

2 The Context of Upper Secondary Education in Lithuania

This chapter provides an overview of the context for upper secondary education in Lithuania. It outlines the socio-economic context, notably the labour market that young people transitioning from school to work enter. It presents the structure of upper secondary education in Lithuania in a comparative international perspective, highlighting the comparative brevity of upper secondary programmes and analysing the transition mechanisms from lower to upper secondary education. It briefly describes how upper secondary institutions are organised and funded and then discusses the main trends in upper secondary education, including participation, attainment, and completion. The chapter also outlines the curriculum, teaching and assessment in upper secondary education and the learning outcomes of different student groups and graduates emerging from international assessments. Finally, it provides an overview of the outcomes of upper secondary graduates, both into further education and employment.

Introduction

Despite having one of the highest attainment rates of upper secondary education among OECD countries (OECD, 2022^[1]), upper secondary education in Lithuania seems to play a relatively modest role in shaping young adults' knowledge and skills compared to in other OECD countries (OECD, 2012, 2015, 2018^[2]). There are currently concerns in the country around the skills that students have both when entering and leaving upper secondary education. Higher education institutions and employers reported to the OECD team that upon completion of upper secondary education, many young people still lacked skills to enable them to function effectively in the workplace and in higher education. Evidence also shows that upper secondary vocational graduates tend to perform consistently lower than general graduates and have a harder time finding employment compared to vocational graduates in other OECD countries (Vandeweyer and Verhagen, 2020^[3]; OECD, 2022^[1]). While participation and completion of general upper secondary education are very high, enrolment in vocational education in Lithuania is lower than the national targets, and Vocational Education and Training (VET) students are more likely to leave their programme before completion (OECD, 2022^[1]). The lack of graduates with strong vocational skills has an impact on the labour market, which is characterised by a considerable skills mismatch (OECD, 2022^[4]).

Socio-economic context

Economic growth has been relatively strong over the past the decade

Over the past decade, annual Gross Domestic Product (GDP) growth in Lithuania has tended to be above the OECD average. The impact of the COVID-19 pandemic on economic growth was comparatively mild, falling by just 0.02% in 2020 compared to a decline of 4.39% on average across OECD countries (OECD, 2023^[5]). Since February 2022, economic growth slowed, hit by declining exports and increased uncertainty (OECD, 2023^[5]).

Structural unemployment remains a persistent challenge

Unemployment rates in Lithuania tend to be slightly higher than across the OECD on average (7.5% in 2023 compared to the OECD average of 5%) and compared to neighbouring countries Estonia (5.9%) and Latvia (6.7%) (OECD, 2023^[5]). Despite a flexible labour market that tends to adapt relatively easily to evolving challenges, with workers transitioning from old to new jobs more rapidly than in most OECD countries (OECD, 2018^[6]), persistently high structural unemployment (estimated at around 6.5%) remains a feature of Lithuania's labour market. During the pandemic, the share of both vacancies and unemployment have increased, suggesting that the mismatch between available jobs and jobseekers has become even more acute (OECD, 2022^[4]).

Skills mismatch is considerable

While skills mismatch (i.e. the sub-optimal use of an individual's skills in their occupation, causing a disparity between the supply and demand of labour (Brun-Schammé and Rey, 2021^[7]) has been declining over the past few years in Lithuania, it remains considerable. In 2020, around 30% of employed tertiary graduates in Lithuania aged 25-34 were mismatched with their job by field of study and/or qualification level (OECD, 2022^[4]). Many workers are either under- or overqualified for their jobs, and the labour market experiences skills shortages, with high-skilled job offers often remaining unoccupied while low-qualified workers have difficulties in finding jobs (OECD, 2022^[4]). In particular, Lithuania faces a shortage of workers with medical, and education and training knowledge, as well as transversal skills including cognitive and communication skills, knowledge in business process and resilience, commitment, and self-management (OECD, 2022^[8]). These gaps contribute to shortages of well-qualified candidates for occupations such as

health professionals, personal care workers, teaching professionals, and sales workers (OECD, 2022^[8]). One of the factors contributing to the skills mismatch is the dominance of general, academic education in Lithuania while vocational education at upper secondary and post-secondary levels remains underdeveloped, resulting in many graduates lacking the specific and technical skills needed for their jobs (see Chapter 4) (OECD, 2021^[9]).

Poverty remains a challenge, especially in remote areas

Despite a recent decline in the share of the population living below the poverty line, the at-risk-of poverty rate in Lithuania remains the second highest among European Union (EU) OECD countries. Reducing poverty is an important challenge for Lithuania, and regional differences in GDP per capita and unemployment exceed the OECD average despite the country's small size (OECD, 2022^[4]). The population in remote and rural areas is ageing rapidly as the active population is moving to urban areas.

The structure of upper secondary education

Upper secondary education is comparatively short and no part of it is compulsory

The theoretical duration of upper secondary education (ISCED 3) (Box 2.1) in Lithuania is two years (Figure 2.1), except for vocational programmes that usually last three years (with the first two years primarily focused on general education and the third year focused on vocational education). Two years is comparatively short compared to other OECD countries, where upper secondary education is most frequently three years. At 17, young people are comparatively old when they start upper secondary education in Lithuania, compared to other OECD countries where the starting age is most frequently 15 or 16 (Stronati, 2023^[10]).

One of the consequences of having a comparatively long lower secondary and short upper secondary cycle is that the upper limit of compulsory education – 16 in Lithuania – occurs before the start of upper secondary education. In contrast, in most OECD countries at least part or all of upper secondary education is compulsory (Figure 2.1). However, analysis of the period of compulsory education and upper secondary participation and completion has tended not to reveal any clear relationship (Perico e Santos, 2023^[11]). This finding is borne out in Lithuania, where despite no part of upper secondary education being compulsory, attainment rates are among the highest in the OECD (OECD, 2022^[1]).

All upper secondary graduates have access to tertiary programmes at ISCED 6

Lithuania offers different options at the post-secondary level, including higher VET programmes (Figure 2.2). ISCED 6 programmes include both bachelor's degrees offered in universities and professional bachelor's degrees (vocational oriented) offered in colleges. All upper secondary graduates, both from general and vocational programmes, who pass the Matura in at least three subjects (including mathematics and Lithuanian from 2023/24) have direct access to these programmes. On the contrary, short-cycle vocational programmes at ISCED 5 will require a vocational qualification to enter from 2023 onwards. Therefore, upper secondary VET graduates will be able to access them directly, while upper secondary general graduates will need to enrol first in a post-secondary non-tertiary vocational programme (ISCED 4). All tertiary institutions usually set additional entry requirements, both at ISCED 5 and 6, based on the marks from the Matura, so having direct access does not guarantee admission.

Box 2.1. Principal characteristics of upper secondary education, ISCED 2011

The International Standards Classification of Education (ISCED) was developed to provide an international system for classifying countries' education systems, in order to understand and interpret the inputs, processes and outcomes of education systems from a global perspective and ensure comparable data. According to ISCED 2011, the principal characteristics of upper secondary education are:

- programmes at ISCED level 3, or upper secondary education, are typically designed to complete secondary education in preparation for tertiary education or provide skills relevant to employment, or both.
- programmes at this level offer students more varied, specialised and in-depth instruction than programmes at ISCED level 2. They are more differentiated, with an increased range of options and streams available. Teachers are often highly qualified in the subjects or fields of specialisation they teach, particularly in the higher grades.
- programmes classified at ISCED level 3 may be referred to in many ways, for example: secondary school (stage two/upper grades), senior secondary school, or (senior) high school.

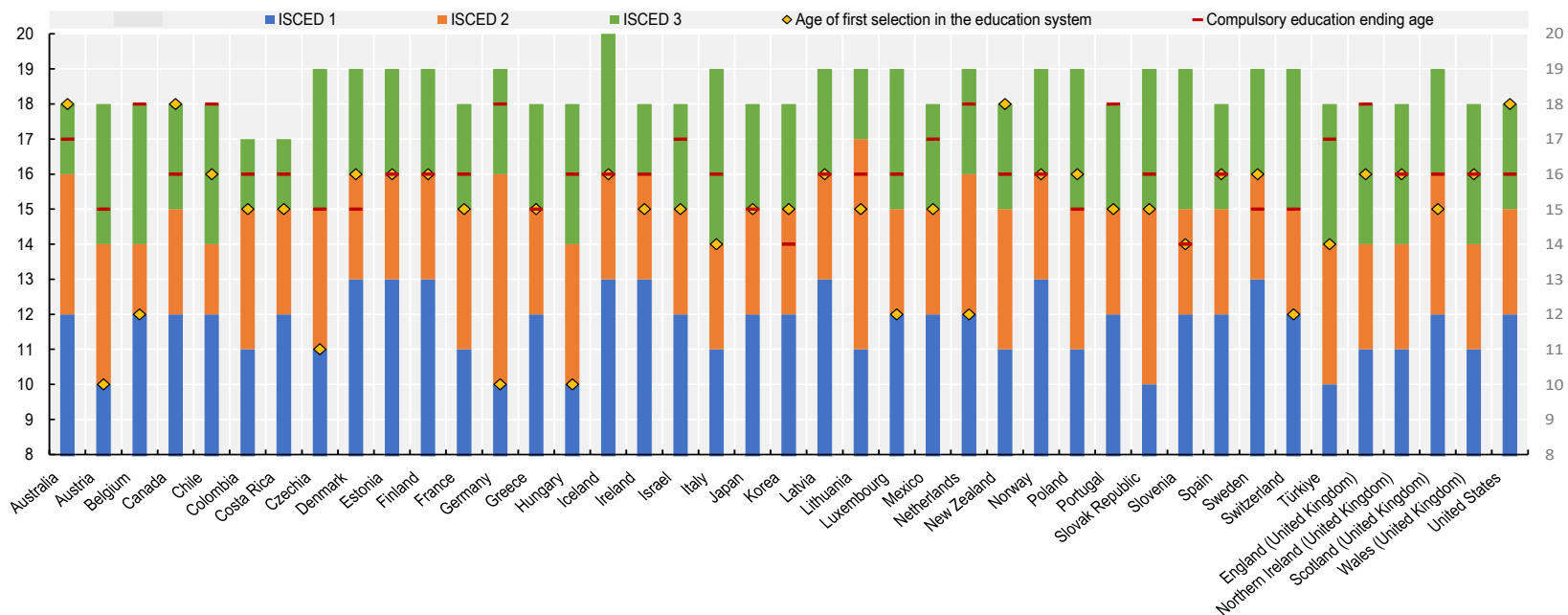
General and vocational upper secondary education

At the upper secondary level, ISCED distinguishes upper secondary education programmes by orientation:

- general education is defined as education programmes that are designed to develop learners' general knowledge, skills and competencies, as well as literacy and numeracy skills, often to prepare participants for more advanced education programmes at the same or a higher ISCED level and to lay the foundation for lifelong learning.
- vocational education is defined as education programmes that are designed for learners to acquire the knowledge, skills and competencies specific to a particular occupation, trade, or class of occupations or trades.

