

Chapter D5. Who are the teachers, and where do countries stand in terms of teacher shortages?

Highlights

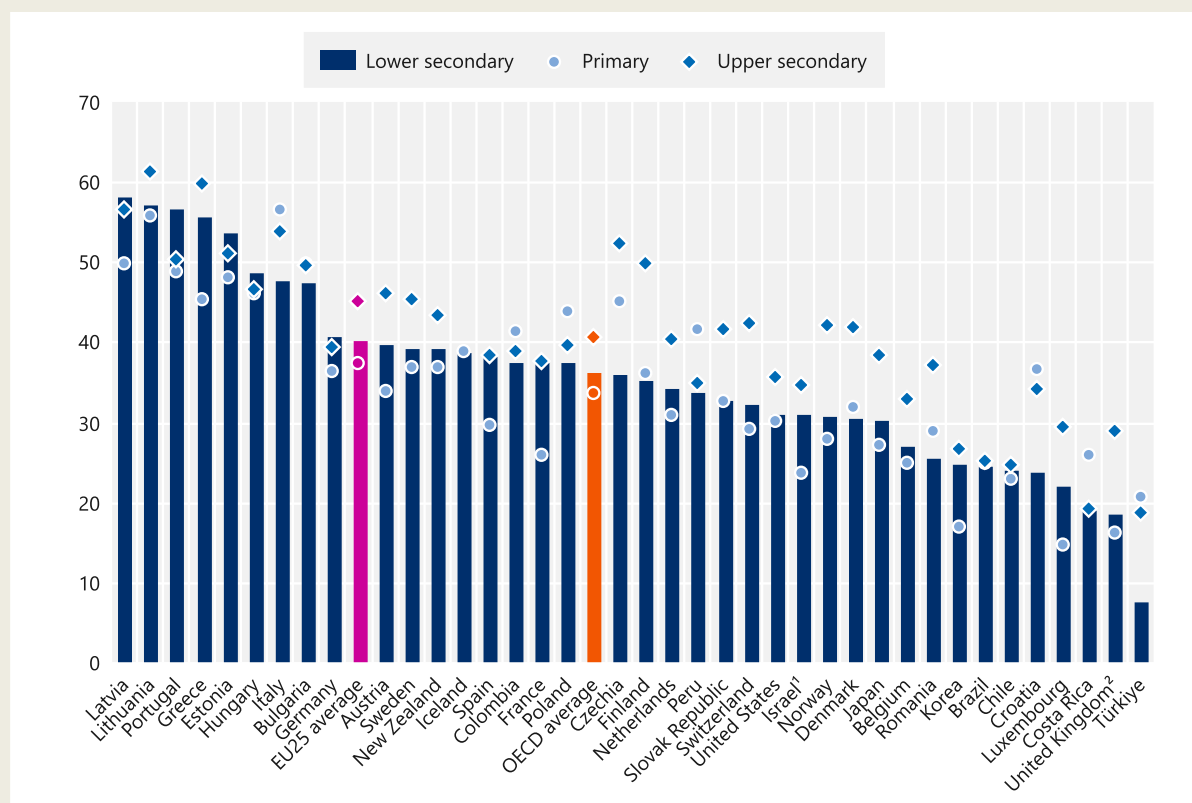
- Of the 21 countries with available data, 18 reported that they faced teacher shortages at the start of the 2022/23 academic year, with only Greece, Korea and Türkiye not reporting any shortages.
- The ageing of the teaching workforce is more pronounced in secondary schools than in primary education. On average across OECD countries, the share of older teachers (aged 50 and over) increases with the education level: from 34% in primary education to 36% in lower secondary and 41% in upper secondary education.
- Men are more likely to teach in secondary education than at early stages of education. On average, less than 5% of teachers in early childhood education are men, rising to 17% at primary level, 32% at lower secondary level and 40% at upper secondary level.

Context

Teacher recruitment problems have become a major concern in OECD countries, with most countries reporting frequent teacher shortages at the start of the school year. Shortages in education can be more difficult to resolve than in other sectors, due to the specific nature of the teaching profession. These shortages result from the declining attractiveness of the teaching profession, partly due to low salaries, high stress levels, increased administrative burdens and limited opportunities for career advancement (OECD, 2020^[1]). The ageing population adds to the challenge as many teachers are nearing retirement, increasing the need to recruit new teachers to maintain standards and performance. Recruitment difficulties are especially acute in rural and disadvantaged areas, leading to disparities in educational quality (OECD, 2023^[2]). Gender imbalances in the teaching profession is another issue. Men are under-represented in early childhood and primary education, while women are under-represented in higher education and leadership roles. This affects the diversity of role models for students and reflects broader gender equity issues in the workplace. This chapter examines all these questions and tries to highlight some of the educational policies being implemented to meet these challenges. This chapter also covers the teacher selection process, which might also have a bearing on shortage.

Figure D5.1. Share of teachers aged 50 and over, by level of education (2022)

In per cent, public and private institutions



1. Values for lower secondary and upper secondary education include only public institutions.

2. Upper secondary vocational programmes include vocational programmes at other levels of education.

Countries are ranked in descending order of the share of teachers aged 50 and over in lower secondary education.

See Table D5.3. for data and under Chapter D5 Tables for StatLink. For more information see *Source* section and *Education at a Glance 2024 Sources, Methodologies and Technical Notes* (<https://doi.org/10.1787/e7d20315-en>).

Other findings

- Students intending to become secondary school teachers obtain a master's degree in around 60% of countries. Candidates have to pass a competitive examination at the end of the initial teacher education programme in around a third of countries.
- More than half of OECD and partner countries have seen a decline in the share of young teachers since 2013. In 2022, young teachers made up 11% of the teaching workforce from primary to upper secondary levels of education.
- Of the nine countries which reported teacher shortages in only some fields of study, all face a shortage of mathematics teachers, while there are no shortages of history and geography teachers.
- Most countries are opting to employ non-qualified teachers to offset the effects of teacher shortages. Nevertheless, the proportions are still low, accounting for less than 5% of all primary and secondary school teachers in around two thirds of countries with data, and only exceeding 20% in Denmark and Sweden.

- On average, 7% of fully qualified teachers resigned or retired from the profession in 2022/23 across the 15 OECD countries and other participants with data available.

Note

Teacher shortages mean either some vacancies were not filled by fully qualified teachers at the beginning of the academic year or, in countries with competitive examinations, that the number of available teaching positions exceeded the number of successful candidates in the competitive examination conducted at the end of the preceding academic year. The fact that certain positions are unfilled at the beginning of the year does not necessarily mean that they remain vacant throughout the school year. The number of vacant posts may also have differing impacts on countries, since this chapter does not account for the overall size of the education system or workforce. This chapter does not account for teacher absenteeism throughout the year or the mechanisms for their replacement. These factors can disrupt the continuity of education for students and challenge schools in maintaining quality teaching.

Analysis

Pathways to becoming a fully qualified teacher in secondary education

Countries exhibit significant differences in the qualifications required to become a teacher, the selectiveness of their teacher education programmes, how rigorously candidates are assessed during and at the end of their studies and how they are assigned to public schools.

Qualification level

In all countries except Japan, students intending to become secondary school teachers in public schools leave the initial teacher education programme with a bachelor's or master's degree, which is the standard requirement for teaching. In the Flemish Community of Belgium and Japan, some teachers can also teach at the lower secondary level with a short-cycle tertiary degree. Globally, in about half of the 32 countries and other participants with data, all secondary teachers are required a master's degree, while a bachelor's degree is sufficient in the remaining 40%. A few OECD countries and other participants require different qualifications for teachers lower and upper secondary education. For instance, in Denmark, the Netherlands and Romania, teachers in lower secondary education usually need a bachelor's degree, whereas those wishing to teach in upper secondary education need a master's degree. This differentiation aims to ensure that teachers at the upper secondary level, who are preparing students for tertiary education, have a deeper subject knowledge and advanced pedagogical skills (Table D5.1.).

There is no clear correlation between teachers' qualification requirements and the proportion of unfilled teaching vacancies at the start of 2022/23. However, only a bachelor's degree is required in the three countries with no teacher shortages at the start of that academic year – Greece, Korea and Türkiye – while out of the nine countries which faced unfilled teaching vacancies in all fields of study, this is only true for Latvia and Lithuania, all remaining countries require a master's degree for all, or part, of their secondary teachers. These figures need to be interpreted with caution, as shortages of teachers are also influenced by factors such as salary, working conditions and how valued the teaching profession is in society. So, although requiring higher qualifications may contribute to teacher shortages and make it difficult to replace those leaving the profession, the impact is strongly moderated by other factors in countries' education systems and labour markets (Table D5.1. and Figure D5.5.).

Selection process

The selection process for aspiring teachers varies widely between countries, reflecting different educational philosophies and priorities. However, some trends can be identified. In about three quarters of countries with data, there is a selection process for entry into initial teacher education programmes. This process may take the form of competitive examinations, standardised test results, grade point averages in secondary education, or interviews (see Chapter D6 of *Education at a Glance 2022* (OECD, 2022_[3])). For example, in Estonia and Finland, prospective teachers must pass a competitive exam before being admitted to initial teacher education programmes, ensuring that only those with the required academic skills can enrol (Table D5.1.).

Selection can also take place at the end of the programme. In around one-third of countries with data, – Argentina, Brazil, Denmark (for upper secondary only), France, Japan, Korea, Romania, Spain and Türkiye – candidates must take a competitive examination or take part in a selective procedure (in the case of Greece) at the end of the initial teacher education programme to determine who is eligible for a teaching position in public schools. In all of these countries, with the exception of Argentina (data are missing) and France, there is also a selection process at the entrance to the programme, making preparation for a teaching career very demanding from start to finish (Table D5.1.). In France, students can complete their initial teacher education programme without any selection process at entry or during their studies but they must pass a state examination to be certified. This approach allows a broader pool of candidates to enter initial teacher education programmes, while ensuring that only the most competent are certified to teach (Table D5.1.).

A few countries –, Greece, Korea, Romania, Spain and Türkiye – have multiple stages of selection: at entry, during the programme and at the end. In Korea, for example, students must obtain a bachelor's degree in education to qualify for Level 2 teacher and must pass a competitive examination to be appointed by the Office of Education. Then, after more than three years' teaching experience, they can undergo intensive training and assessment to meet the high standards required for the teaching profession. At the end of this process, they take a comprehensive certification exam to achieve Level 1 teacher qualification. This multi-tiered approach aims to maintain high standards throughout the teacher preparation process, ensuring that only the best candidates enter the profession. In Spain, the second stage of initial secondary teacher education is a master's degree in education. All prospective teachers, in order to access this master, must accredit a minimum B1 level in a foreign language according to the Common European Framework of Reference for Languages (Table D5.1.).

