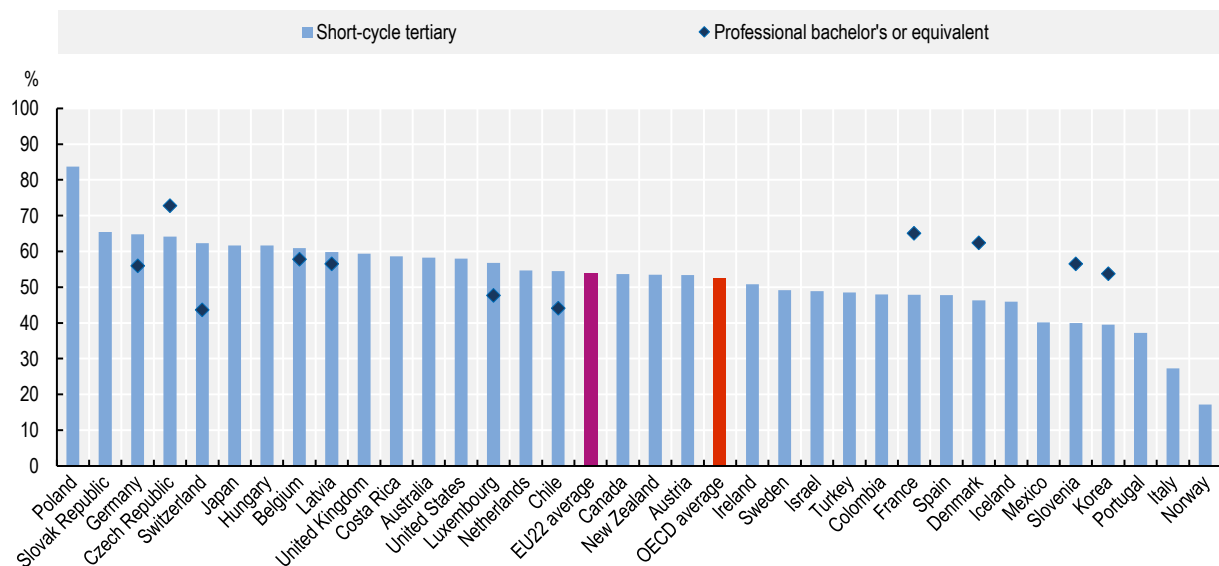
Source: OECD Data collection on professional tertiary education.

The gender of students

In most countries, the share of men and women in professional tertiary education is roughly balanced, with women accounting for between 40% and 60% of short-cycle tertiary students in most countries. At ISCED level 6, in the countries that make a distinction between academic and professional programmes, the share of women in professional programmes ranges between 43% (Switzerland) and 73% (Czech Republic).

At the same time, there are major differences between fields of study in terms of gender composition. Comparative data are not available on gender by field of study separately for academic and professional programmes. However, as one might expect, data on professional programmes show that in countries where one gender dominates in enrolment, programmes are concentrated in traditionally gender-biased fields of study. For example, Norway has the lowest share of women among short-cycle tertiary students, almost certainly explained by the fact that 62% of graduates at this level completed a programme in the field of engineering, manufacturing and construction. In Poland, the opposite holds: 84% of students are women and all programmes at this level are in the field of health and welfare (see Chapter 4).

Figure 3.6. Share of women enrolled in short-cycle tertiary and in professional ISCED level 6 programmes (2018)