Source: UNESCO Institute for Statistics (2012_[12]), International Standard Classification of Education, ISCED 2011, <http://uis.unesco.org/en/topic/international-standard-classification-education-isced> (accessed on 4 December 2021).

Figure 2.1. Upper secondary education systems across OECD countries



Notes: It is assumed that age references refer to 1 January of the reference year. Ending age of compulsory education might refer to the age that each individual student reaches depending on the birth date, meaning that students can leave school during the school year whenever they turn such age, or it can refer to the age that students have during the school year, meaning that students must complete the school year during which they reached the compulsory ending age. Compulsory ending age refers to education and not training, for example in France the ending age of compulsory education is 16 but training is compulsory up to 18. In the United States, the ending age of compulsory education varies between 16 and 18 depending on the state. Countries are ranked in alphabetical order.

Sources: OECD (2022^[11]), *Education at a Glance 2022: OECD Indicators*, <https://doi.org/10.1787/3197152b-en>; OECD (2018^[13]), PISA 2018 Database, <https://www.oecd.org/pisa/data/2018database/> (accessed on 15 April 2023).

The first official selection point is at 14 but in practice, this applies to less than 2% of students

At the lower secondary level, students attend different types of school: gymnasias, pre-gymnasias, basic schools and vocational schools (EURYDICE (European Education Information Network), 2022^[14]). According to the OECD's Programme for International Student Assessment (PISA), the most common school among 15-year-olds is the gymnasium, with 74% of 15-year-olds enrolled (Figure 2.2). Following a school structure reform in 2004/05, in 11 years the number of gymnasias increased from 90 to 359, while other school types have been progressively phased out (Shewbridge et al., 2016^[15]) although some notably basic schools are still found in more rural areas (OECD, 2018^[13]).

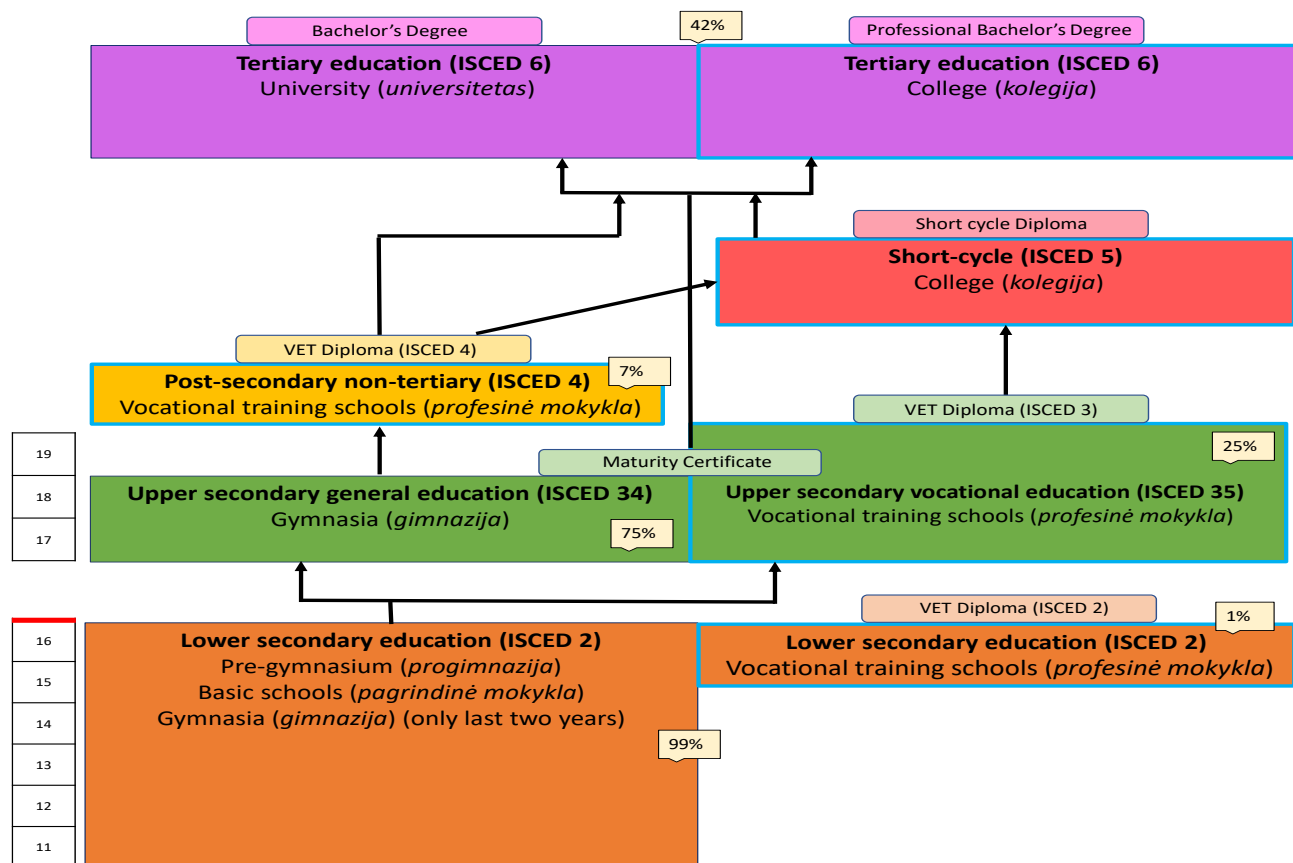
In Lithuania, students can opt to study vocational content at 14, midway through lower secondary education. However, very few – 1.8% in 2018 - students take this option (OECD, 2018^[13]). Low performance on PISA and high levels of socio-economic disadvantage tends to be the case for students entering vocational education at 14, with more than 50% of them coming from the bottom quartile of the socio-economic distribution¹ (OECD, 2018^[13]).

Selection for the vast majority of students occurs at 17, as they transition into upper secondary education

Entry into upper secondary education is the most common point of first selection across OECD countries (Figure 2.1), which is the point when students tend to be oriented towards either vocational or general upper secondary programmes (Box 2.1). This is the case in Lithuania where students can choose between two ISCED 3 programmes – general upper secondary education (*Vidurinio ugdymo programos*) and vocational education (*Profesinio mokymo programos*) (Figure 2.2).

In most countries, the transition into upper secondary education is associated with a move into a different type of educational institution or school. A particular feature of Lithuania's system is that the last two years of lower secondary and upper secondary general education are usually provided by the same institution – gymnasium (*gimnazijos*) (Figure 2.2). Upper secondary vocational education, as well as post-secondary non-tertiary vocational programmes (ISCED 4), are provided in separate vocational schools, (*Technologijų gimnazija*). This means that for a student moving into vocational upper secondary education, they are required to leave their current school and move to a separate vocational school at the end of Grade 10.

Figure 2.2. Upper secondary education transitions in Lithuania



Notes: The column on the left shows the typical age of students enrolled in that grade and the red line represents the end of compulsory education. The blue border represents vocational programmes. The yellow squares represent the share of students enrolled (for lower secondary and upper secondary: the shares in general and vocational among the total of students enrolled; for post-secondary programmes: the share of 19-year-olds enrolled) International date for ISCED 5 short-cycle programmes is missing for Lithuania.

Sources: OECD (2023^[16]), Education GPS; OECD (2022^[11]), *Education at a Glance 2022: OECD Indicators*, <https://doi.org/10.1787/3197152b-en>, (accessed on April 2023).

Entrance into upper secondary education in Lithuania is currently automatic and entirely based on student preferences (but this is planned to change)

Currently, students at the end of Grade 10 are not required to demonstrate through classroom assessments, external examinations or any other kind of assessment that they have met any academic requirements to progress into upper secondary education, i.e. progression into upper secondary is automatic (Perico e Santos, 2023^[11]). The current system leads to almost all students in Lithuania (93%) transitioning into upper secondary education at the expected time (age 17), compared to three-quarters (74%) on average across OECD countries (OECD, 2022^[11]), with the remaining 7% still enrolled in education but at the lower secondary level. In Lithuania, grade repetition is not a common practice at any stage of the education system, and this might play a role in supporting students' smooth transitions (Perico e Santos, 2023^[11]). Students in Lithuania also exercise full discretion in choosing which upper secondary programme they wish to pursue as teachers are not required to provide any recommendation.

During the development of this report there were discussions in Lithuania around the importance of ensuring that students at the end of lower secondary have the basic skills required to succeed in the next levels of education and are oriented to the most appropriate programme for their abilities, interests and ambitions. This reflects concerns about overall levels of student achievement and low enrolment in vocational education. In December 2022, Lithuania passed a law that will affect students' transitions from lower to upper secondary education, including using the results from the Grade 10 national examination to inform transition decisions into upper secondary education (Box 2.2). Chapter 3 discusses transitions into upper secondary education and the proposed changes.

Box 2.2. Recent reform on students' transitions into upper secondary education

Using academic information for entrance into upper secondary education

At the end of 2022, Lithuania passed a new law which will use students' results from the Grade 10 national examination in Lithuanian and mathematics to inform transitions into upper secondary education. The reform will be implemented from 2024. The aim is to assess students' acquisition of basic skills at the end of lower secondary, which are required to be able to access more complex content and succeed in the next levels of education. According to the new law, only those students with a mark above 4 (the national pass grade), will progress directly into upper secondary education. Those with marks below this threshold can retake the examination later in the same school year after receiving additional support at school. If they do not pass the second time, they can either repeat the year in the same school or they can move to vocational lower secondary school (ISCED 2).

It is not clear if the students required to repeat the final year of lower secondary education will still be required to pass the national examination in Grade 10, after having repeated the year to be able to progress into upper secondary education, or if those students directed to lower secondary vocational schools will have the choice of continuing their upper secondary education in either a general or lower secondary school. Chapter 3 discusses the implications of this policy for students and their pathways, including the possibility that repetition rates will increase. Currently, in lower secondary education only 0.6% of students repeated a year in 2020, compared to 2.1% on average across the OECD.