Assignment of teachers to schools

The procedure for assigning certified teachers to schools also varies widely, with some countries granting more autonomy to schools than others when it comes to hiring teachers. In general, the countries with a competitive examination certifying teachers at the end of the training process also have a national or regional education authority overseeing the assignment of teachers to schools, according to criteria which vary across countries. Only Argentina, Denmark and Japan do things differently among this group. In Denmark, teachers often apply directly to schools for open positions. In Argentina, teachers apply for positions in public secondary schools and the selection is made based on their credentials and past performances while in Japan, teachers are selected through exam in each prefecture and ordinance-designated city, and assigned to schools by municipal boards of education. (Table D5.1.).

In countries with no competitive examination at the end of the process, the placement of teachers in schools is often decentralised, with teachers applying directly to the school or through the local government authority. However, the way in which teachers are assigned to schools is different across countries. In Latvia, for instance, qualified individuals typically apply for teaching positions through job advertisements and the teachers are selected by the school head. In Austria, teachers are employed by the regional

education authorities (*Bildungsdirektionen*) but the school management has full autonomy over their selection. In New Zealand, there is no central agency responsible for staff placement. Teaching vacancies at national level are advertised by the Ministry of Education via an online platform called the Education Gazette and applications for teaching jobs are made directly to the schools (Table D5.1.).

In a few countries – such as Germany, Switzerland and the United States – the assignment of teachers to schools varies significantly between subnational regions. In Switzerland, the employment conditions for teachers differ between cantons. Although in all cantons a recognised diploma is a general requirement for a teaching position (with exceptions when there are teacher shortages), other employment conditions, such as salary or number of teaching hours, vary across cantons. In the United States, school districts and states have different procedures for applications for teaching positions and the assignment of teachers to schools. Teachers may apply directly to schools or districts for open positions, or they may use online job boards and recruitment websites. The recruitment and hiring process of teachers is centralised only in some states in the United States, as it is in some *Bundesländer* in Germany (Table D5.1.).

Start in the teaching profession

Countries also differ over whether teachers can begin their teaching careers immediately after graduation or must undergo further training or probationary periods. Additional steps might include acquiring a credential or licence for teaching (in addition to the relevant academic qualifications), passing examinations and/or successfully completing an induction or probation period.

In more than one-third of the 31 countries with data, newly certified teachers are required to undergo a probationary period before they can teach independently (Table D5.1). This probationary period serves as an induction phase, allowing new teachers to gain practical experience and further develop their teaching skills under supervision. For example, in Australia, new teachers often go through a provisional registration phase, where they work under the guidance of experienced colleagues before gaining full registration.

In contrast, other countries allow certified teachers to begin teaching directly without a formal probationary period (Table D5.1). This does not necessarily mean that they do not receive any support at the start of their career. In Finland, for example, teachers who have undergone a rigorous initial teacher education programme, which includes gaining extensive practical teaching experience, are fully qualified to start teaching independently as soon as they obtain the certificate, while still receiving support to continue learning the fundamentals of the profession during their first years.

Teaching workforce

Teachers by age

The average age of teachers and the proportion of young and older teachers are key measures of a country's ability to renew its teaching workforce. A higher average age and a larger share of older teachers implies an impending wave of retirements, which could worsen existing teacher shortages. Meanwhile a low percentage of young teachers who have just entered the profession may indicate challenges in attracting new talent, leading to concerns about whether an adequate teaching workforce can be sustained.

Data show that the average age of teachers ranges from 42 in early childhood education and care to 46 in upper secondary education. The average age of the teaching workforce has increased at all levels of education in all but six countries since 2013, with largest changes observed in Hungary, Lithuania (increase of 2 years) and Portugal (5 years) (see Data Explorer, personnel data by age).

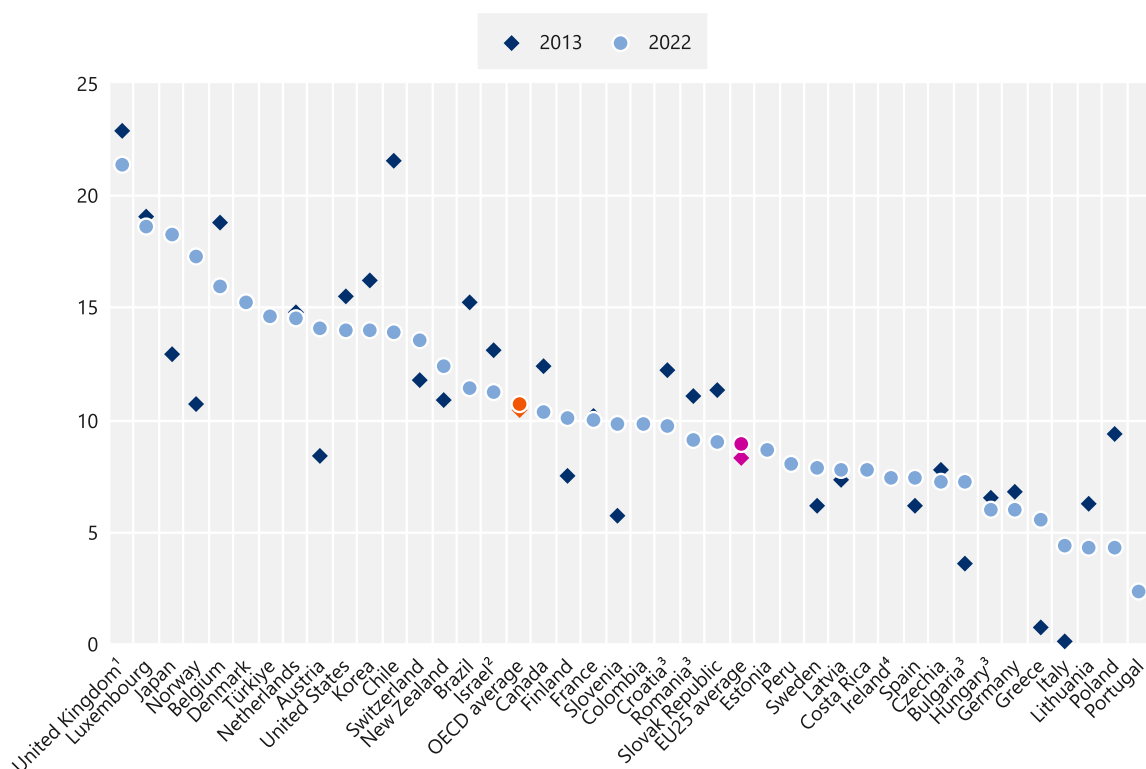
Young teachers

Young teachers – aged under 30 – make up only a small proportion of the teaching workforce, only 11% on average at all levels of education. The proportion of young teachers is highest in early childhood education and care (18%) and lowest in upper secondary vocational education, where young teachers account for just 7% of all teachers. At upper secondary level, around 70% of countries have a higher proportion of young teachers in general programmes than in vocational programmes.

Since 2013, more than half of OECD and partner countries (i.e. 21 out of 34) experienced a decline in the share of young teachers from primary to upper secondary levels. Chile saw the sharpest decline, by 7 percentage points from 21% to 14%. However, in Austria, Japan and Norway, the share of young teachers increased by 5 or more percentage points since 2013 (Figure D5.2.). The share of young teachers is particularly low at tertiary level. This is partly because the qualifications required to work are often higher at tertiary education compared to other levels of education. In Japan and Korea, teachers aged under 30 account for almost half of the teachers at pre-primary level, but less than 3% at tertiary level (Table D5.2.).

Figure D5.2. Trends in the share of teachers aged under 30 in primary to upper secondary education (2013 and 2022)

In per cent, public and private institutions



1. Upper secondary vocational programmes include vocational programmes at other levels of education.

2. Values for lower secondary and upper secondary include only public institutions.

3. Year of reference differs from 2013. Refer to the source table for more details.

4. Values for all levels include only public institutions.

Countries are ranked in descending order of the share of teachers aged under 30 in 2022.

See Table D5.2 for data and under Chapter D5 Tables for StatLink. For more information see *Source* section and *Education at a Glance 2024 Sources, Methodologies and Technical Notes* (<https://doi.org/10.1787/e7d20315-en>).

Young teachers at the beginning of their careers often face several difficulties. Many young teachers leave the profession early due to burnout, balancing high workloads and parenting responsibilities, low self-efficacy regarding class management, and feelings of isolation (Hogan and White, 2021^[4]). Due to low salaries, especially at the beginning of their careers, young teachers struggle to manage childcare and parenting along with their work. This may lead to teachers leaving the profession at a young age, exacerbating teacher shortages (Diliberti, Schwartz and Grant, 2021^[5]).

Older teachers

A larger share of older teachers – aged 50 and older – implies a large number of imminent retirements, which could worsen current shortages. Conversely, a declining share of older teachers may indicate either that more teachers are leaving the profession early, or that a large cohort of older teachers have just been replaced by new teachers.

On average for all levels of education, teachers aged 50 and over make up over one-third of the entire teaching profession. More specifically, 34% of teachers are aged 50 and over in primary education, 36% in lower secondary, and over 40% in upper secondary and tertiary education. In Japan and Korea, while the share of older teachers is less than 15% at pre-primary level, it reaches around 50% at tertiary level. However, some countries show different trends. In Germany for instance, less than 30% of teachers are 50 or more at both early childhood education and care and tertiary level, while almost half of post-secondary non-tertiary teachers are older (Table D5.3. and Figure D5.1).

The proportion of older teachers has increased at all levels of education between 2013 and 2022 in 11 of the 19 countries with comparable data for both years (See Data Explorer, personnel data by age). This trend is particularly marked in pre-primary and upper secondary education, where the share has increased in all countries except for seven countries. The trend especially in pre-primary education can be linked to the decline in the population of children of pre-primary age in recent decades. If total enrolment declines, the age of teachers is likely to increase as fewer new teachers are needed to replace retirees. In Portugal, for example, a country with an ageing population and a low birth rate, the number of children enrolled has fallen sharply, especially among the under 5-year-olds. This partly explains why the proportion of pre-primary teachers aged 50 and over has risen from 26% to 30%, while the proportion of teachers aged under 30 has fallen from 21% to 18% between 2013 and 2022 (Table D5.2, Table D5.3. and Data Explorer on personnel data by age).

Beyond the need to replace retiring teachers, the age of the teaching workforce has other important policy implications especially for secondary and tertiary level of education. For example, younger teachers are more likely to have the skills to use information and communication technologies (ICT) effectively in the classroom. Older teachers who may not be as familiar with ICT, may struggle to use it in their teaching without sufficient technical support or professional development (Diliberti, Schwartz and Grant, 2021^[5]). To overcome these difficulties, countries need to adjust their professional development programmes to suit the characteristics of their teaching workforce.