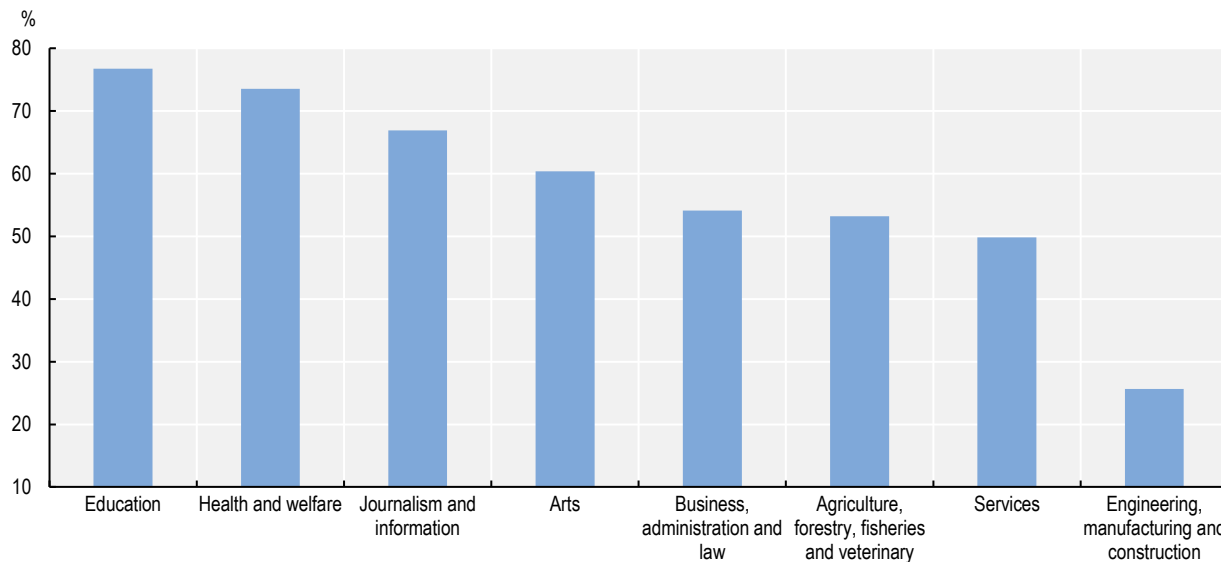
Note: Data for short-cycle tertiary education is for all programme orientations. Data for ISCED level 6 programmes are based on national definitions of programme orientation.

Source: OECD (2020^[4]), "Education at a Glance", Education and Training – Education at a Glance (database), <https://stats.oecd.org/>.

In the absence of comparative data by programme orientation and field of study, Figure 3.7 shows the gender balance in some selected fields of study, which may be considered sector- or profession-oriented. Women are strongly over-represented at the tertiary education level in fields such as education and health and welfare, and men in the fields of information and communication technologies (ICT) and engineering. Only three out of nine fields of study have a balanced gender distribution on average across countries: Services, “Agriculture, forestry, fisheries and veterinary” and “Business, administration and law”.

Figure 3.7. Share of women enrolled in selected fields of study (2018)

OECD average, all tertiary education levels



Source: OECD (2020^[4]), “Education at a Glance”, Education and Training – Education at a Glance (database), <https://stats.oecd.org/>.

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Gender segregation by field of study is linked to the gender pay gap. Among tertiary students, men tend to dominate the fields that yield the best employment prospects in terms of wages, such as ICT or engineering, manufacturing and construction, while women account for the majority of students in lower paid fields such as education or health and welfare (see Figure 4.4 for relevant data for ISCED level 5 programmes). Making sure that well-paid sectors such as ICT and engineering are reflected in training programmes which are attractive to women might play a part in reducing the gender pay gap.

International evidence shows that the lower engagement of women in science, technology, engineering, and mathematics (STEM) fields of study is not driven by academic performance in science – the overall performance of girls and boys in science at age 15 is similar across different countries, but girls are likely to be even better at reading and choose based on their “comparative” (rather than “absolute”) strengths (Mostafa, 2019^[6]). An overview of research (Kahn and Ginther, 2017^[7]) shows that the gender STEM gap is driven by gendered stereotypes, culture, role models, competition, risk aversion and interests. These differences start at childhood and affects children and young adults as they progress through their education and into the labour market.

In response to the strongly biased participation patterns in different fields of study, several countries have introduced initiatives designed to attract women to traditionally male occupations and vice versa. Box 3.2 provides some examples.

Box 3.2. Initiatives to reduce the gender imbalance in professional programmes

Girls' Day – Future for girls day – Daughter's day in Austria

A wide range of initiatives, with different names are implemented with a common objective: bring girls closer to the world of work, especially male-dominated occupations, widening career options and study choices. Girls have a day off school and participate in different activities, such as getting a taste of some occupations (e.g. programming computers, or repairing cars), or visiting companies to learn about occupations involved.