Sources: Republic of Lithuania (2023^[17]), Education Law No. I-1489, [XIV-1726 Law of the Republic of Lithuania on Education No. I-1489 7, 8, 9, 10, 11, 14, 16, 19, 20, 21, 23, 29, 36... \(Irs.lt\)](#), (accessed 30 August 2023); OECD (2022^[11]), Education at a Glance 2022: OECD Indicators, Table C4.1., <https://doi.org/10.1787/3197152b-en> (accessed on 15 April 2023).

Governance and funding

General and vocational schools have separate governance

General upper secondary schools in Lithuania are managed by their municipalities. In contrast, vocational schools are managed by the central government. Stakeholders reported that this disparity was another factor that contributed to lower perceptions of the vocational system. It also makes cooperation and collaboration across general and vocational schools more difficult.

The funding system also makes cooperation across schools challenging, and in particular can create incentives from schools to try to retain students rather than advise on learning pathways that best suit the needs of individual students. At the end of Grade 10, gymnasiums that suggest students consider attending a vocational school risk losing funding, which is linked to individual students (see Chapter 3).

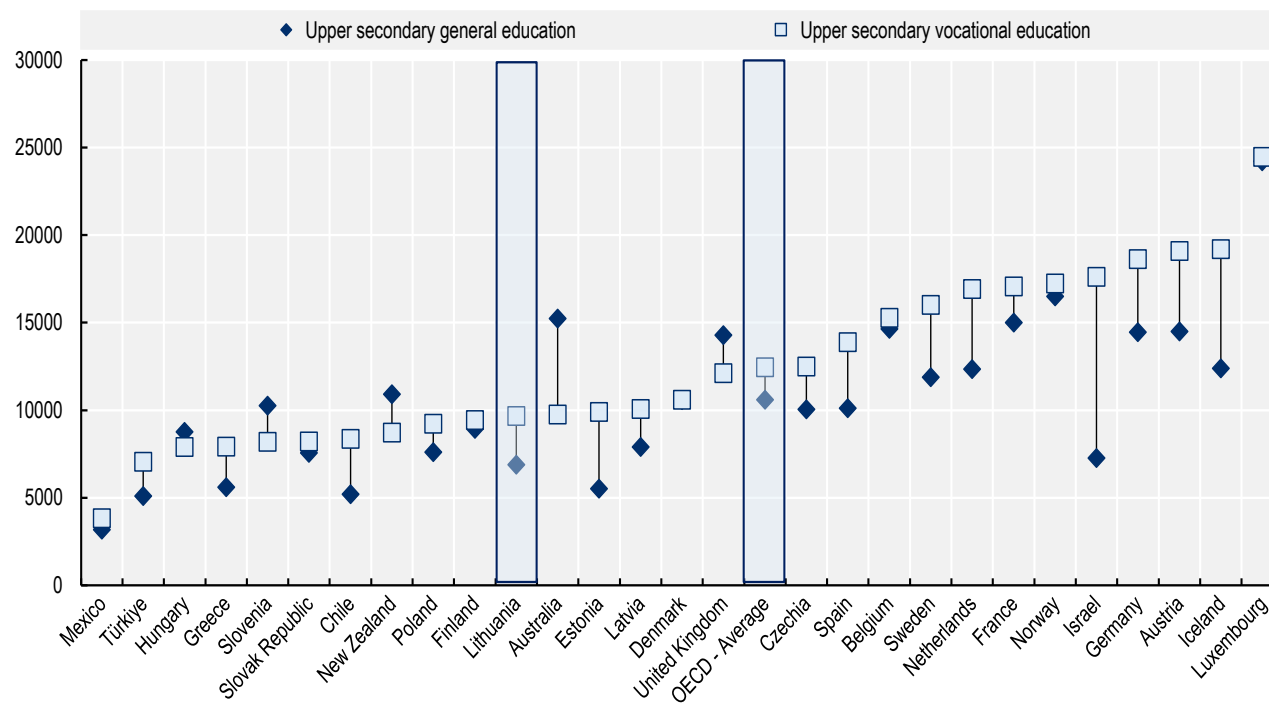
Overall spending on education is low compared to the OECD average but higher for upper secondary education

In 2019, Lithuania spent 8.9 % of its total public expenditure on education, a share smaller than that of its neighbouring countries, Estonia (10.6%) and Latvia (9.5%), and less than the OECD average (10.6%). Spending on lower and upper secondary and post-secondary non-tertiary education is 4.5%, higher than in Estonia (3.7%), in Latvia (3.9%) and the OECD average (4.3%). Annual spending per student in upper secondary education in Lithuania in 2019 was USD 7 662 (OECD, 2022^[11]). While Lithuania's annual spending per upper secondary student is lower than the OECD average, its spending per vocational student is very similar to that of Estonia and that of Latvia. Many countries spend more per vocational upper secondary student because of the higher infrastructure costs. Lithuania has recently made significant investments in the infrastructure of its vocational schools which may be driving higher per-student costs (Figure 2.3).

Some countries, especially those with historically well-developed VET systems, leverage private funding from employers to cover some of the costs of upper secondary vocational education compared to general education. In Germany, and the Netherlands for example, where employers cover most of the cost of work placement for VET students, private funding accounts for at least 37% of funding for VET. In contrast, in Lithuania private funding for VET accounts only for 7.6%, lower than across the OECD on average (11.2%) (OECD, 2022^[11]). Increasing the share of private funding in VET can help schools provide practical training, because it is very costly for them to continuously update content to reflect the labour market and requires significant investments in training and equipment (OECD, 2017^[18]).

Figure 2.3. Total expenditure on educational institutions per full-time equivalent upper secondary student

USD Purchasing Power Parity



Source: OECD (2022^[11]), *Education at a Glance 2022: OECD Indicators*, Table C4.1., <https://doi.org/10.1787/3197152b-en>, (accessed on 15 April 2023).

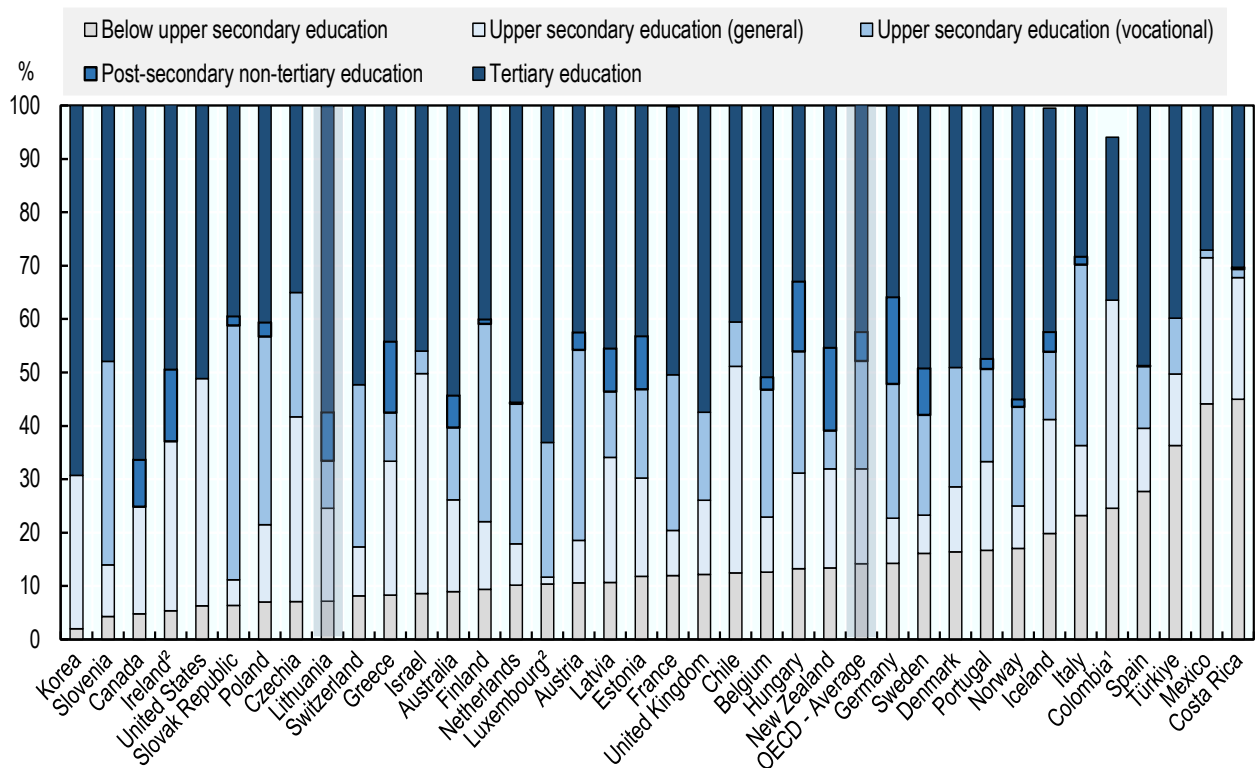
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Participation in upper secondary education

Attainment of upper secondary education is very high

Lithuania has consistently been able to ensure that young people both successfully transition into upper secondary education and remain in the cycle until successfully completing. Lithuania has one of the highest rates of upper secondary attainment across the OECD, having 93% of 25-34 year-olds who attained at least upper secondary education compared to an OECD average of 86% (Figure 2.4). Attainment of upper secondary education has been consistently high over time and translates into high rates of tertiary attainment. The share of 20-24 year-olds who attained at least upper secondary education in Lithuania increased from 87% in 2010 to 93% in 2020 (OECD, 2017^[19]; OECD, 2021^[20]).

Figure 2.4. Educational attainment of 25–34 year-olds (2021)



Notes:1 Upper secondary general education includes both general and vocational upper secondary education.

2 Upper secondary general education represents both upper secondary and post-secondary non-tertiary education.

Countries are ranked in ascending order of the share of 25–34 year-olds who attained below upper secondary education.

Source: OECD (2022^[1]), *Education at a Glance 2022: OECD Indicators*, <https://doi.org/10.1787/3197152b-en>, (accessed on 15 April 2023).