Teachers by gender

Women make up a large majority of teaching staff across OECD and partner countries. This can be problematic not just because of the effects that an unbalanced distribution of teachers' gender can have on students, but also because a lack of male applicants can worsen teacher shortages. On average, women make up 70% of teaching staff at all levels of education. The share ranges from 49% in Japan and 52% in Saudi Arabia to more than 80% in Estonia (82%), Latvia (83%) and Lithuania (82%) (Table D5.4.).

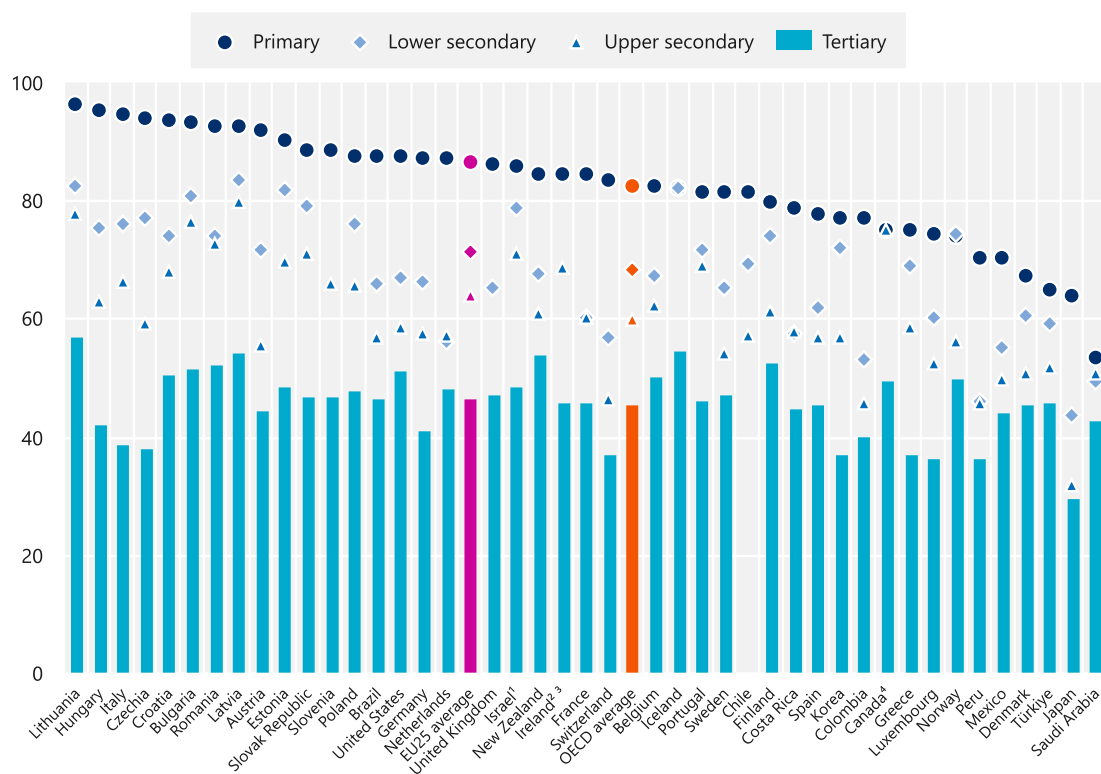
The gender balance of teaching staff varies across different levels of education. Women are particularly over-represented in early childhood education. Less than 5% of teachers in early childhood education are

men. Countries are therefore making efforts to increase the number of male teachers in early childhood education and care environment (ECEC), leading to an increase of male staff over the years. Germany implemented the *Mehr Männer in Kitas* (More men in day-care centres) programme in 2011 to 2013 and *Quereinstieg – Männer und Frauen in Kitas* (Lateral entry – Men and women in day-care centres) programme in 2015 to 2020, which helped increase ECEC staff (UNESCO, 2022^[6]). This has led to an increase of the share of male staff at ECEC level, almost doubling from 3.5% in 2013 to 5.9% in 2022 (Table D5.4. and Data Explorer on personnel data by institution).

The over-representation of female teachers is also noticeable in primary and secondary education. Women account for over 70% of primary teachers in all countries except Denmark, Japan and Türkiye. In secondary education, although they continue to dominate, the proportion of female teachers is smaller. Women make up 68% of lower secondary teachers on average across OECD countries, with values ranging from 44% in Japan to 83% in Latvia. At upper secondary level the share of female teachers falls to 60% on average across OECD countries, with significant variations across countries, from 32% in Japan to 80% in Latvia (Figure D5.3.).

Figure D5.3. Share of female teachers, by level of education (2022)

Percentage of women among teaching staff in public and private institutions



1. Values for lower secondary, upper secondary and all tertiary include only public institutions.
2. Values for all levels include only public institutions.
3. Year of reference differs from 2022. Refer to the source table for more details.
4. Tertiary includes only public institutions.

Countries are ranked in descending order of the share of female teachers in primary education.

See Table D5.4. for data and under Chapter D5 Tables for StatLink. For more information see Source section and *Education at a Glance 2024 Sources, Methodologies and Technical Notes* (<https://doi.org/10.1787/e7d20315-en>).

In contrast, gender ratios at tertiary level are close to parity across the OECD. On average, female teachers are slightly under-represented, at 46%, compared to a high share of female students enrolled at tertiary level (Figure D5.3). This relatively low share of female teachers at higher levels of education may indicate that some countries still have a glass ceiling for female faculty in senior positions. The slight under-representation of women among doctoral students, a qualification often required to teach in tertiary education, also partly explains this trend (see Chapter B4).

Teachers by type of contracts

As well as differences in the age structure and gender balance of their teaching populations, countries also differ in the way teachers are employed. In all OECD countries, at least three-quarters of fully qualified teachers typically have open-ended contracts, providing them with long-term job stability and security. This is standard practice for all teachers in countries such as France, Latvia, and Lithuania, where teachers, once certified, generally enjoy permanent positions (Table D5.5.).

However, it is also common in some countries for teachers to start their careers on fixed-term contracts, particularly when filling temporary vacancies or during probationary periods after graduation. On average, around 12% of secondary school teachers have a fixed-term contract in the countries for which data are available. This proportion even exceeds 20% in Austria, Romania and the Slovak Republic (Figure D5.4). In Austria, there are many fully qualified teachers with fixed-term contracts, particularly for substitute teachers or for specific project-based roles. These temporary contracts are generally used for temporary positions or when there is a specific end date for the employment period. The reasons are different in the Slovak Republic, where the long probationary period before newly hired teachers become eligible for permanent positions increases the prevalence of fixed-term contracts. Whether a teacher receives a fixed-term or open-ended contract is often at the discretion of the school head. According to labour legislation, a fixed-term employment contract in the Slovak Republic can last a maximum of two years and may not be extended or re-agreed within this period more than twice, although the law does allow some exceptions.

In an effort to attract more individuals to the teaching profession, some countries have recently reformed their contract policies. The Flemish Community of Belgium and the Netherlands, for example, have reduced the length of time before a teacher has to be made permanent. This change aims to provide greater job security and make teaching a more appealing career choice, addressing concerns about recruitment and retention in the education sector.

Another common factor is the prevalence of non-fully qualified teachers among the teaching staff in primary and secondary education. Most countries, except Hungary, Ireland, Japan and Korea, employ teachers who are not fully qualified. In about two thirds of these countries, they make up less than 5% of all teachers in secondary education. However, the share exceeds 20% in Denmark, for primary and lower secondary education, and in Sweden for secondary education (Table D5.5.).

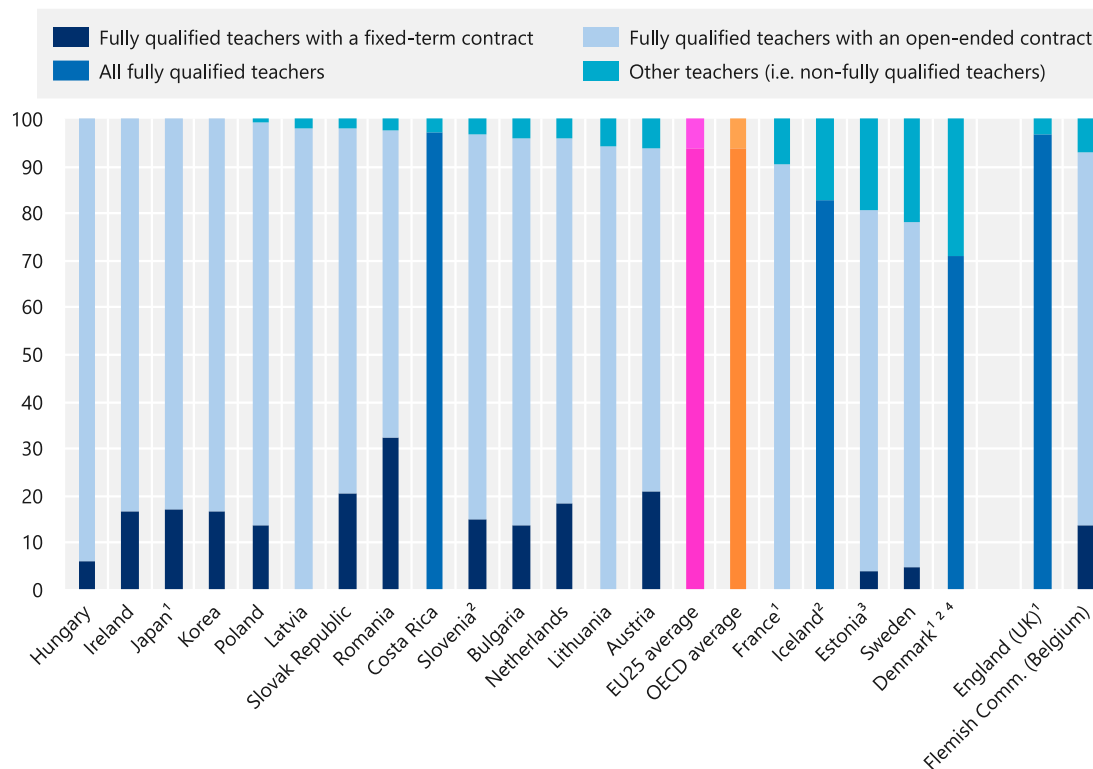
The reasons for this high percentage differ between the two countries. In Denmark, many of these teachers are students taking a sabbatical year from their studies to work as teachers. They often work part time, unlike fully qualified teachers, many of whom work full time. This situation arises due to a combination of factors including teacher shortages and flexibility within the Danish education system that allows for such arrangements. Although these students help to meet immediate staffing needs, they also raise the issue of the need to properly train them. Even if many of them only work part-time, it is essential to maintain the quality of teaching provided to students. In Sweden, the situation is due to a significant wave of retirements among the current teaching workforce, leading to a rise in the employment of non-fully qualified teachers. Unlike in Denmark, Sweden's approach involved a broader range of individuals than students, including those with partial qualifications, substitute teachers and individuals transitioning from other professions.