Gender action plan in Scotland (United Kingdom)

The Gender action plan outlines strategies to address gender imbalances at subject level in colleges and universities. For example, it asks each institution to develop its own gender action plan and to develop a school engagement strategy seeking to offer careers advice, pathways and bridging programmes. This action plan seeks to address the important female under-representation in areas such as construction, engineering and IT, while men are underrepresented in childcare and personal care services. The plan aims to increase the minority gender in each of the 10 largest and most imbalanced classes among 16-to 24-year-olds and to remove imbalances greater than 75% in any subject.

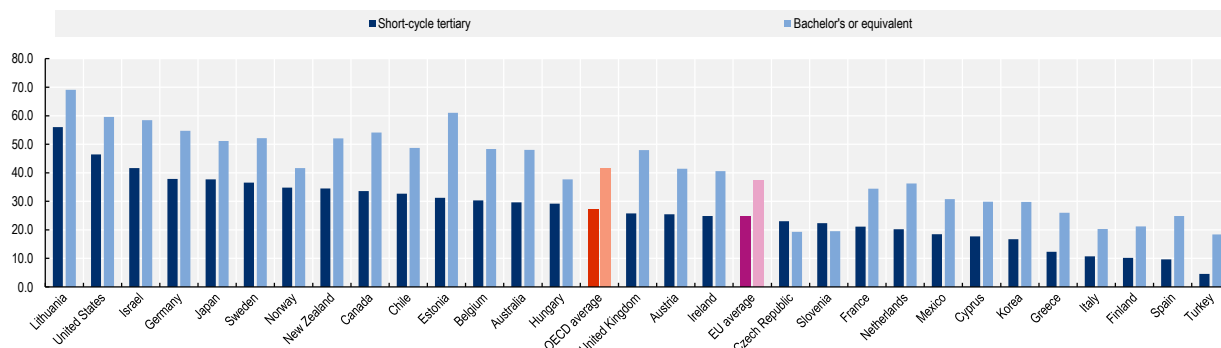
Source: BMBWF (2022^[8]), *Girls' Day - MädchenZukunftstag – Töchertag* [Girls' Day – Girls' Future Day – Daughters' Day], https://www.bmbwf.gv.at/Themen/schule/schulpraxis/ba/gs/geschlechtss_bo/girlsday.html; Cedefop (2020^[9]), *Developments in vocational education and training policy in 2015-19: UK Scotland*, <https://www.cedefop.europa.eu/en/publications-and-resources/country-reports/developments-vocational-education-and-training-policy-2015-19-uk-scotland>.

Socio-economic background

Comparative data on the socio-economic background of students in professional programmes are limited, as relevant data are not collected as part of regular data collections that distinguish by programme orientation. Even at national level data appear to be scarce – a European study of short-cycle tertiary education (Kirsch and Beernaert, 2011^[10]) found that while there was a widely held view among ministries and providers across different countries that short-cycle tertiary programmes contribute to widening participation in higher education and promoting social cohesion, relevant data in support of this proposition were rarely available. Figure 3.8 provides some insights based on the Survey of Adult Skills, a product of the Programme for the International Assessment of Adult Competencies (PIAAC). Professional programmes appear to play an important role in allowing individuals to acquire a tertiary qualification first in their family. The share of adults with at least one tertiary-educated parent is lower among short-cycle tertiary graduates than among adults holding a bachelor's degree or equivalent in all but two countries (and in those countries the difference is very small).

Figure 3.8. Share of tertiary graduates with at least one tertiary-educated parent

Adults aged 25-64 with tertiary attainment, by type of tertiary qualification



Note: Data refer to 2015 for Chile, Greece, Israel, Lithuania, New Zealand, Slovenia and Turkey. Data refer to 2017 for Hungary and the United States. All other countries refer to 2012. The Survey of Adult Skills (PIAAC) is based on ISCED-97. The labels in this chart have been adapted so that they refer to the closest equivalents: Short-cycle tertiary education = ISCED-97 5B, Bachelor's or equivalent = ISCED-97 5A. Source: OECD Survey of Adult Skills (PIAAC), <https://www.oecd.org/skills/piaac/>.

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Conclusion

Countries differ strongly in terms of the age distribution of students in professional tertiary education programmes. Variation regarding the age of students, as well as the use of part-time participation, both across countries and between programmes within individual countries, illustrates the different functions professional programmes play in national skills systems.