Participation in upper secondary education is high

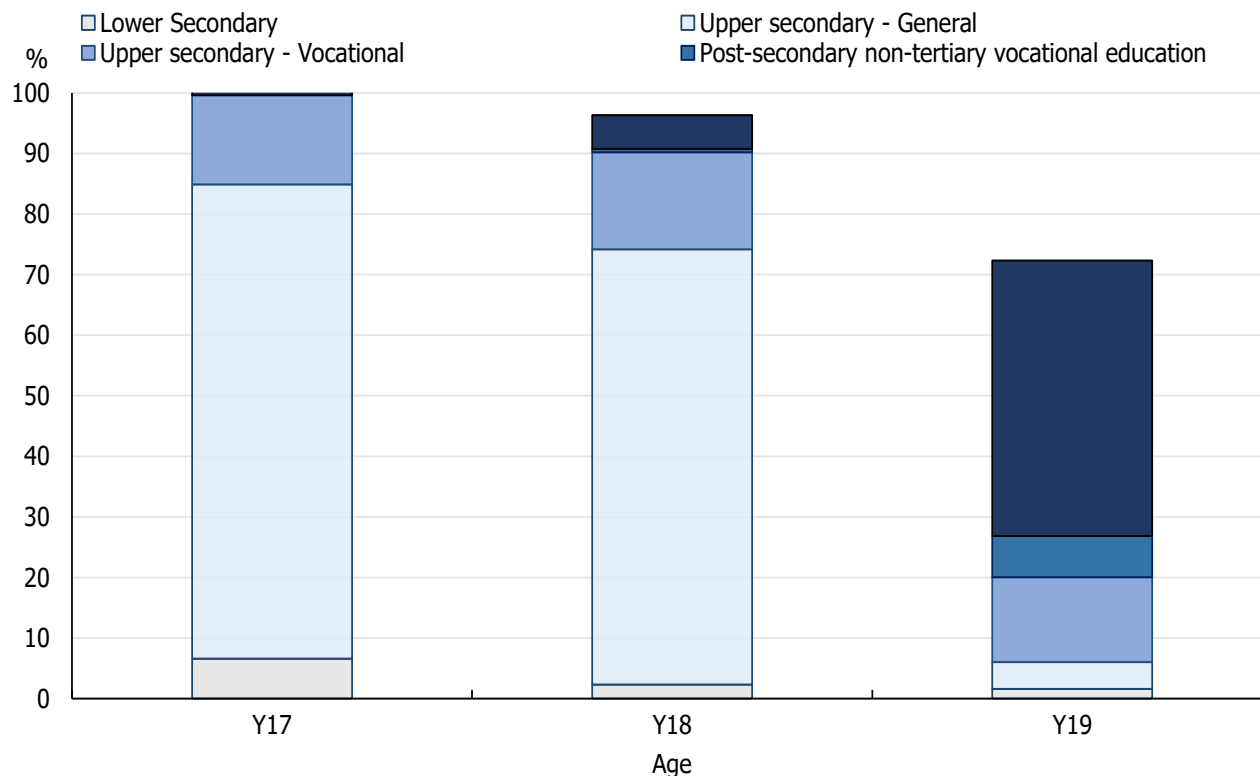
In line with high attainment overall, participation in education among 17–19 year-olds (the phase of upper secondary education) in Lithuania is high (Figure 2.5). Despite compulsory education ending at 16, 100% of 17-year-olds were enrolled in education in 2020, of which 93% successfully transitioned and were enrolled in upper secondary education (either general or vocational). Automatic progression into upper secondary education and the absence of any certification until the end of upper secondary education could be factors encouraging this high participation in Lithuania.

Transitions through upper secondary are comparatively smooth

Student transitions through upper secondary education in Lithuania are relatively smooth and linear, with students transitioning at the expected time to the subsequent grade (OECD, forthcoming^[21]). In practice, this means that most students in Lithuania are enrolled in the grade that corresponds to their age. One factor contributing to smooth transitions is low repetition rates, as repetition results in students not progressing with their cohort, possibly making students more vulnerable to non-completion (OECD, 2021^[20]). Smooth transitions could also be supporting students' completion of upper secondary education. Almost all students in Lithuania complete upper secondary education at the expected time, with only 4%

of 19-year-olds still enrolled in general upper secondary education (Figure 2.5) and, in contrast to other OECD countries, there is limited change in completion rates two years after programmes' theoretical duration (Figure 2.7). The current plans to change entrance into upper secondary education, with the introduction of a threshold in the Grade 10 examination, could impact transitions into upper secondary education and potentially enrolments as well (see Chapter 3).

Figure 2.5. Enrolment rates of 17-19 year-olds by level of education

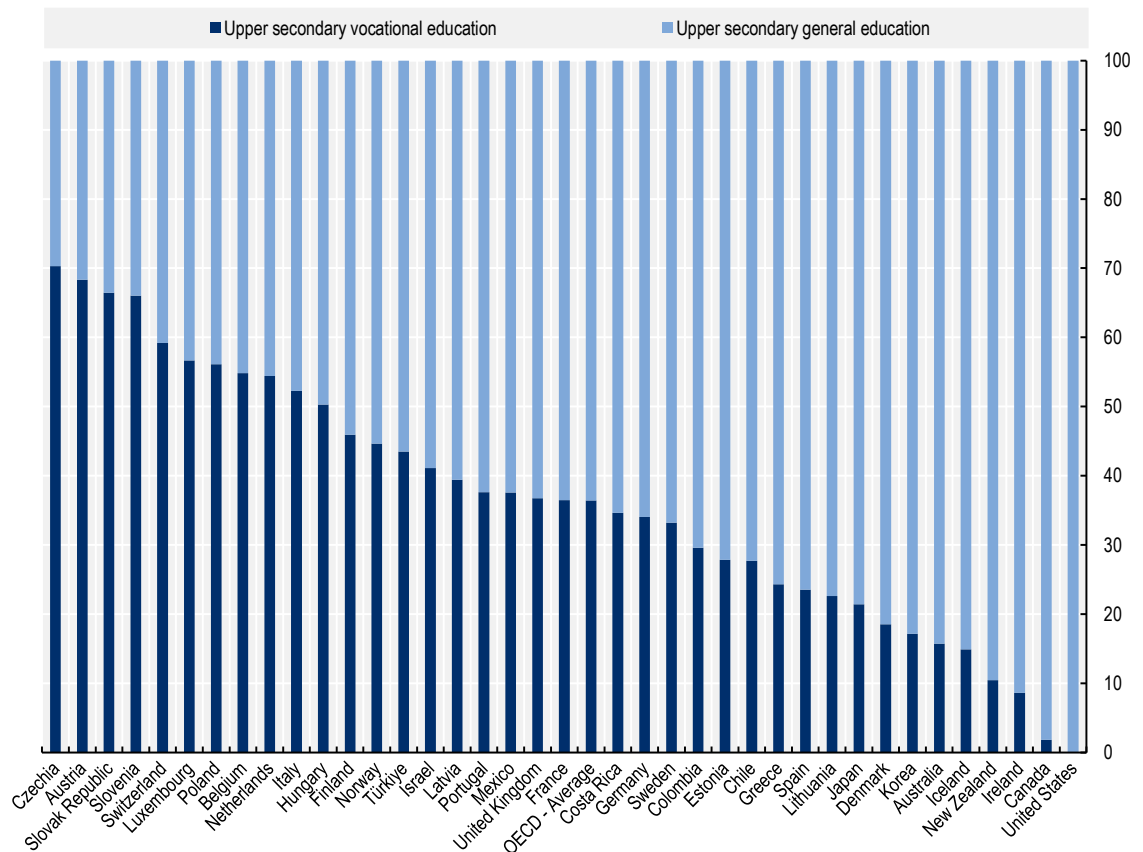


Source: OECD (2021_[20]), *Education at a Glance 2021: OECD Indicators*, <https://doi.org/10.1787/b35a14e5-en>, (accessed on 15 April 2023).

Participation in upper secondary vocational education is lower than national targets

In Lithuania, 23% of 15-19 year-olds are enrolled in vocational education and training (VET) compared to the OECD average of 36% (Figure 2.6). In countries with historically well-developed VET systems at the lower and upper secondary levels, such as Austria, the Netherlands and Switzerland, more than 50% of students are enrolled in VET (Figure 2.6). One of the key policy concerns of stakeholders during the OECD team's mission to Lithuania in October 2022 was the comparatively low share of students enrolled in vocational upper secondary education. This has also been a recurrent policy priority in Lithuania over the past decade (OECD, 2017_[19]). Successive policies and targets have aimed to increase upper secondary VET enrolment, such as the large investment made in 2007-2013 on VET physical infrastructure and the opening of 42 sectoral practical training centres between 2012 and 2015 (OECD, 2017_[19]). However, despite these investments, participation has not increased significantly in recent years and the target set in the 2013 Strategic Plan – that 33% of upper secondary students would be enrolled in VET by 2017 – was not achieved. Enrolment in upper secondary VET has been relatively stable (at around 25%) since 2013 (OECD, 2022_[11]).


Figure 2.6. Share of students aged 15-19 enrolled in upper secondary, by programme orientation



Notes: Upper secondary vocational education includes upper secondary school and work-based vocational education (ISCED 2011 level 3 programme 5_SW).

Countries are ranked in ascending order of the share students aged 15-19 enrolled in upper secondary vocational education.

Source: (OECD, 2021^[20]), *Education at a Glance 2021: OECD Indicators*, <https://doi.org/10.1787/b35a14e5-en>, (accessed on 15 April 2023).

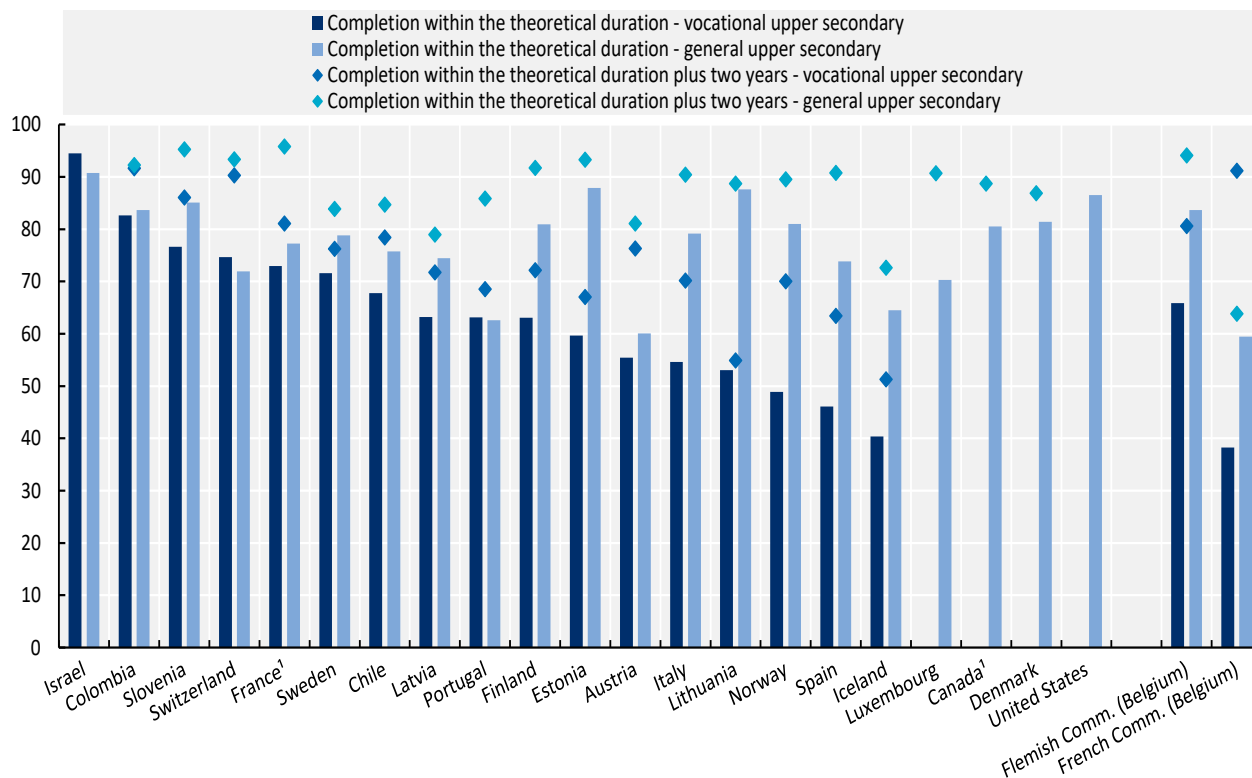
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Completion of upper secondary education is high but lower for VET programmes