There is no uniform pattern to the presence of non-fully qualified teachers at different levels of education. In some countries, such as Costa Rica and Lithuania, non-fully qualified teachers are more numerous in

primary education, while in others, such as France and Sweden, they are more common in secondary education. However, over the last decade, the proportion of non-fully qualified teachers has generally increased in most countries and, although their share remains relatively low, it is a growing concern in many education systems, reflecting wider challenges in maintaining a fully qualified teaching workforce across different subjects, regions and levels of education (Table D5.5.).

Figure D5.4. Distribution of secondary teachers, by type of contract and qualification status (2022/23)

Full-time and part-time, public institutions



1. Reference year: academic year 2021/22 for Denmark, France, Japan and England (UK).

2. Primary and lower secondary education combined instead of secondary education.

3. Including primary education.

4. Many teachers in the “other teachers” category work part-time.

Countries are ranked in descending order of the share of fully qualified teachers.

See Table D5.5. for data and under Chapter D5 Tables for StatLink. For more information see *Source* section and *Education at a Glance 2024 Sources, Methodologies and Technical Notes* (<https://doi.org/10.1787/e7d20315-en>).

Teacher shortages

Shortage of fully qualified teachers in secondary education

Teacher shortages are a growing concern in many countries. The 2022 Programme for International Student Assessment (PISA) found that, in more than half of the education systems surveyed, school principals were more likely to report teacher shortages in their schools in 2022 than their counterparts were in 2018. On average, the percentage of students in schools whose principals reported that instruction is hindered by a lack of teaching staff increased by 21 percentage points, from 26% in 2018 to 47% in 2022.

In Australia, Belgium, Chile, France, Latvia, the Netherlands, Poland and Portugal, the increase exceeded 30 percentage points. However, it is important to note that these measures are based on principals' perceptions, and are not objective measures of staff shortages. Principals in different countries may have different perceptions of what constitutes a shortage of teaching or support staff in their schools (OECD, 2023^[2]).

In contrast, Figure D5.5 uses quantitative data to examine the issue of teacher shortages at two points in time: the start of the academic year 2014/15 and 2022/23. For this analysis, a teacher shortage is considered to exist if some of the vacant posts at the start of the year are not filled by fully qualified teachers or, for countries with competitive examinations, if the number of available teaching posts is greater than the number of successful applicants selected to fill these posts (see Definitions section). This approach is intended to provide a clearer picture of the immediate staffing challenges facing schools and the implications for continuity and quality of teaching, although it does not show whether the situation improved or deteriorated over the course of the school year, with some posts, such as those in rural areas, sometimes taking longer to fill.

Among the 21 countries included in the analysis, only Greece, Korea and Türkiye were not experiencing teacher shortages at the start of the 2022/23 academic year, mirroring their situation in 2014/15. Of the remaining countries, nine faced shortages across all subjects, while in the other nine the shortages were limited to certain fields of education. Notably, this is a relatively new issue in Austria, the Flemish Community of Belgium, Hungary and Slovenia, as they were not experiencing shortages in 2014/15. Conversely, in the other countries with comparable data, teacher shortages were already a reality a decade ago. However, the fact that certain positions are unfilled at the beginning of the year does not necessarily mean that they remain vacant throughout the school year. In addition, the number of vacant posts may also have differing impacts on countries, since this chapter does not account for the overall size of the education system or workforce (Figure D5.5).

In a subset of countries where the data allow for comparisons between 2021/22 and 2022/23, Germany (for lower secondary education), Latvia, the Netherlands and New Zealand experienced a worsening situation, with unfilled vacancies increasing by at least 5% between the two years. However, Romania bucked this trend; although they were still experiencing shortages in 2022/23, the situation was improved relative to 2021/22. In Austria, Costa Rica, Hungary, Iceland and Slovenia, the situation is not improving but has remained stable over time, with minimal variation in the percentage of unfilled vacancies between 2021/22 and 2023/24 (Ad-hoc survey on teacher shortages). In addition, countries that are hosting a large number of refugees from Ukraine face an increased demand for teachers and are also affected by the shortage of teachers. 15 out of 23 European Union Member States reported challenges in teacher shortage especially below secondary level (European Commission, 2024^[7]), while 8% of Ukrainian households in the Multi-Sector Needs Assessment (MSNA) survey from UNHCR reported a lack of capacity in host country schools as a reason for non-enrolment (UNHCR, 2024^[8]).

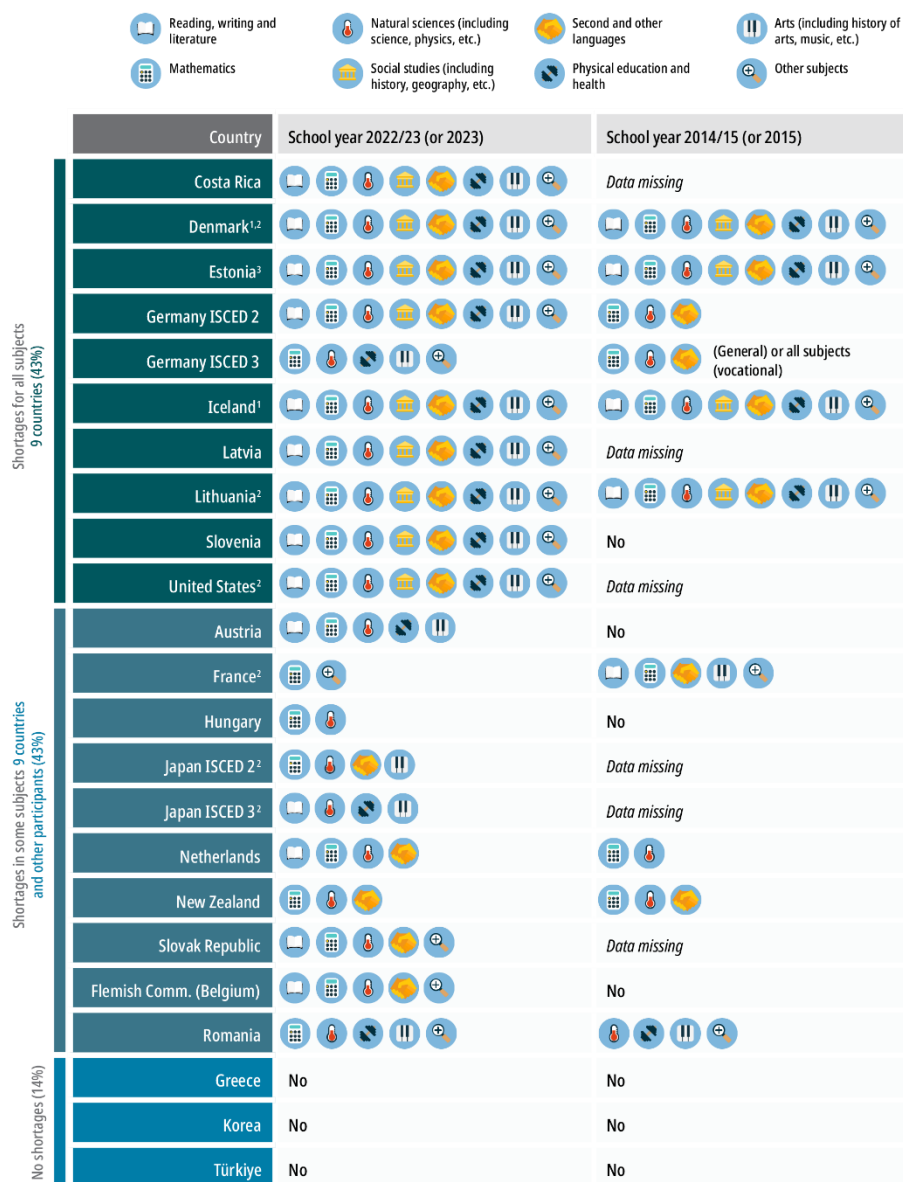
Among the nine countries with shortages in only some fields of study in 2022/23, a common pattern emerges. All of them face a shortage of mathematics teachers, highlighting the global challenge in attracting and retaining educators in this critical subject. Similarly, all of them except France lack adequate numbers of science teachers. However, none report shortages of teachers in social studies such as history and geography, suggesting a relative abundance of fully qualified teachers in these subjects compared to STEM fields (Figure D5.5).

Teacher shortages are less severe in subjects like history and geography than in STEM fields for several reasons. One key factor is gender differences in fields of study within tertiary education. Women are generally less represented in STEM fields in tertiary education and are over-represented in the teaching profession (see Chapter B4). This means there is a smaller pool of individuals with STEM backgrounds entering the teaching profession. History and geography also benefit from a larger pool of graduates, increasing the supply of potential teachers in these subjects. Furthermore, graduates from STEM fields

also have more lucrative career alternatives outside of teaching, which further reduces the number of individuals entering the teaching profession in these subjects.

Figure D5.5. Trends in teacher shortages in secondary education, by subject (2014/15 and 2022/23)

Public institutions



Note: Teacher shortages mean either some vacancies were not filled by fully qualified teachers at the beginning of the academic year or, in countries with competitive examinations, that the number of available teaching positions exceeded the number of successful candidates in the competitive examination conducted at the end of the preceding academic year. The fact that certain positions are unfilled at the beginning of the year does not necessarily mean that they remain vacant throughout the school year. The number of vacant posts may also have differing impacts on countries, since this chapter does not account for the overall size of the education system or workforce.

1. Primary and lower secondary education combined instead of secondary education.
2. Reference years differ from 2014/15 and 2022/23. Refer to Table D5.5. for more details.
3. Including primary education.

See under Chapter D5 Tables for StatLink. For more information see *Source* section and *Education at a Glance 2024 Sources, Methodologies and Technical Notes* (<https://doi.org/10.1787/e7d20315-en>)

Several countries have implemented measures to address the challenge of shortage of fully qualified teachers. For example, Australia has introduced financial incentives, such as scholarships for teacher education, to attract teachers to the profession. The Netherlands has invested in professional development and mentorship programmes to support new teachers and improve retention rates. The government in the Flemish Community of Belgium has invested in attracting second career teachers (side-entrants) into the profession. To this end, it enabled second-career teachers to retain part of their seniority when moving from the private sector to the education sector, making the latter financially more attractive.

These measures aim to enhance the attractiveness of the teaching profession and ensure a stable supply of fully qualified teachers across various regions and subjects. However, improving the overall prestige of the teaching profession also remains a crucial challenge, as greater societal value and recognition could attract more individuals to this vital career. There is still a long way to go on this point, as the latest Teaching and Learning International Survey (TALIS) results found that only 26% of teachers in lower secondary education felt valued by society in 2018.