Younger adults dominate in programmes providing initial preparation for labour market entry. Programmes are designed to equip recent upper secondary graduates with occupational skills. Short-cycle tertiary programmes in Austria, Slovenia, France and Italy usually play this role. Similarly, professional bachelor's programmes across various European countries (e.g. Belgium, Lithuania, Slovenia, France) tend to enrol young adults and prepare them for a first skilled job.

Older adults dominate in programmes offering other functions, including:

- **Upskilling for existing professionals:** Programmes build on a relevant prior vocational qualification and several years of relevant work experience. Students often combine studies with employment in a relevant sector. For example, professional examinations in Germany and Switzerland often have this function.
- **Reskilling for adults:** Programmes are used to support a career shift. While students may have work experience and work part-time, their employment is not necessarily related to the targeted field of study. A programme may serve as a tool for reskilling if it does not require relevant work experience – instead participants may obtain such experience during their studies through work-based learning. For example, in Denmark professional programmes may be pursued full time (with an internship) or part time for those with relevant work experience.

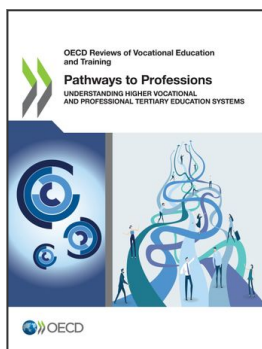
Countries that want to make their programmes more accessible to adult learners, may need to increase the flexibility of their professional programmes, including in terms of part-time options, recognition of prior learning and modularisation.

The gender balances in professional tertiary education also differs strongly between countries, and largely reflects the fields-of-study of the professional programmes on offer. Female students are predominantly enrolled in fields such as, health and social care and teaching. By contrast, male students are much more likely than female students to be enrolled in construction, manufacturing and engineering programmes, as well as IT programmes. Breaking gender stereotypes is crucial, and can contribute to closing the gender wage gap in the labour market. Career guidance can help girls and boys consider a wide variety of career options, and financial incentives to students and education and training providers can contribute to guiding students into fields where they are underrepresented.

Several countries view professional programmes as an important tool in enabling non-traditional students access tertiary education. While comparative data on this issue are limited, they suggest that short-cycle tertiary programmes do play that role: the share of graduates with at least one tertiary-educated parent is much lower than among graduates of bachelor-level programmes.

References

- BMBWF (2022), *Girls' Day - MädchenZukunftstag - Töchertag*, [8]
https://www.bmbwf.gv.at/Themen/schule/schulpraxis/ba/gs/geschlechtss_bo/girlsday.html
 (accessed on 15 February 2022).
- Cedefop (2020), "Developments in vocational education and training policy in 2015-19: UK Scotland", *Cedefop monitoring and analysis of VET policies.*, [9]
<https://www.cedefop.europa.eu/en/publications-and-resources/country-reports/developments-vocational-education-and-training-policy-2015-19-uk-scotland> (accessed on 28 February 2022).
- CNED (2021), *Consejo Nacional de Educación. Índices Educación Superior*, [5]
<https://www.cned.cl/indices/matricula-sistema-de-educacion-superior> (accessed on 22 December 2021).
- Kahn, S. and D. Ginther (2017), "Women and STEM", *NBER Working Paper Series 23525*, [7]
<https://doi.org/10.3386/W23525>.
- Kirsch, M. and Y. Beernaert (2011), *Short Cycle Higher Education in Europe. Level 5: the Missing Link*, EURASHE, Brussels. [10]
- Mostafa, T. (2019), "Why don't more girls choose to pursue a science career?", *PISA in Focus*, No. 93, OECD Publishing, Paris, <https://doi.org/10.1787/02bd2b68-en>. [6]
- NCES (2021), *Fast Facts: Tuition costs of colleges and universities*, [3]
<https://nces.ed.gov/fastfacts/display.asp?id=76> (accessed on 30 November 2021).
- OECD (2021), *OECD Data collection on professional tertiary education*, Unpublished. [2]
- OECD (2020), "Education at a Glance", *Education and Training – Education at a Glance (database)*, <https://stats.oecd.org/> (accessed on 1 June 2021). [4]
- Ulicna, D., K. Luomi Messerer and M. Auzinger (2016), *Study on higher Vocational Education and Training in the EU*, European Commission, Brussels, <https://doi.org/10.2767/421741>. [1]



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