Upper secondary completion rates measure the proportion of the students who enter an upper secondary programme and who ultimately graduate from it (OECD, 2020^[22]). Completion rates of upper secondary education are around 90% in Lithuania for students in general programmes (Figure 2.7). While completion rates in general programmes are among the highest among OECD countries (almost 90%), only 55% of VET students graduate by the theoretical duration of the programme plus two years. Lithuania has the widest gap between completion rates in general and vocational programmes across the countries that provided data. One of the reasons for this disparity might be the poor perceptions of vocational education, and in particular, the low value that some occupations seem to place on vocational qualifications – it was reported to the OECD team that a vocational qualification is often not required for employment in a given sector (see Chapter 3). However, it is important to note that VET students who leave their programme after two years can still certify completion of upper secondary by successfully passing the Matura.

Figure 2.7. Upper secondary completion rates, by timeframe and programme orientation on entry (2021)

Per cent, true cohort data only



Notes: The data presented here come from an ad hoc survey and only concern initial education programmes. The reference year (2021, unless noted otherwise) refers to the year of graduation by the theoretical duration plus two years. 1 Year of reference differs from 2021.

Countries and other participants are ranked in descending order of the completion rate within the theoretical duration of vocational upper secondary students.

Source: OECD (2023_[23]), INES 2023 ad hoc survey on upper secondary completion rate.

The gender gap in participation and completion of upper secondary education is slightly more pronounced than across the OECD on average

As in the case across the OECD on average, upper secondary VET in Lithuania is more popular among men, with 29% of men enrolled compared to 16% of women. This gender gap in Lithuania is slightly higher than the OECD average (OECD, 2022_[1]). In Lithuania, young women are more likely to leave VET early compared to young men (a difference of 5 percentage points). In contrast, across the OECD on average, men are more likely to leave early (7 percentage points gap). Similarly, young women in Lithuania are less likely to complete upper secondary VET compared to young men: only 50% of young women completed VET, 10 percentage points lower than for young men, the largest gender gap across the OECD (OECD, 2023_[23]). In contrast, young women enrolled in general upper secondary education in Lithuania have high completion rates, 7 percentage points higher than young men (OECD, 2023_[23]). National efforts to raise participation in and prestige of VET should consider targeting the specific challenge around young women's perceptions and experiences in VET education.

Teaching, learning and the curriculum in upper secondary education

Lithuania is implementing a new competency-based curriculum in general education

In 2020, Lithuania started updating the general curriculum framework for primary, lower and upper secondary education (ISCED 1-3) and in 2022 started implementing a new competency-based curriculum. The previous curriculum for certain subjects, such as mathematics, was found to cover less content and be less demanding compared to other OECD countries. While competencies such as problem solving and critical thinking were mentioned in the curriculum, student performance did not demonstrate strong performance in these skills in international assessments (e.g. PISA) (OECD, 2021^[9]).

The new curriculum aims to equip students with competencies that young people need to succeed in the twenty-first century. The new curriculum guidelines introduce competence-oriented education covering knowledge (subject, interdisciplinary, procedural and epistemic), skills (cognitive, metacognitive, emotional, social and practical) and values (personal, interpersonal and societal) (National Agency for Education, 2019^[24]; OECD, 2021^[9]). The curricula for upper secondary VET programmes are updated on an ongoing basis, as professional standards are updated (Eurydice, 2019^[25]). The introduction of the new curriculum intensifies the need to address the reported focus on knowledge memorisation rather than application of skills (OECD, 2019^[26]). Part of encouraging a shift in teaching and learning in line with the curriculum will require ensuring alignment between its aims and the knowledge and skills assessed by the country's national examination for upper secondary certification - the Matura (see Chapter 4).

The upper secondary curriculum aims to promote breadth of student choice

Like in most OECD countries, Lithuania's upper secondary curriculum aims to promote breadth of learning (Stronati, 2023^[10]), with students in both general and vocational education required to study at least eight general subjects. In addition to their eight general subjects, vocational students must also pursue a vocational specialisation, and students in general education frequently add elective courses.

In 2023, as well as implementing a new curriculum, Lithuania will introduce new requirements for the subjects students study. Both general and vocational students will be required to study for fewer hours overall. In particular, the number of compulsory subjects for vocational students may fall significantly – to five – as well as reducing the minimum number of hours that they spend in total in school. Vocational students will also be given greater choice so that they can choose across several subjects. Compulsory subjects, mathematics and Lithuania will be provided at two levels for all students (see Chapter 3).

There are two types of teachers at the upper secondary level in Lithuania: general and vocational teachers

General teachers teach general content across both general and vocational schools, with some teachers working in both types of schools during the same year because there are not enough hours in individual schools (OECD, 2017^[19]). General teachers usually represent around 30% of the total workforce in vocational schools (Vaitkute, 2016^[27]). Vocational teachers teach vocational subjects in vocational schools.

Upper secondary general teachers are required to hold a tertiary certification and a teacher qualification regardless of which type of school they teach in. Vocational teachers can qualify via two routes: with a tertiary and teacher qualification as for general teachers, or with an upper secondary certification and a vocational qualification (ISCED 3 or above), three years of work experience in their occupational area, and a 120-hour course on teaching and psychology delivered by accredited teacher development institutions within the first year of their teaching activity (Shewbridge et al., 2016^[15]).

All teachers are required to take continuing professional development and to designate at least five days a year to it. Initial teacher education and continuous professional development are regulated by the Ministry

of Education and Science (MoES). VET schools are responsible for organising professional development for vocational teachers and can use school funding for it (OECD, 2021^[9]).

While the OECD Teaching and Learning International Survey (TALIS) only provides data on teachers in lower secondary education in Lithuania, the data about teacher demographics is likely indicative for the profession overall. TALIS 2018 indicated that the teaching workforce in Lithuania is ageing, with an average age of 49.9 compared to an average across the OECD of 44.1 (OECD, 2019^[28]). The renewal of the teaching force could represent an opportunity to ensure that new VET teachers have minimum levels of relevant work experience in their chosen occupational field (see Chapter 3).

Certification at the end of upper secondary education in Lithuania

The Matura determines upper secondary certification and tertiary entrance

In Lithuania, the Matura currently serves the function of certification of upper secondary education and selection into tertiary education. The introduction of the Matura in 1998 replaced entrance examinations that were previously organised by each higher education institution. This change is widely perceived to have brought important improvements in the objectivity and reliability of higher education selection procedures (OECD, 2017^[19]).

As in many other OECD countries, the Matura is a composite performance-based certification process with a number of different components. Currently, it includes student performance in national-level external examinations, school-based examinations, teachers' marks from classroom work, and an optional project. From 2023 onwards, reform of the Matura will remove the school-based examinations, with all examinations designed and administered at the national level to provide externality and promote reliability (see Chapter 4).

There is no separate certification for upper secondary vocational students

Students in general and vocational education have the same requirements for upper secondary certification and for tertiary selection. This means that while students in vocational education have fewer hours dedicated to general subjects, they are currently required to take the same examination and meet the same requirements for completion of upper secondary education. For students who wish to receive certification in their vocational subjects, they remain in their vocational school for an additional six to 18 months to complete their vocational studies and the requirements to certify their vocational content. The fact that vocational students receive their upper secondary certification before the completion of their vocational programme might be one factor encouraging non-completion of vocational programmes (Figure 2.7).

Certification at the end of upper secondary education is not currently promoting student engagement or the acquisition of higher order skills

While the Matura was an important step forward when it was introduced, promoting fairness and more consistent standards across schools, it was repeatedly reported to the OECD team from a wide range of stakeholders that the examination in its current form is not focusing on the competencies that young people need to succeed in twenty-first century in Lithuania. Teachers from across the school system indicated that they perceive the Matura to be assessing students' knowledge, rather than what they can do. Students in upper secondary education preparing for the Matura reported that its examination items are predictable – with the same types of items each year, which follow the same format and are not always engaging or stimulating.

A number of stakeholders reported to the OECD team that one of the challenges in raising learning outcomes in Lithuania is weak student motivation. The data about the contribution of upper secondary

education to young people’s competencies – where completing upper secondary education appears to have a relatively limited impact on what one knows and can do, and where employers indicated that the signalling value that they attached to upper secondary certification is weak – might partly explain the reportedly low levels of motivation. Young people’s perceptions of what they are required to learn during upper secondary education might also be influencing student motivation. In the workshops with the OECD team, young people reported that they did not believe that what they learnt at school was useful for life. This seems to echo teachers’ views that the Matura does not effectively assess what their students can do, but rather what they know. Teachers and students reported that the current Matura requires that they cover a vast range of material – and that this breadth translates to relatively shallow learning, with a new topic being covered in each lesson.