Teachers leaving the profession

Teacher attrition is a significant issue in the education sector, with substantial implications for educational quality and stability if countries are not able to replace teaching staff who leave. An important percentage of teachers leave the profession each year in some OECD countries: about 7% of fully qualified teachers on average in the 15 countries and other participants with available data. Figures range from less than 5% of teachers in six of the countries, to over 8% in Denmark, the Flemish Community of Belgium, England (United Kingdom), Estonia, Lithuania and New Zealand. These departures are generally due to a combination of resignations and retirement. Resignation is the main driver of attrition in eight countries and other participants, namely Austria, Denmark, Estonia, England (United Kingdom), the Flemish Community of Belgium, Poland, the Slovak Republic and Sweden. By contrast, in France, Greece, Ireland and Türkiye, retirement is the main driver of attrition in 2022/2023 while the data for Lithuania, New Zealand and the United States do not distinguish between resignations and retirement (Figure D5.6.).

Although retirements are an inevitable part of the career lifecycle, too many resignations are concerning as they often indicate underlying problems in the profession. However, they may also reflect differences in the usual length of employment in all occupations in some countries. For example, in New Zealand, less than 25% of all workers stay in one job for more than a decade, compared to over 50% in Greece. The higher turnover rate observed among New Zealand's teachers may reflect the particular dynamics of their labour market (see OECD employment statistics by job tenure intervals).

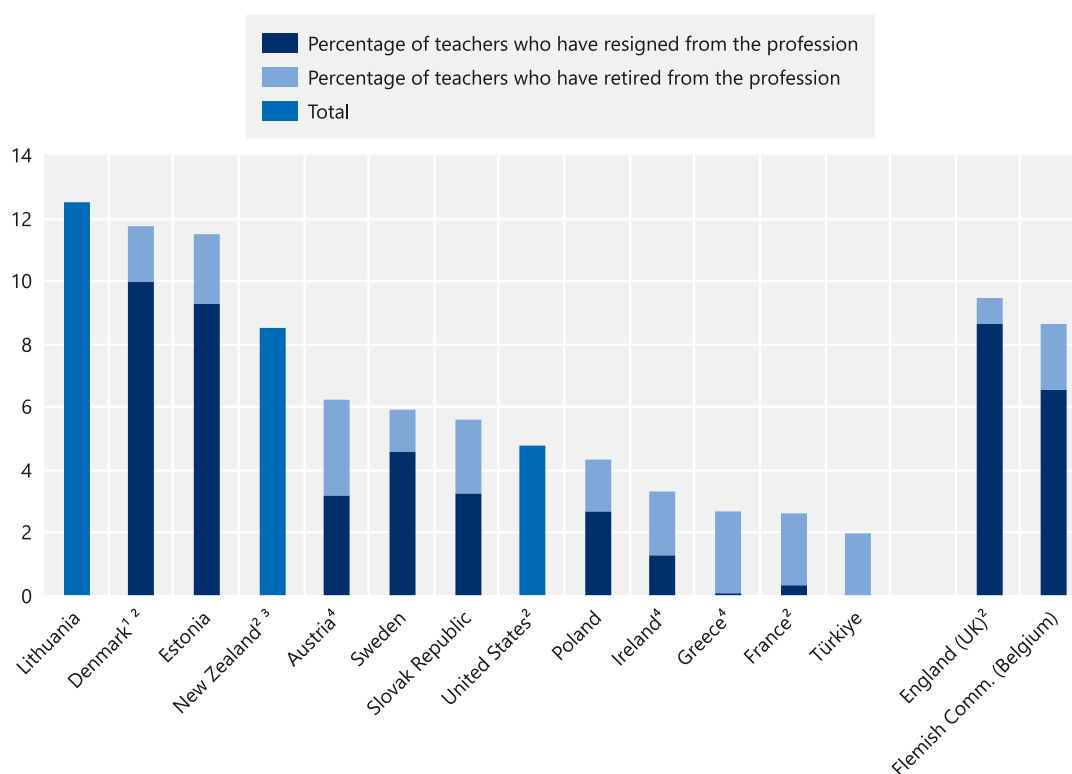
Other factors contributing to teacher resignations include high levels of job-related stress, insufficient support, lack of professional development opportunities and relatively low compensation. These challenges can lead to dissatisfaction, prompting teachers to seek alternative careers (OECD, 2020^[1]). Addressing the reasons behind teachers' resignations and understanding labour-market dynamics are crucial for building a stable, effective and satisfied teaching workforce.

Some countries have taken steps to combat teacher attrition. For instance, New Zealand has implemented several targeted strategies. One notable initiative is the Teacher Supply Package, which includes measures such as financial incentives, additional support for new teachers and initiatives to attract overseas teachers. In Lithuania, the focus was on improving teachers' working conditions and providing better professional support to reduce attrition, while in Denmark, the emphasis has been on improving teachers' working conditions through better school leadership and more collaborative working environments.

Although the share of teachers resigning from the profession may appear relatively small in many countries, Figure D5.6. does not necessarily capture the full picture. One significant factor which is often overlooked is absenteeism among teachers and the mechanisms in place for their replacement. While a teacher may not have formally resigned, frequent absences can also disrupt the continuity of education for students and create challenges for schools in maintaining quality teaching. Moreover, the process of replacing absentee teachers, especially at short notice, can strain resources and impact the overall educational environment (OECD, 2016^[9]). Therefore, although low resignation rates may seem positive, it is essential to delve deeper into absenteeism rates and their implications for educational continuity and quality. In addition, the relatively small number of countries with data could have an impact on the results/conclusions. It will be interesting to develop new analyses on this question and increase the number of participating countries in the future.

Figure D5.6. Share of fully qualified teachers who left the profession by resigning or retiring in pre-primary, primary and secondary education in 2022/23

Full-time and part-time, public institutions



Note: Due to lack of data, this chart does not take into account teachers who left the profession because they are appointed to other positions in the education sector. These data would increase the percentages, for example from 4.8% to 7.9% in the United States. Data do not include teachers who move out of public institutions to private institutions or out of private institutions into public institutions. Other teachers (i.e. non-fully qualified teachers) are not taken into account in this chart.

1. Excluding upper secondary education.

2. Reference year differs from 2022/23: academic year 2021/22 for Denmark, France, the United States and England (UK), and calendar year 2021 for New Zealand.

3. Including unqualified teachers.

4. Excluding pre-primary education.

Countries are ranked in descending order of the share of fully qualified teachers who left the profession in 2022/23.

See under Chapter D5 Tables for StatLink. For more information see Source section and *Education at a Glance 2024 Sources, Methodologies and Technical Notes* (<https://doi.org/10.1787/e7d20315-en>).

Definitions

Centralised/decentralised system: Having a centralised system for certifying new teachers and assigning them to schools means that this process is managed at central (national) government level. In a centralised system, the national government is responsible for certifying teachers and assigning them to schools, whereas in a decentralised system, these responsibilities are assumed by regional authorities (lander, districts, states etc.) or local ones (schools, municipalities, etc.).

Competitive examinations refer to examinations organised by local, regional or national authorities in order to select the applicants with the best results to fill a limited and fixed number of places for student teachers and/or for teachers in the public education system.

Fully qualified teachers refer to teachers who have fulfilled all the training requirements for teaching (a certain subject) and meet all other administrative requirements according to the formal policy in a country. The administrative requirements can comprise formal qualifications and attainment level, specific training or practical experience, succeeding in competitive examinations, and the successful completion of a probation period or induction programmes.

Other teachers (i.e. non-fully qualified teachers) refer to teachers entering the profession through alternative pathways. In most cases and in most, but not all, countries, these teachers are hired on a temporary basis, instead of having a permanent contract. Even though they are not fully qualified teachers, they are usually employed by the government.

A **leaving teacher** refers to any teacher who is leaving the profession in the reference year and who is not expected to come back the year after (i.e. someone who is permanently leaving the profession). Teachers who left both by resigning or retiring are counted as leaving teachers. Teachers leaving an ISCED level to teach at another level of education are not considered to be leaving teachers for the purposes of calculating attrition. A teacher temporarily not at work (e.g. for reasons of illness or injury, maternity or parental leave, holiday or vacation, or early leave before retirement) is not considered a leaving teacher.

In this chapter, **teacher shortages** are defined as the lack of fully qualified teachers at the start of the academic year 2022/23. This shortage can be either because some vacancies remain unfilled by fully qualified teachers at the beginning of the academic year or, in countries with competitive examinations, because the number of available teaching positions for the year 2022/23 exceeded the number of successful applicants from the competitive examination conducted at the end of the 2021/22 academic year. This chapter provides a national overview, but it is important to note that teacher shortages can be more pronounced in certain regions or in rural areas. Additionally, a shortage at the start of the year does not necessarily imply that the situation will not improve as the year progresses. In some cases, the assignment of fully qualified teachers to rural areas can take time, or a country may hire non-fully qualified teachers to compensate for the lack of fully qualified staff. It should also be noted that this chapter does not cover teacher absenteeism, which is an important issue in many countries and can lead to shortages for part of the academic year.

Some of the **fields of study** included in Figure D5.5 are defined as follows:

- Natural sciences include subjects such as science, physics, chemistry, biology, environmental sciences and ecology.
- Social studies include subjects such as history, geography and all related studies. May also include community studies, social and political instruction, philosophy or civics education.
- Arts includes subjects such as arts, history of arts, music, visual arts, drama, music and dance performance, photography, and creative handicrafts.

Methodology

The number of teachers in the chapter are reported in headcounts. It refers to the total count of individuals employed teachers, encompassing both those working on a full-time basis and those working on a part-time basis.

The share of teachers in the population corresponds to the proportion of teachers in a given age group (e.g. below the age of 30 or above the age of 50) among the total population of the same age group.

For more information, please see the OECD *Handbook for Internationally Comparative Education Statistics 2018* (OECD, 2018_[10]).

Source

Data on teachers by age and gender refer to the academic year 2021/22 and are based on the UNESCO-UIS/OECD/EUROSTAT data collection on education statistics administered by the OECD in 2023. They cover both public and private institutions.

Data included in Table D5.5 and Figures D5.4., D5.5. and D5.6. refer to the academic year 2022/23 and are based on the INES special data collection on teacher shortages administered by the OECD in 2024. Qualitative information from this ad hoc survey has been used to include country examples throughout the chapter. This questionnaire covers public institutions from pre-primary to upper secondary education. The scope of the questionnaire is focused on initial education and does not include adult education (second chance education or any other form of lifelong learning activities) or special education programmes and schools for children with disabilities.

Data in Table D5.1. are from the OECD-INES-NESLI survey on pathways to becoming teachers and school heads and refer to the academic year 2022/23. This table also includes information from the teacher shortages survey.

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Chapter D5 Tables

Tables Chapter D5. Who are the teachers, and where do countries stand in terms of teacher shortages?