Learning outcomes in upper secondary education

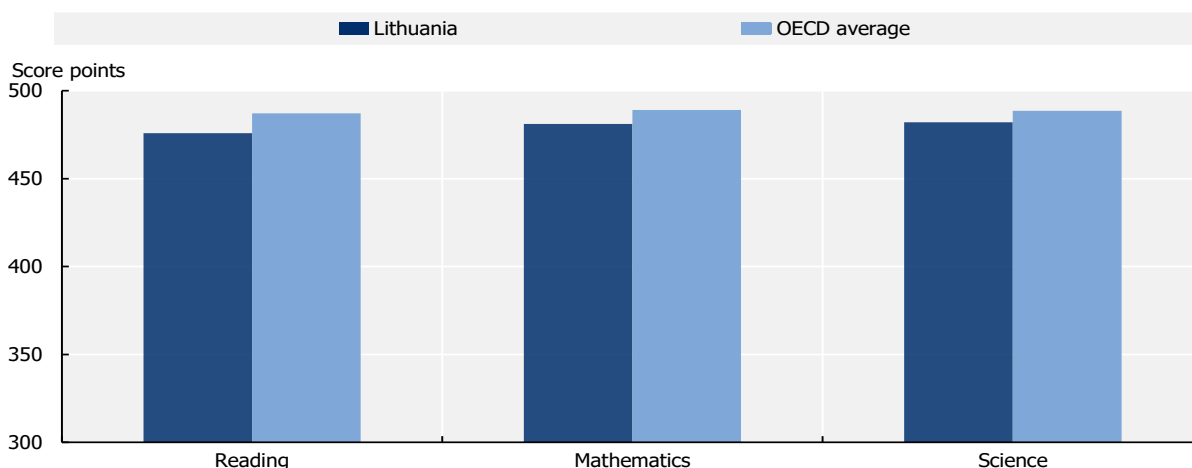
On entry to upper secondary education, 15-year-olds in Lithuania score below the OECD average

In the PISA 2018, 15-year-olds in Lithuania (learners in Grade 9, their penultimate year of lower secondary education) scored below the OECD average in mathematics, reading and science (Figure 2.8). Over the past decade (2009-2018), Lithuania has not experienced significant improvements in performance in reading, mathematics and science (OECD, 2021^[9]).

While Lithuania’s performance is close to the OECD average and in line with that of a number of other countries at the same level of economic development – notably Croatia, Hungary and the Slovak Republic – it performs significantly below all its neighbouring countries, notably Estonia, Latvia (except for reading) and Poland (OECD, 2019^[29]).

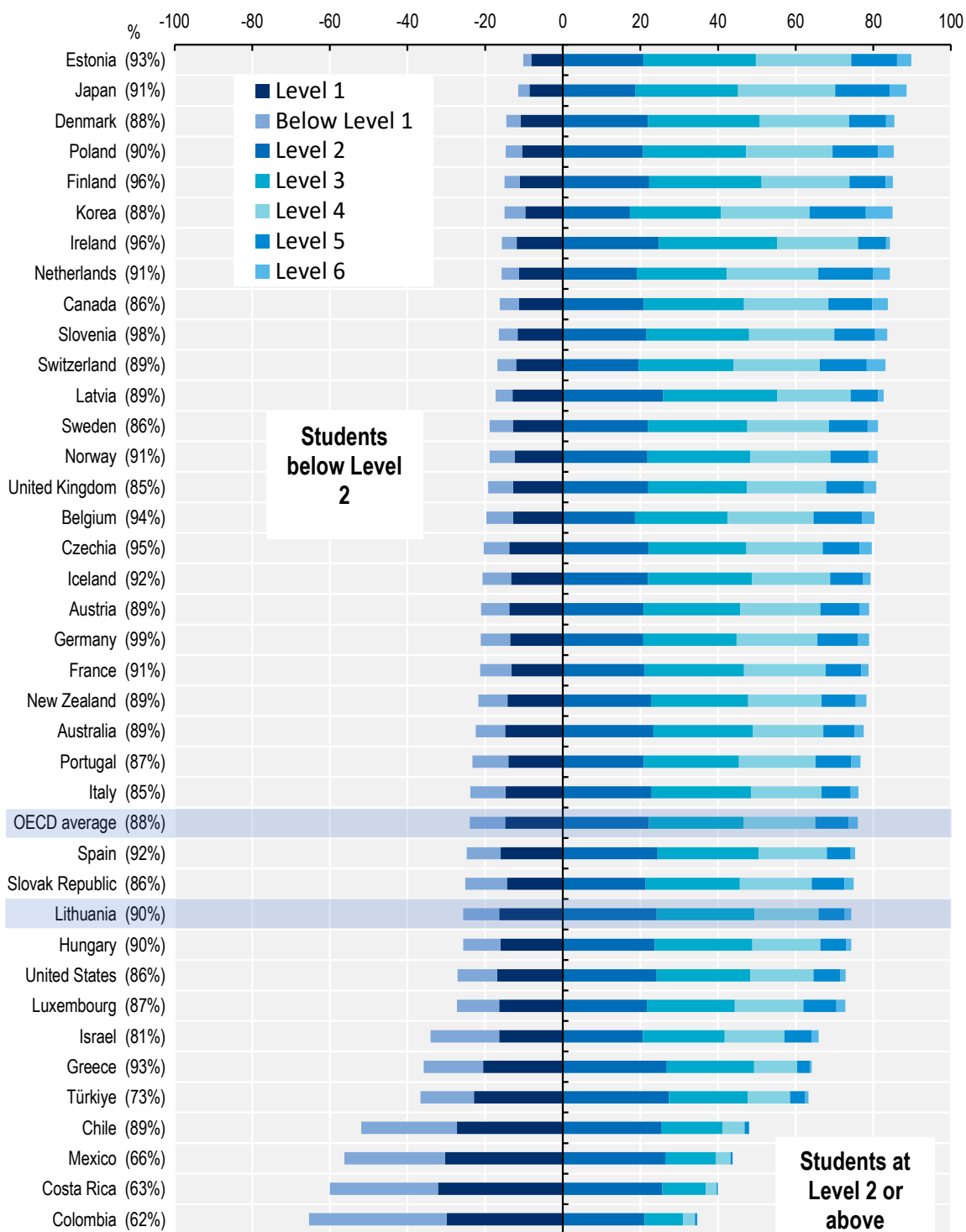
In 2018, more than a quarter of 15-year-olds in Lithuania (25.6%) scored below Level 2 in mathematics, which is considered the baseline for basic competence. That is a far higher share than in the neighbouring countries of Estonia, where 10% of 15-year-olds scored below Level 2, and Latvia, where the share was 17% (Figure 2.9). PISA also shows that a very small minority (8.4%) of 15-year-old students in Lithuania are high performers (performing at Levels 5 or 6) in any of the three PISA domains (Figure 2.9). In Estonia, almost double this share of students are high performers (16%) and 10.9% on average across OECD countries (Figure 2.9).

Figure 2.8. 15-year olds performance in reading, mathematics and science, PISA 2018



Source: OECD (2018^[13]), PISA 2018 Database, <https://www.oecd.org/pisa/data/2018database/> (accessed 15 April 2023).

Figure 2.9. Students' proficiency in mathematics



Notes: Coverage Index 3 is shown in parenthesis next to the country/economy name.

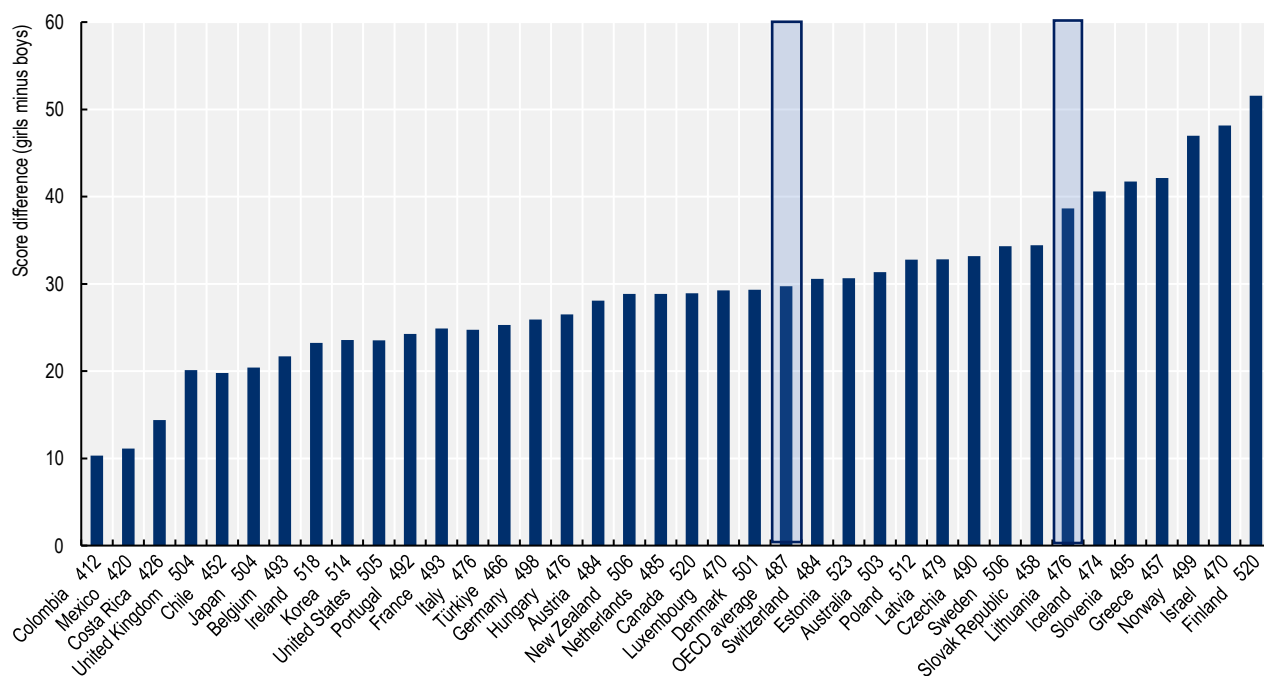
Countries and economies are ranked in descending order of the percentage of students who performed at or above Level 2.

Source: OECD (2019^[29]), PISA 2018 Results (Volume I): What Students Know and Can Do, <https://doi.org/10.1787/5f07c754-en>, Figure I.6.1 Students' proficiency in mathematics.

Girls outperform boys in both reading and mathematics

The gender gap in 2018 (measured in terms of the difference between boys' and girls' performance in reading) is slightly greater in Lithuania than the OECD average. While the gender gap in reading favours girls across all OECD countries, in Lithuania the gap is more pronounced, with a difference of 39 score points, compared to 30 score points across the OECD. In neighbouring countries, the gender gap in reading is slightly smaller, a difference of 31 score points for Estonia and 33 for Latvia (Figure 2.10). In mathematics, boys outperform girls on average across the OECD, but by only five score points. Lithuania is one of the few OECD countries (together with Iceland, Israel, Norway and Sweden) where girls still outperform boys, but by only 2 points (OECD, 2019_[30]).

Figure 2.10. Gender gap in reading performance



Notes: The mean score in reading is shown next to the country/economy name. All differences are statistically significant.

Countries and economies are ranked in ascending order of the score-point difference related to gender (girls minus boys).

Source: OECD (2018_[13]), PISA 2018 Database, <https://www.oecd.org/pisa/data/2018database/> (accessed 15 April 2023), Tables I.B1.4 and II.B1.7.1.

StatLink  <https://stat.link/1wd078>

The socio-economic gap between regions puts students from rural areas at a disadvantage

In terms of equity, the association in Lithuania between a student's socio-economic background and their reading performance at age 15 is in line with the OECD average, with 89 points' difference between students from the bottom and top quarter of the PISA index of economic, social and cultural status (OECD, 2019_[30]).

However, according to PISA, Lithuania has relatively large performance differences between students in rural and urban schools that are driven by differences in students' socio-economic status. While the performance gap between students from rural and urban students is almost twice as large as in Latvia and

four times larger than in Estonia, after controlling for differences in students' social-economic status Lithuania is one of the few countries in which rural students outperform urban students (OECD, 2020_[31]). This underscores the importance of reducing poverty levels in rural areas as part of efforts to promote higher, more equitable outcomes nationally. Closing the socio-economic gap is challenging as rural students perform comparatively poorly also on national examinations and the Matura, which is required to enter tertiary institutions. While the majority of urban students who study tertiary education enrol in universities, students coming from rural areas tend to study in colleges, from which graduates experience lower earning and higher rates of unemployment (OECD, 2017_[19]).

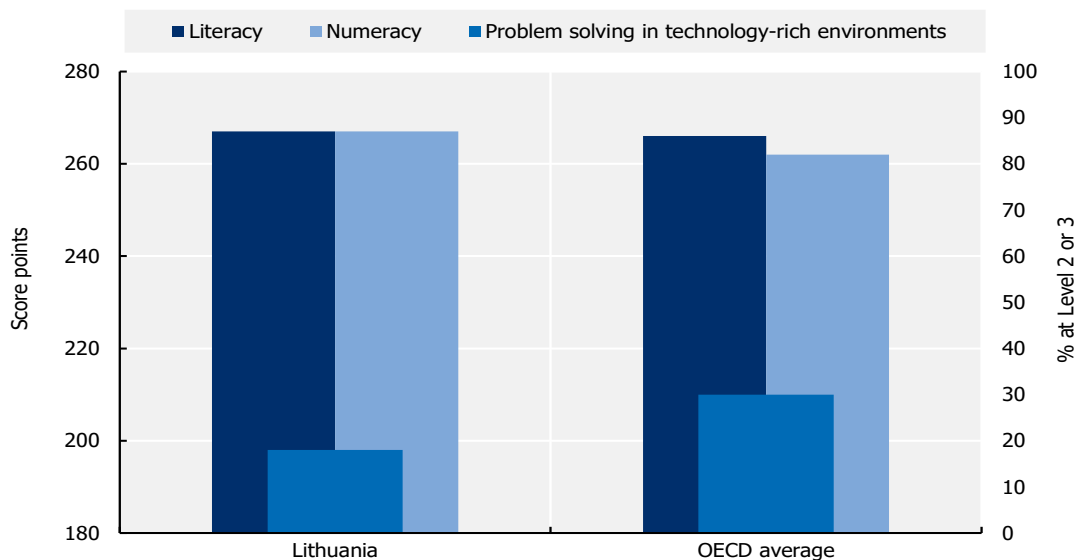
Since 15-year-olds in Lithuania are still enrolled in lower secondary education and only 1% of students is enrolled in vocational education at this stage, it was not possible to explore the performance differences in PISA between general and vocational students.

Adults in Lithuania score above the OECD average

The OECD's Programme for the International Assessment of Adult Competencies (PIAAC) shows that adults in Lithuania perform significantly above the OECD average in numeracy and slightly above the average in literacy (Figure 2.11). Compared to other OECD countries, Lithuania has few adults with very low levels of skills (at Level 1 or below), although there are also fewer adults with skills at higher levels compared to the OECD average. Performance among adults is relatively equitable, with age and socio-economic background having a smaller impact on performance than the average across the OECD (OECD, 2021_[9]). The third domain of PIAAC – problem solving in technology-rich environments – assesses problem solving and basic computer literacy skills. In Lithuania, only 18% of adults reached the highest levels (Level 2 or 3), which is almost half the proportion of adults reaching this level across the OECD on average (30%). At these levels, tasks might involve multiple steps or operations, and the user might have to respond to unexpected events, evaluate the relevance of items, and avoid distractors (OECD, 2016_[32]).

Figure 2.11. Snapshot of performance in literacy, numeracy and problem solving (PIAAC)

Mean proficiency scores of 16–65 year-olds in literacy and numeracy (primary axis), and the percentage of 16–65 year-olds scoring at Level 2 or 3 in problem solving in technology-rich environments (secondary axis)



Source: OECD (2012, 2015, 2018^[2]), Survey of Adult Skills (PIAAC) (2012, 2015, 2018), [Survey of Adult Skills \(PIAAC\) - PIAAC, the OECD's programme of assessment and analysis of adult skills](#), (accessed on 15 April 2023).

Upper secondary education seems to play little role in contributing to adult skills

Looking across Lithuania's performance in PISA and PIAAC would seem to suggest that the final stages of school and education play an important role in raising levels of learning, in particular addressing basic learning gaps and creating more equitable performance. However, among all the countries that participated in PIAAC in 2016, in Lithuania attaining upper secondary education provides the smallest positive contribution across the OECD to an individual's performance on these assessments (Figure 2.12). It should be noted that Lithuania's upper secondary cycle is slightly shorter than all the other PIAAC countries on average, so it might be expected that it plays a less significant role in bringing up learning outcomes than in other countries.

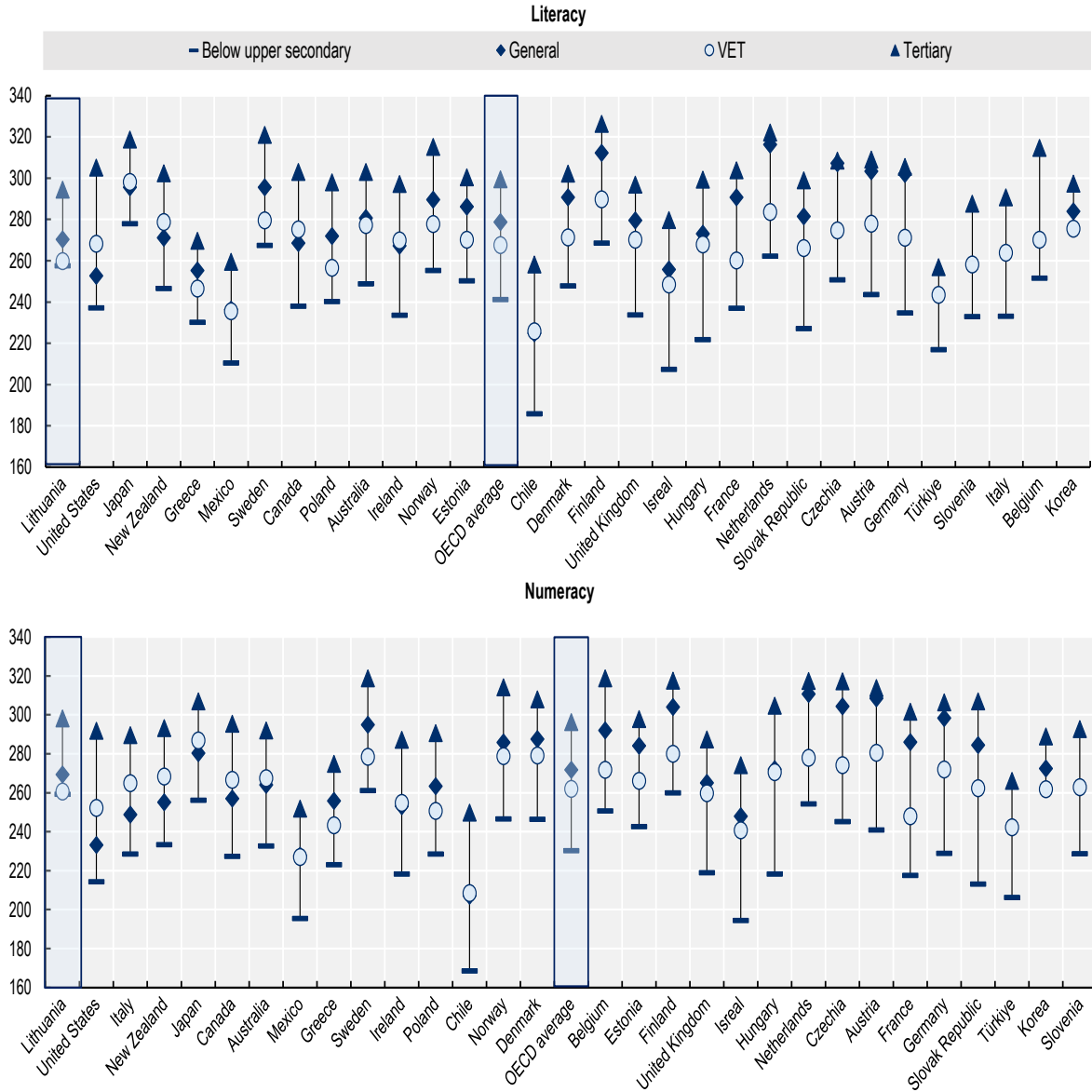
Rather than upper secondary contributing significantly to raising literacy and numeracy skills of adults, it seems that Lithuania's above-average scores in PIAAC are being driven by high shares of attainment overall. In 2015 (the year Lithuania participated in PIAAC), only 8% of 25-64 year-olds in Lithuania had not attained upper secondary education, and 39% had attained tertiary education (compared to 22% on average across the OECD countries that participated in PIAAC), and 39% had attained tertiary education (compared to 35%) (OECD, 2016^[33]). Put simply, because so many adults in Lithuania complete upper secondary and tertiary education, which is associated with higher levels of performance in all countries, this drives up the country's average scores. In contrast, the positive contribution of completing upper secondary education to an individual adult's learning outcomes is significantly lower than in other countries. There is significant scope for Lithuania to strengthen the impact that upper secondary education has on young people's learning, so that it capitalises more on its achievements in terms of high participation and completion of upper secondary education (see Chapters 3 and 4). This would also help Lithuania to realise far greater positive contributions to learning outcomes from its investments in upper secondary education.