Table D5.1	Pathways to becoming a fully qualified teacher in secondary education (2022/23)
Table D5.2	Share of teachers below the age of 30, by level of education (2022)
Table D5.3	Share of teachers aged 50 and over, by level of education (2013 and 2022)
Table D5.4	Gender distribution of teachers by level of education (2022)
Table D5.5	Share of teachers by ISCED level, type of contract, experience and qualification status (2014/15 and 2022/23)

StatLink  <https://stat.link/dj257i>

Cut-off date for the data: 14 June 2024. Any updates on data and more breakdowns can be found on the OECD Data Explorer (<http://data-explorer.oecd.org/s/4s>).

Table D5.1. Pathways to becoming a fully qualified teacher in secondary education (2022/23)

Public institutions only, general subjects

	Qualification level	Selectiveness at the entry and during studies		Selectiveness for certifying new teachers		Graduates from initial teacher education can start teaching directly	How teachers are assigned to schools once they have been certified
	ISCED qualification awarded at the end of initial teacher education	Existence of selective criteria for entry into initial teacher education	Existence of selective criteria to progress in initial teacher education	Competitive examination for a limited and fixed number of places	Centralised/ decentralised process		
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Australia	ISCED 6	Yes	No	No	Decentralised	No	Teachers typically apply for positions through centralised education departments or online platforms. Schools then review the applications. Teachers may have the opportunity to express preferences for specific geographic locations or types of schools, but final assignments are often based on the availability of positions and staffing requirements.
Austria	ISCED 7	Yes	No	No	Decentralised	Yes	Teachers often apply directly to schools. Teachers are employed by the regional education authorities (Bildungsdirektionen). Assignments to schools are typically based on factors such as teacher preferences, school staffing needs, and available positions. They are selected in full autonomy by the school management.
Costa Rica	ISCED 7	No	No	No	Centralised	No	Teachers often apply directly to schools. In Costa Rica, teachers are typically employed by public schools under the Ministry of Public Education or by private educational institutions. School assignments are often based on factors such as teacher qualifications, school staffing needs and available positions.
Denmark ^{1,2}	ISCED 6 for lower secondary, ISCED 7 for upper secondary	Yes	a	No for lower secondary, Yes for upper secondary	Centralised	Yes	Teachers often apply directly to schools for open positions, or they may use centralised recruitment systems managed by education authorities. In upper secondary education, a newly appointed teacher must take a pedagogy course (Pædagogikum) in the first year.
Estonia	ISCED 7	Yes	Yes	No	m	Yes	Teachers typically apply for positions through online platforms or directly to schools, depending on the preference of the school or municipality. Once applications are received, schools or local education authorities review candidates' qualifications and conduct interviews to assess their suitability for the position. While teachers can express preferences for certain schools or locations, the final decision on teacher assignments is often made by school principals.
Finland	ISCED 7	Yes	a	No	Decentralised	Yes	Teacher assignments are typically co-ordinated through a decentralised system where municipalities and individual schools have significant autonomy in hiring decisions. Teachers generally apply directly to schools or through municipal job portals, where vacancies are advertised. Once applications are received, school principals or hiring committees review candidates. Interviews and demonstration lessons may be part of the selection process.
France	ISCED 7	No	No	Yes	Centralised	No	Teachers are appointed through a centralised recruitment process. Teachers are assigned to an academy according to different criteria (ranking according to a number of points). The academy then assigns them to a school.
Germany	ISCED 7	Yes	No	No	Centralised	Yes, after graduating from the preparatory service	Teachers either apply to the school authority or to the individual school, it depends on the application and employment procedure of the individual German states.
Greece	ISCED 6	Yes	Yes	Yes	Centralised	No	Teachers are appointed through a centralised recruitment process. Teachers can apply for positions in secondary schools. Final decision is taken by the education authority which assigns them to the school.
Hungary	ISCED 7	Yes	a	No	Decentralised	Yes	The assignment of teachers to schools in Hungary is typically managed by local government authorities, such as municipal education departments or regional educational offices. Schools may advertise teaching vacancies, and applicants submit their applications directly to the schools or through centralised systems managed by local authorities.
Iceland	ISCED 7	m	m	m	Centralised	No	m
Ireland	ISCED 7	Yes	Yes	No	Decentralised	Yes	Teachers are typically employed by schools or educational institutions and assigned to schools based on factors such as teacher qualifications, subject expertise and school staffing needs. School assignments are managed by school principals or boards of management.
Japan ³	ISCED 5, 6, 7 for lower secondary, ISCED 6, 7 for upper secondary	Yes	a	Yes	Decentralised	No	Teachers are selected through exam in each prefecture and ordinance-designated city, and assigned to schools by municipal boards of education.
Korea	ISCED 6	Yes	a	Yes	Centralised	Yes	Teachers are appointed through a centralised recruitment process. Teachers can apply for positions in secondary schools. Final decision is taken by the education authority which assigns them to the school.

	Qualification level	Selectiveness at the entry and during studies		Selectiveness for certifying new teachers		Graduates from initial teacher education can start teaching directly	How teachers are assigned to schools once they have been certified
	ISCED qualification awarded at the end of initial teacher education	Existence of selective criteria for entry into initial teacher education	Existence of selective criteria to progress in initial teacher education	Competitive examination for a limited and fixed number of places	Centralised/ decentralised process		
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Latvia	ISCED 6	Yes	Yes	No	Decentralised	Yes	The assignment of teachers to schools is typically managed by schools themselves or/ and local government authorities, such as municipal education departments or regional educational centres. Qualified individuals typically apply for teaching positions through job announcements. The teachers are selected by the school head.
Lithuania ²	ISCED 6	Yes	Yes	No	Decentralised	Yes	The assignment of teachers to schools is typically managed by local government authorities, such as municipal education departments or regional educational centres. Applicants who meet the required criteria are invited for an interview with the school head. Three representatives of the school council can observe the job interview. The school head makes their decision following the interview.
Netherlands	ISCED 6 for lower secondary, ISCED 7 for upper secondary	No	a	No	Decentralised	Yes	Schools have autonomy in hiring decisions, so teachers typically apply directly to schools for open positions. Schools may advertise teaching vacancies on their websites or through job boards.
New Zealand	ISCED 6	Yes	No	No	Centralised	No	Teachers are directly employed by schools. There is no central agency responsible for staff placement. Teaching vacancies at a national level are advertised centrally by the Ministry of Education via an online "Education Gazette". Applications for teaching jobs are made directly to the employing school.
Norway	ISCED 7	Yes	a	No	Centralised	Yes	Schools have autonomy in hiring decisions, so teachers typically apply directly to schools for open positions. Schools may advertise teaching vacancies on their websites, through job boards, or through municipal or county education authorities.
Poland	ISCED 7	No	No	No	Centralised	Yes	Teachers often apply directly to schools. They can also apply through regional educational authorities or online job portals where schools advertise vacancies. Once applications are received, school administrators or hiring committees review the candidates' qualifications, experience, and suitability for the position.
Slovak Republic	ISCED 7	Yes	a	No	Decentralised	Yes	Teachers apply directly to schools. Teachers are typically employed by school principals based on factors such as teacher qualifications, subject expertise, school staffing needs and others.
Slovenia ¹	ISCED 7	Yes	No	No	Centralised	Yes	Qualified teachers typically apply for positions through job announcements posted by schools or through the ministry's online portal. Once applications are received, school administrators or hiring committees review candidates' qualifications and suitability for the position. Interviews and teaching demonstrations may be part of the selection process.
Spain	ISCED 7	Yes	Yes	Yes	Decentralised	No	Teachers are selected through a competitive exam process conducted by regional governments, in accordance with nationally established requirements. The assignment of teachers to schools is managed by regional education authorities based on accumulated experience and teacher preferences.
Sweden	ISCED 7	Yes	a	No	Centralised	Yes	The assignment of teachers to schools is typically managed by municipal or regional education authorities. Teachers may apply directly to schools for open positions, or they may use centralised recruitment systems managed by education authorities.
Switzerland	ISCED 7	No	No	No	Decentralised	Yes	Each canton is responsible for its own education policies and practices. The employment conditions for teachers however differ between the cantons. While in all cantons a recognised diploma is a general requirement for a teaching position (exceptions are possible in times of teacher shortages), other employment conditions, like salary, number of teaching hours etc. vary between cantons.
Türkiye	ISCED 6	Yes	Yes	Yes	Centralised	No	Teachers are appointed through a centralised recruitment process. Teachers can apply for positions in secondary schools. Final decision is taken by the education authority which assigns them to the school.
United States ²	ISCED 6 or ISCED 7	m	m	No	Decentralised	m	The requirements for applying to teaching positions and the assignment of teachers to schools varies by district and state. Teachers may apply directly to schools or districts for open positions, or they may use online job boards and recruitment websites. Some states have centralised systems for teacher recruitment and hiring.
Other participants							
Flemish Comm. (Belgium)	ISCED 5 (for vocational education), ISCED 6, 7	No	a	No	Decentralised	Yes	Teachers are hired into schools through an open recruitment procedure organised at the school board level and with considerable involvement of the school principal. Schools boards have autonomy in teacher recruitment, selection and appointment, and therefore act as the employers.
England (UK) ²	ISCED 6	Yes	No	No	Decentralised	Yes	Schools, academies and local authorities are responsible for their own recruitment. Recruitment decisions may be based on factors such as candidates' qualifications, subject expertise and school staffing needs.

Partner and/or accession countries	Qualification level	Selectiveness at the entry and during studies		Selectiveness for certifying new teachers		Graduates from initial teacher education can start teaching directly	How teachers are assigned to schools once they have been certified
	ISCED qualification awarded at the end of initial teacher education	Existence of selective criteria for entry into initial teacher education	Existence of selective criteria to progress in initial teacher education	Competitive examination for a limited and fixed number of places	Centralised/ decentralised process		
Argentina	ISCED 6	m	m	Yes	Decentralised	Yes	Teachers are appointed through a centralised recruitment process at the provincial level. In the public education sector, teachers apply for positions in secondary schools through a public merit-based selection process based on their credentials and past performance. School assignments are based on factors such as teacher qualifications and available school positions.
Brazil	ISCED 6	Yes	a	Yes	Decentralised	No	Teachers are appointed through a centralised recruitment process. Teachers can apply for positions in secondary schools. Final decision is taken by the education authority which assigns them to the school.
Bulgaria	m	m	m	No	Decentralised	m	Teachers apply directly to schools and are typically employed by the schools head upon a consultation with the regional education authority concerned. School assignments are often based on factors such as teacher qualifications, school staffing needs and available positions.
Romania	ISCED 6 for lower secondary, ISCED 7 for upper secondary	Yes	Yes	Yes	Centralised	No	Teachers are appointed through a centralised recruitment process. Teachers can apply for positions in secondary schools. Final decision is taken by the education authority which assigns them to the school.