The results from PIAAC are reinforced by the views of national stakeholders. Higher education institutions and employers reported to the OECD that upon completion of upper secondary education, many young people still lacked skills to enable them to function effectively in the workplace and in higher education. They noted that young people often lacked independent study and organisational skills, and relational skills to work with others. Higher education institutions highlighted specific skill gaps around literacy and numeracy and noted the need to provide catch-up and reinforcement classes for students in their first year.

VET graduates have low skill levels

The skill level of 16-34 year-olds upper secondary graduates in Lithuania is not consistently high. According to PIAAC, recent upper secondary VET graduates have lower literacy, numeracy and problem-solving skill levels than VET graduates in most other OECD countries (Vandeweyer and Verhagen, 2020^[3]). In both literacy and numeracy, young VET graduates in Lithuania performed at almost the same level as those who did not complete upper secondary education (around 260 score points) (Figure 2.12). This underscores the urgency for Lithuania to raise the quality of its vocational upper secondary pathways (see Chapter 3).


Figure 2.12. Differences in literacy and numeracy proficiency in PIAAC for individuals aged 16-34 by educational attainment, including VET



Notes: Includes individuals aged 16 to 34. General represents upper secondary general education (ISCED 3) while VET includes both ISCED 3 and ISCED 4.

Countries are ordered in ascending order by the difference in the scores between adults who attained upper secondary general education and those who did not attain upper secondary education.

Source: Vandeweyer and Verhagen (2020^[3]), "The changing labour market for graduates from medium-level vocational education and training", OECD Social, Employment and Migration Working Papers, No. 244, OECD Publishing, Paris, <https://doi.org/10.1787/503bcecb-en>.

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Transitions into further education and employment

Many upper general secondary graduates transition into tertiary education

In Lithuania, all students passing the Matura examination at the end of upper secondary education can access a state-funded place in tertiary education, and around half do so. In 2020, 50% of 20 year-olds were enrolled in tertiary education, compared to the OECD average of 39%. In the same year among 25-34 year-olds, the rate of tertiary attainment was 58%, well above the OECD average of 47% (OECD, 2022^[11]). Tertiary education is an attractive option as its attainment is well-rewarded in the labour market in Lithuania, with 91% of tertiary graduates employed in 2021, one of the highest shares among OECD countries, and well above the OECD average (84%) (OECD, 2022^[11]).

Few vocational upper secondary graduates progress into tertiary education

In Lithuania, 97% of upper secondary vocational students are enrolled in programmes that have direct access to tertiary education, compared to 70% on average across OECD countries (OECD, 2022^[11]). Ensuring access routes from upper secondary VET into higher levels of education is important for student pathways, and can help encourage parity of esteem across general and vocational upper secondary education and equal opportunity to all students regardless of the programme they are enrolled in. However, it is challenging for VET students in Lithuania to successfully enrol in tertiary education, since they have to compete with general students who have more time acquiring the skills and knowledge assessed in the Matura examinations that is required to access a state-funded place in tertiary education. In 2022, 57.8% of all general graduates entered tertiary education in contrast to only 1.7% of VET graduates (Beleckienė, Kazlavickas and Palevič, 2022^[34]). This is driven by far fewer shares of VET students taking the state Matura examinations required for tertiary entry in the first place, and their significantly lower results in the state Matura examinations in all subjects when they do take them (Lithuania National Agency for Education, 2022^[35]) (see Chapter 4).

Until recently, VET students have had limited post-secondary options

As tertiary education is theoretically open to VET graduates but in reality, difficult to access, the only other option for VET graduates to continue education has been post-secondary non-tertiary programmes (ISCED 4). While some students do access this route (3% of 20-24 year-olds were in ISCED 4 in Lithuania in 2020 (OECD, 2022^[11]), it is a relatively underdeveloped pathway in Lithuania and the progression from ISCED 3 is not always clear. Stakeholders reported to the OECD team that students taking upper secondary VET qualifications receive an ISCED 3 qualification while graduates from upper secondary general education who complete the same qualification after their Matura in a gymnasium receive an ISCED 4 qualification for the same programme. As well as being confusing, this provides limited options for VET graduates to deepen their sector-specific skills in post-secondary non-tertiary education. Employment outcomes from the ISCED 4 programmes are also very low (Figure 2.13).

Lithuania has recently introduced vocationally oriented tertiary qualifications at ISCED 5. A new law plans to facilitate access for VET graduates into these programmes, which should expand the range of post-secondary pathways for VET graduates (see Chapter 3).

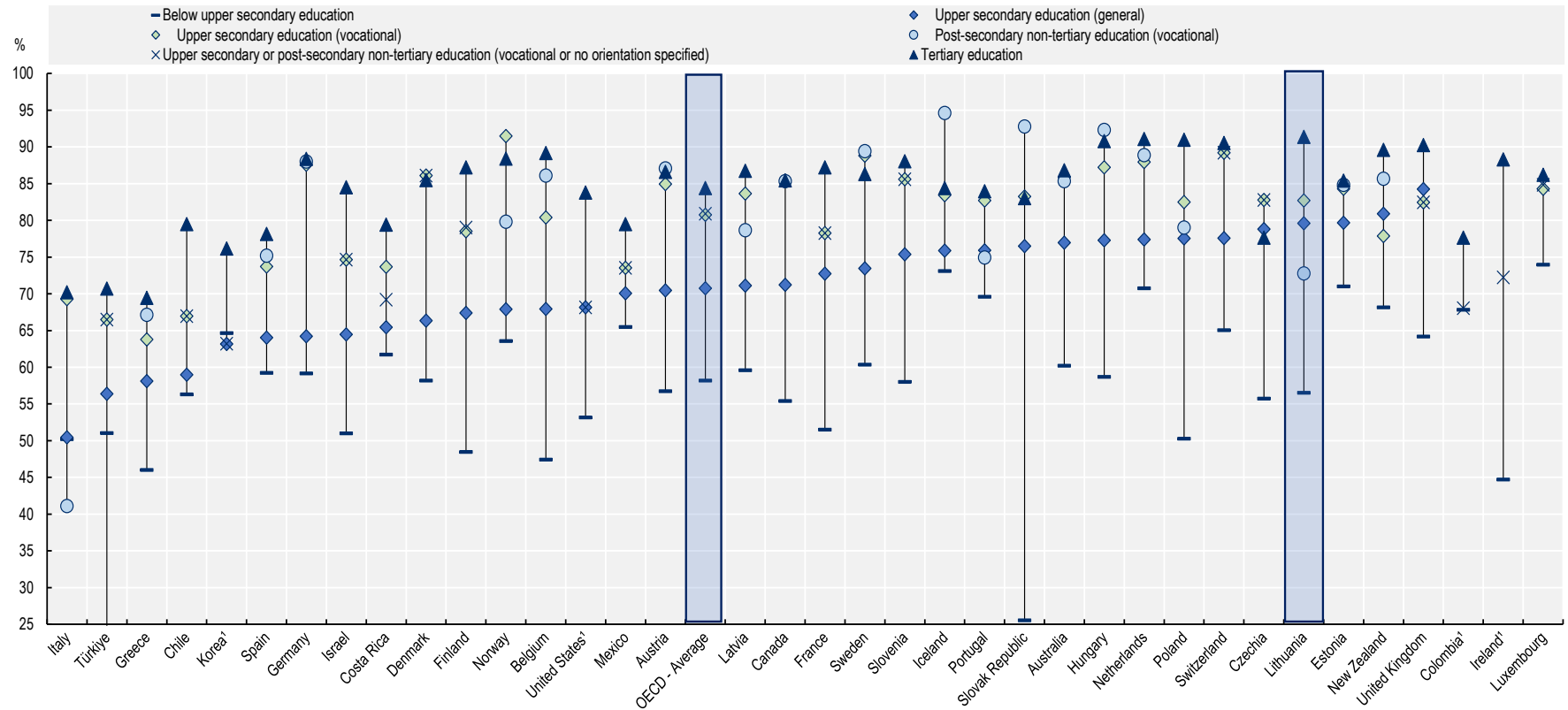
An upper secondary vocational qualification provides little advantage on the labour market

Compared to the OECD average, overall employment outcomes are positive for young people who attain at least upper secondary education in Lithuania. The only exception is for post-secondary non-tertiary (ISCED 4) vocational graduates, who show employment rates lower than those of all upper secondary

graduates. Lithuania is one of only three OECD countries where post-secondary non-tertiary graduates have lower employment outcomes than general upper secondary graduates.

However, the upper secondary vocational qualification does not give young people a significant advantage in the labour market. Employment rates for recent upper secondary VET graduates in Lithuania (83%) are similar to the OECD average but are 9 percentage points lower than for tertiary graduates, one of the largest differences across the OECD, and only 3 percentage points higher than for general graduates. In most OECD countries, young people with upper secondary vocational education as their highest level of attainment have an advantage entering employment compared to their peers who have completed upper secondary general education as their highest level of education. This is because vocational upper secondary education intends to build occupation specific skills that will enable graduates to immediately access the labour market while general education is intended to be preparation for tertiary education (Box 2.1) (UNESCO Institute for Statistics, 2012^[12]). However, in Lithuania the upper secondary VET programme confers only a very limited advantage for its graduates to access the labour market. In 2021, the employment rate of vocational graduates was 83%, only 3 percentage points higher than the 80% employment rate of general graduates, the smallest advantage across all OECD countries, where the difference is 10 percentage points on average (Figure 2.13).

Figure 2.13. Employment rates of 25–34 year-olds, by educational attainment and programme orientation (2021)



Notes: 1 Data on upper secondary or post-secondary non-tertiary education are not available for vocational education. When data on students who attained post-secondary non-tertiary vocational education are not available, joint data on students who attained upper secondary or post-secondary non-tertiary vocational education are used.

Countries are ranked in ascending order of the employment rate of 25–34 year-olds who attained general upper secondary education.

Source: OECD (2022^[1]), Education at a Glance 2022: OECD Indicators, <https://doi.org/10.1787/3197152b-en>.

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Notes

¹ In PISA, a student's socio-economic status is estimated by the PISA index of economic, social and cultural status (ESCS), a composite a composite measure that combines into a single score the financial, social, cultural and human-capital resources available to students. In practice, it is derived from several variables related to students' family background that are then grouped into three components: parents' education, parents' occupations, and an index summarising a number of home possessions that can be taken as proxies for material wealth or cultural capital, such as possession of a car, the existence of a quiet room to work, access to the Internet, the number of books and other educational resources available in the home. In PISA the terms "advantaged students" and "disadvantaged students" refer respectively to those students coming from the top and bottom quartile of the ESCS scale (OECD, 2019_[30]).



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