Note: See under Chapter D5 Tables for StatLink and Box. D5.1 for the Notes related to this Table/.

Table D5.2. Share of teachers below the age of 30, by level of education (2022)

Public and private institutions

	Early childhood educational development	Pre-primary	Primary	Lower secondary	Upper secondary			Post-secondary non-tertiary	Tertiary	All levels of education	Primary to upper secondary	
					General programmes	Vocational programmes	All programmes				2013	2022
OECD countries	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Australia	m	m	m	m	m	m	m	m	m	m	m	m
Austria	36	29	19	15	11	5	8	4	10	15	8	14
Belgium	a	16	20	16	12	12	12	6	5	15	19	16
Canada ¹	m	x(3)	10 ^d	x(3)	x(7)	x(7)	10	m	5	m	12	10
Chile	17	14	14	14	15	12	14	a	m	m	21	14
Colombia	m	25	11	10	x(7)	x(7)	8	13	5	10	m	10
Costa Rica	7	6	7	8	9	8	8	a	4	7	m	8
Czechia	a	17	8	9	5	5	5	m	m	m	8	7
Denmark	12	11	18	19	6	5	6	a	19	15	m	15
Estonia	x(2)	10 ^d	10	8	8	6 ^d	7 ^d	x(7)	4	8	9 ^d	9 ^d
Finland	m	17	12	13	7	3	4	3	12	12	8	10
France	a	11	12	9	9	9	9	12	12	10	10	10
Germany	22	22	8	5	6	3	5	3	23	13	7	6
Greece	m	7	10	2	1	3	1	6	1	5	1	5
Hungary ²	13	15	8	5	5	m	5	m	5	7	7	6
Iceland	37	37	7	7	m	m	m	m	14	m	m	m
Ireland ¹	m	m	12	x(7)	1 ^d	a	1 ^d	4	m	m	m	7
Israel ¹	m	12	13	9	x(7)	x(7)	9	m	11	m	13	11
Italy	a	4	4	4	5	5 ^d	5 ^d	x(7)	1	4	0	4 ^d
Japan	a	49	21	18	x(7)	x(7)	13 ^d	x(7, 9)	2 ^c	17	13 ^d	18 ^d
Korea	22	47	16	14	11	14	11	a	1	14	16	14
Latvia	12	12	9	7	6	8	7	8	5	8	7	8
Lithuania	12	11	6	4	3	3	3	6	5	6	6	4
Luxembourg	a	21	27	14	8	11	9	9	28	20	19	19
Mexico	m	m	m	m	m	m	m	a	m	m	m	m
Netherlands	a	17	15	16	16	10	12	a	19	16	15	14
New Zealand	25	25	13	13	11	9	11	8	11	14	11	12
Norway	19	19	21	19	9	9	9	12	25	19	11 ^d	17
Poland	a	16	5	4	4	4	4	6	4	6	9	4
Portugal	m	3	2	2	x(7)	x(7)	3 ^d	x(7)	5	3	2	2 ^d
Slovak Republic	a	17	10	10	11	6	7	5	4	10	11	9
Slovenia	10	10	10 ^d	x(3)	6	6	6	a	5	8	6	10
Spain	10	10	9	7	6	6	6	a	4	7	6	7
Sweden	10	9	9	7	x(7)	x(7)	5	6	6	8	6	8
Switzerland	a	16	20	11	5	5 ^d	5 ^d	x(7)	2	11	12 ^d	14 ^d
Türkiye	m	28	15	17	14	9	12	a	10	15	m	15
United Kingdom ³	23	20	25	22	22	9 ^d	17 ^d	a	6	18	23	21 ^d
United States	m	m	15	14	11	a	11	m	m	m	15	14
OECD average	18	18	12	11	8	7	8	7	9	11	10	11
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	16	14	11	12	11	10	11	11	4	11	15	11
Bulgaria ²	a	9	7	7	7	7	7	3	5	7	4	7
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia ²	18	18	9	11	9	9	9	a	9	10	12	10
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	14	13	7	10	9	a	9	a	4	8	m	8
Romania ²	10	20	11	11	5	6	5	7	3	10	11	9
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	15	14	11	9	7	6	6	6	8	10	8	9
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: See under Chapter D5 Tables for StatLink and Box. D5.1 for the Notes related to this Table/.

Table D5.3. Share of teachers aged 50 and over, by level of education (2013 and 2022)

Public and private institutions

	Early childhood educational development		Pre-primary		Primary		Lower secondary		Upper secondary				Post-secondary	Tertiary		All levels of education
	2013	2022	2013	2022	2013	2022	2013	2022	General programmes	Vocational programmes	All programmes		2022	2013	2022	2022
									2022	2022	2013	2022				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
OECD countries																
Australia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Austria	20	16	22	22	37	34	48	40	39	51	42	46	53	36	40	38
Belgium	m	a	15	29	22	25	29	27	32	34	31	33	46	37	38	30
Canada ¹	m	m	x(5)	x(6)	26 ^d	29 ^d	x(5)	x(6)	x(12)	x(12)	26	29	m	45	49	m
Chile	11	15	17	21	28	23	31	24	23	31	31	25	a	m	m	m
Colombia	m	m	m	27	m	41	m	38	x(12)	x(12)	m	39	22	m	33	37
Costa Rica	31	26	32	26	31	26	24	19	19	19	23	19	a	36	32	24
Czechia	a	a	37	40	31	45	32	36	52	52	45	52	m	m	m	m
Denmark	m	37	m	38	33	32	32	31	39	49	40	42	a	41	34	35
Estonia	x(3)	x(4)	39	47	38	48	50	54	52	50 ^e	50 ^e	51 ^d	x(12)	m	40	48
Finland	m	m	27	33	30	36	30	35	41	56	44	50	56	46	42	39
France	a	a	25	31	22	26	30	38	38	38	31	38	41	m	40	34
Germany	27	29	28	29	45	36	50	41	36	50	45	39	49	24	30	35
Greece	m	m	12	37	49	45	38	56	66	50	40	60	30	47	53	49
Hungary ²	20	26	41	40	38	46	41	49	47	m	34	47	m	41	41	45
Iceland	22	20	22	21	36	39	36	39	m	m	m	m	m	m	38	m
Ireland ^d	m	m	m	m	22	16	x(11)	x(12)	40 ^d	a	29 ^d	40 ^d	51	m	m	m
Israel ^f	m	m	27	26	21	24	28	31	x(12)	x(12)	35	35	m	m	42	m
Italy	a	a	57	51	57	57	63	48	55	53 ^e	73	54 ^d	x(12)	53	56	53
Japan	a	a	9	11	31	27	27	30	x(12)	x(12)	34 ^d	38 ^d	x(12,15)	44 ^d	47 ^d	33
Korea	6	13	2	7	16	17	23	25	25	31	28	27	a	m	53	30
Latvia	a	41	28	41	36	50	45	58	58	52	47	56	53	50	47	50
Lithuania	41	47	41	48	39	56	43	57	62	59	48	61	49	39	40	52
Luxembourg	a	a	14	15	19	15	17	22	32	28	30	29	39	m	14	19
Mexico	m	m	m	m	m	m	m	m	m	m	m	m	a	m	m	m
Netherlands	a	a	35	30	36	31	42	34	34	43	51	40	a	33	30	33
New Zealand	25	25	25	25	39	37	42	39	42	50	44	43	51	46	44	38
Norway	14	19	14	19	33	28	33	31	42	42	45	42	44	39	31	31
Poland	a	a	20	25	23	44	22	38	40	39	29	40	37	m	40	37
Portugal	m	m	31	55	34	49	33	57	x(12)	x(12)	29	50 ^d	x(12)	35	47	51
Slovak Republic	a	a	37	35	27	33	36	33	28	47	40	42	49	45	41	36
Slovenia	19	26	22	26	27	32 ^d	33	x(6)	49	49	34	49	a	51	45	35
Spain	30	28	30	28	33	30	34	38	38	38	34	38	a	41	47	37
Sweden	35	36	36	38	37	37	38	39	x(12)	x(12)	44	45	43	43	44	40
Switzerland	a	a	29	31	35	29	36	32	38	44 ^e	41 ^e	42 ^d	x(12)	44	49	37
Türkiye	m	m	m	3	m	21	m	8	18	20	m	19	a	19	26	16
United Kingdom ³	m	19	19	22	16	16	22	19	19	44	29	29	a	40	37	25
United States	m	m	m	m	31	30	30	31	36	a	34	36	m	m	m	m
OECD average	23	27	26	30	32	34	35	36	39	43	38	41	44	41	40	37
Partner and/or accession countries																
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	12	19	13	21	17	25	19	25	25	24	21	25	24	31	35	26
Bulgaria ²	a	a	52	40	42	50	48	48	49	50	48	50	42	54	48	47
China	a	a	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Croatia ²	29	25	29	25	27	37	28	24	34	34	33	34	a	33	34	30
India	a	a	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Peru	m	29	m	25	m	42	m	34	35	a	m	35	a	m	42	37
Romania ²	13	29	33	22	30	29	25	26	36	38	32	37	35	32	38	30
Saudi Arabia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
South Africa	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	26	31	31	34	33	37	37	40	43	46	40	45	45	41	40	39
G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: See under Chapter D5 Tables for StatLink and Box. D5.1 for the Notes related to this Table/.

Table D5.4. Gender distribution of teachers, by level of education (2022)

Percentage of female teachers in public and private institutions

	Early childhood educational development	Pre-primary	Primary	Lower secondary	Upper secondary			Post-secondary non-tertiary	Tertiary			All levels of education
					General programmes	Vocational programmes	All programmes		Short-cycle tertiary	Bachelor's, master's and doctoral or equivalent	All tertiary	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
OECD countries												
Australia	m	m	m	m	m	m	m	m	m	49	m	m
Austria	98	97	92	72	64	50	56	71	52	44	45	67
Belgium	a	96	83	67	64	61	62	47	84	49	50	71
Canada ¹	m	x(3)	75 ^d	x(3)	x(7)	x(7)	75	m	53	45	50	m
Chile	99	99	81	69	59	49	57	a	m	m	m	m
Colombia	m	97	77	53	x(7)	x(7)	46	65	41	40	40	60
Costa Rica	84	94	79	58	58	57	58	a	64	45	45	69
Czechia	a	99	94	77	59	59	59	41	59	38	38	76
Denmark	93	93	67	61	53	46	51	a	44	46	46	63
Estonia	x(2)	99 ^d	90	82	77	60 ^d	70 ^d	x(7)	a	49	49	82
Finland	m	97	80	74	69	56	61	56	a	53	53	74
France	a	91	84	60	60	59	60	42	56	43	46	69
Germany	94	94	87	66	60	51	57	60	32	41	41	67
Greece	m	98	75	69	59	57	58	55	a	37	37	68
Hungary	99	99	95	75	69	58	63	58	x(11)	x(11)	42	75
Iceland	91	91	82	82	m	m	m	m	x(10)	55	55	m
Ireland ^d	x(2)	98 ^d	85	x(7)	68 ^d	a	68 ^d	65	x(11)	x(11)	46	78
Israel ^l	m	99	86	79	x(7)	x(7)	71	m	57	47	49	m
Italy	a	99	95	76	69	64 ^d	66 ^d	x(7)	a	39	39	77
Japan	a	97	64	44	x(7)	x(7)	32 ^d	x(7,11)	50 ^d	25 ^d	30 ^d	49
Korea	100	99	77	72	58	51	57	a	47	35	37	63
Latvia	99	99	93	83	83	73	80	68	64	53	54	83
Lithuania	99	99	96	82	80	70	78	67	a	57	57	82
Luxembourg	a	93	74	60	56	49	52	30	49	36	37	66
Mexico	95	96	70	55	51	48	50	a	x(11)	x(11)	44	60
Netherlands	a	88	87	56	56	57	57	a	53	48	48	67
New Zealand	97	97	85	68	62	53	61	53	54	54	54	73
Norway	90	90	74	74	56	56	56	46	46	50	50	67
Poland	a	98	88	76	70	62	65	75	63	48	48	76
Portugal	m	99	81	72	x(7)	x(7)	69 ^d	x(7)	x(10)	46 ^d	46	71
Slovak Republic	a	100	89	79	73	70	71	64	61	47	47	79
Slovenia	97	96	88 ^d	x(3)	66	66	66	a	39	48	47	78
Spain	98	93	78	62	59	53	57	a	52	44	46	65
Sweden	97	96	81	65	x(7)	x(7)	54	47	46	47	47	70
Switzerland	a	97	84	57	49	45 ^d	46 ^d	x(7)	a	37	37	62
Türkiye	m	94	65	59	53	50	52	a	43	46	46	59
United Kingdom	95	92	86	65	65	m	m	a	x(11)	x(11)	47	m
United States	m	93	87	67	58	a	58	x(11)	x(11)	51 ^d	51 ^d	70
OECD average	96	96	83	68	63	57	60	56	53	45	46	70
Partner and/or accession countries												
Argentina	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	97	94	87	66	58	50	57	48	44	47	47	70
Bulgaria	a	99	93	81	80	72	76	39	a	52	52	80
China	m	m	m	m	m	m	m	m	m	m	m	m
Croatia	99	99	94	74	68	68	68	a	x(11)	x(11)	51	73
India	m	m	m	m	m	m	m	m	m	m	m	m
Indonesia	m	m	m	m	m	m	m	m	m	m	m	m
Peru	98	98	70	46	46	a	46	a	27	37	37	60
Romania	99	100	93	74	75	71	73	79	a	52	52	79
Saudi Arabia	m	100	53	49	x(7)	x(7)	51	18	27	43	43	52
South Africa	m	m	m	m	m	m	m	m	m	m	m	m
EU25 average	97	97	86	71	67	61	64	57	54	46	47	73
G20 average	m	m	m	m	m	m	m	m	m	m	m	m

Note: See under Chapter D5 Tables for StatLink and Box. D5.1 for the Notes related to this Table/.

Table D5.5. Share of teachers by ISCED level, type of contract, experience and qualification status (2014/15 and 2022/23)

Full-time and part-time, public institutions only.

	2022/23												2014/15		
	Pre-primary education				Primary education				Secondary education				Share of other teachers (i.e. non-fully qualified teachers)		
	Fully qualified teachers and new teachers who will be fully qualified after completion of probation period or induction programmes	Of which:		Other teachers (i.e. non-fully qualified teachers)	Fully qualified teachers and new teachers who will be fully qualified after completion of probation period or induction programmes	Of which:		Other teachers (i.e. non-fully qualified teachers)	Fully qualified teachers and new teachers who will be fully qualified after completion of probation period or induction programmes	Of which:		Other teachers (i.e. non-fully qualified teachers)	Pre-primary education	Primary education	Secondary education
		% of teachers with less than 5 years of experience	% of teachers with a fixed-term contract (temporary)			% of teachers with less than 5 years of experience	% of teachers with a fixed-term contract (temporary)			% of teachers with less than 5 years of experience	% of teachers with a fixed-term contract (temporary)				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
OECD countries															
Australia	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Austria	m	m	m	m	94.7	24.6	18.9	5.3	94.0	25.9	21.3	6.0	m	1.2	3.1
Costa Rica	90.3	m	m	9.7	94.0	m	m	6.0	97.5	m	m	2.5	12.4	6.9	3.8
Denmark ^{1, 2}	63.2	3.0	m	36.8	71.2	15.0	m	28.8	m	m	m	m	22.6	24.8	m
Estonia	85.3	15.9	1.0	14.7	x(9)	x(10)	x(11)	x(12)	80.9 ^d	16.0 ^d	4.3 ^d	19.1 ^d	17.6	x(15)	7.6 ^d
France ^{2, 3}	x(5)	x(6)	x(7)	x(8)	98.7 ^s	15.0 ^s	0.0 ^s	1.3 ^s	90.9	13.3	0.0	9.1	x(14)	0.4 ^d	7.7
Hungary	100.0	m	9.8	0.0	100.0	m	8.7	0.0	100.0	m	6.5	0.0	0.0	0.0	0.0
Iceland ⁴	21.8	31.5	m	78.2	83.1	22.1	m	16.9	80.2	21.2	m	19.8	71.5	4.5	16.3
Ireland	m	m	m	m	100.0	14.7	12.7	0.0	100.0	14.7	17.1	0.0	m	m	m
Japan ²	100.0	m	23.4	0.0	100.0	m	13.6	0.0	100.0	m	17.5	0.0	0.0	0.0	0.0
Korea	100.0	27.7	32.9	0.0	100.0	15.7	5.8	0.0	100.0	22.9	17.1	0.0	0.0	0.0	0.0
Latvia	94.0	m	a	6.0	m	m	a	m	98.5	m	a	1.5	m	m	m
Lithuania ³	80.6	7.4	0.0	19.4	92.5	8.5	0.0	7.5	94.5	8.9	0.0	5.5	16.2	6.0	4.9
Netherlands	x(5)	x(6)	x(7)	x(8)	98.1 ^s	28.6 ^s	10.6 ^s	1.9 ^d	96.1	31.1	18.7	3.9	m	m	6.0
New Zealand	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Norway	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Poland	99.9	16.0	19.4	0.1	99.9	9.7	14.5	0.1	99.4	9.0	13.9	0.6	m	m	m
Slovak Republic	97.8	20.7	18.2	2.2	97.1	12.4	21.3	2.9	98.1	13.1	20.8	1.9	m	m	m
Slovenia ¹	m	m	m	m	96.9	12.6	15.3	3.1	m	m	m	m	m	1.4	m
Sweden	88.2	30.9	3.5	11.8	83.7	17.9	4.3	16.3	78.4	12.5	5.2	21.6	m	m	m
Switzerland	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Türkiye	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
OECD average	85.1	19.1	13.5	14.9	94.0	16.4	10.5	6.0	93.9	17.2	11.9	6.1	m	m	m
Other participants															
Flemish Comm. (Belgium)	96.8	m	19.0	3.2	97.3	m	17.9	2.7	93.1	m	15.0	6.9	m	m	m
England (UK) ²	98.4	m	m	1.6	98.2	m	m	1.8	97.2	m	m	2.8	2.9	1.9	3.7
Partner and/or accession countries															
Argentina	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Brazil	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Bulgaria	95.7	26.8	15.3	4.3	97.0	17.7	12.6	3.0	96.2	21.4	14.1	3.8	0.3	1.2	2.1
Romania	97.4	1.9	24.7	2.6	98.5	1.1	18.4	1.5	98.0	0.8	33.4	2.0	2.5	1.5	1.4
EU25 average	90.3	15.7	12.4	9.7	94.6	15.0	11.8	5.4	94.1	15.3	13.0	5.9	m	m	m
G20 average	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Note: See under Chapter D5 Tables for StatLink and Box. D5.1 for the Notes related to this Table/.

Box D5.1. Notes for Chapter D5 Tables

Table D5.1 Pathways to becoming a fully qualified teacher in secondary education (2022/23)

Selectiveness at the entry into initial teacher education and during studies, where it exists, may take the form of competitive examinations, standardised test results, grade point averages in secondary school or upper secondary school examinations, or interviews. In some countries, several of these criteria are used to select students.

1. Primary and lower secondary education combined.
2. Reference year differs from 2022/23: academic year 2021/22 for Denmark, Japan, United States and England (UK) and calendar year 2021 for New Zealand.

Table D5.2 Share of teachers below the age of 30, by level of education (2022)

All levels of education exclude early childhood educational development.

1. For Canada, tertiary level values include only public institutions. For Ireland, values for all levels except pre-primary education include only public institutions. For Israel, values for pre-primary, lower secondary, upper secondary and all tertiary include only public institutions.
2. Year of reference differs from 2013: 2014 for Bulgaria and Croatia; and 2015 for Hungary and Romania.
3. Upper secondary vocational programmes include vocational programmes at other levels of education.

Table D2.3. Average class size, by level of education and type of institution (2013 and 2022)

Share of teachers aged 50 and over, by level of education (2013 and 2022)

1. For Canada, tertiary level values include only public institutions. For Ireland, values for all levels except pre-primary education include only public institutions. For Israel, values for pre-primary, lower secondary, upper secondary and all tertiary include only public institutions.
2. Year of reference differs from 2013: 2014 for Bulgaria and Croatia; and 2015 for Hungary and Romania.
3. Upper secondary vocational programmes include vocational programmes at other levels of education.

Table D5.4 Gender distribution of teachers by level of education (2022)

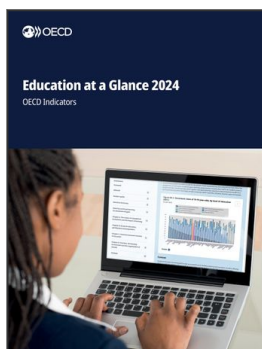
1. For Canada, tertiary level values include only public institutions. For Ireland, values for all levels except pre-primary education include only public institutions. For Israel, values for pre-primary, lower secondary, upper secondary, short-cycle tertiary and all tertiary include only public institutions.

Table D5.5 Share of teachers by type of contract, experience and work status, by ISCED levels (2022/23)

1. Primary and lower secondary education combined.
2. Reference year: academic year 2021/22 for Denmark, France, Japan and England (UK).
3. Reference year for trends: academic year 2012/13 for the United States, 2015/16 for France and 2018/19 for Lithuania.

Data and more breakdowns are available on the OECD Data Explorer (<http://data-explorer.oecd.org/s/4s>).

Please refer to the Reader's Guide for information concerning symbols for missing data and abbreviations.



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