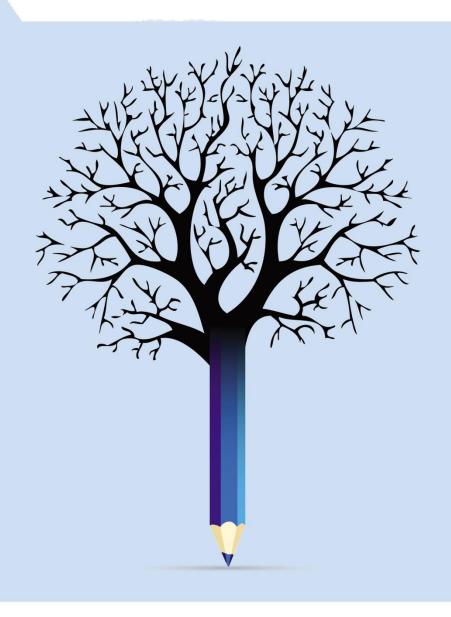


EDUCATION POLICY OUTLOOK SLOVAK REPUBLIC







EDUCATION POLICY OUTLOOK

This **policy profile on education** in the Slovak Republic is part of the *Education Policy Outlook* series, which presents comparative analysis of education policies and reforms across OECD countries. Building on the OECD's substantial comparative and sectorial policy knowledge base, the series offers a comparative outlook on education policy by providing analysis of individual countries' educational context, challenges and policies (education policy profiles), analysis of international trends, and insight into policies and reforms on selected topics. In addition to country-specific profiles, the series also includes a recurring publication. The first volume, *Education Policy Outlook 2015: Making Reforms Happen*, was released in January, 2015.

Designed for policy makers, analysts and practitioners who seek information and analysis of education policy taking into account the importance of national context, the country policy profiles offer constructive analysis in a comparative format. Each profile reviews the current context and situation of the country's education system and examines its challenges and policy responses, according to six policy levers that support improvement:

- Students: How to raise outcomes for all in terms of 1) equity and quality and 2) preparing students for the future
- Institutions: How to raise quality through 3) school improvement and 4) evaluation and assessment
- System: How the system is organised to improve education policy in terms of 5) governance and 6) funding.

Some country policy profiles contain spotlight boxes on selected policy issues. They are meant to draw attention to specific policies that are promising or showing positive results and may be relevant for other countries. This country profile also includes a spotlight on the European Union perspective for the Slovak Republic, based on challenges and recommendations identified by the Council of the European Union and the European Commission as part of their activities with EU member countries.

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Sources: This country profile draws on OECD indicators from the Programme for International Student Assessment (PISA), the Survey of Adult Skills of the Programme for International Assessment of Adult Competencies (PIAAC), the Teaching and Learning International Survey (TALIS) and the annual publication *Education at a Glance*. It also refers to country and thematic studies such as OECD work on early childhood education and care, teachers, school leadership, evaluation and assessment for improving school outcomes, equity and quality in education, governing complex education systems, vocational education and training, and tertiary education. Much of this information and documentation can be accessed through the OECD Education GPS at http://gpseducation.oecd.org.

Most of the figures quoted in the different sections refer to Annex B, which presents a table of the main indicators for the different sources used throughout the country profile. Hyperlinks to the reference publications are included throughout the text for ease of reading, and also in the References and further reading section, which lists both OECD and non-OECD sources.

More information is available from the OECD Directorate for Education and Skills (www.oecd.org/edu) and its web pages on Education Policy Outlook (www.oecd.org/edu/policyoutlook.htm), as well as on the EU Education and Training Monitor (http://ec.europa.eu/education/tools/et-monitor_en.htm) and Eurydice (https://webgate.ec.europa.eu/fpfis/mwikis/eurydice/index.php/Slovakia:Overview).

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HIGHLIGHTS

The Slovak Republic's educational context

Students: Educational attainment in the Slovak Republic is below the OECD average in PISA 2012. Performance has decreased across PISA cycles in mathematics and science, but has remained unchanged in reading. The effect of socio-economic background on performance in mathematics is the largest among OECD countries. Early childhood education usually starts at age 2, with enrolment rates of 3-4 year-olds below the OECD average. Compulsory education lasts from age 6 to age 16. The Slovak Republic has low grade repetition rates. Some student selection mechanisms in the Slovak system, such as tracking at age 11 (among the earliest in OECD countries), academic selection and school choice, can hamper equity if not managed appropriately. While the upper secondary attainment rate is one of the highest among OECD countries, tertiary attainment rates remain below the OECD average, despite large increases since 2000. There are very few professionally oriented bachelor study programmes in Slovak higher education. The literacy and numeracy skills of 16-65 year-olds are above average compared to other countries participating in the 2013 OECD Survey of Adult Skills. Unemployment rates are above the OECD average and, for young adults without an upper secondary qualification, they are the highest in OECD countries.

Institutions: The level of responsibility in Slovak lower secondary schools for resource allocation (hiring and dismissing teachers) is above the OECD average, while their level of autonomy for curriculum decision and assessment has risen to the OECD average. Primary and secondary teachers are required to follow a five-year pre-service teacher training programme, which includes a mandatory teaching practicum. Compared to the TALIS average, a lower proportion of teachers in the Slovak Republic consider the teaching profession to be valued in society and indicate that they would choose to work as teachers if they could decide again. The school evaluation and assessment system lacks overall coherence, but in recent years there has been an increase in the importance accorded to evaluation and assessment.

System: The Slovak education system is diverse, with both public and non-public (religious and private) school providers. Governance of the public education system is shared between the central government and local authorities. The national Ministry of Education, Science, Research and Sports develops educational goals and content. Municipalities are responsible for local administration and provide most pre-primary, primary and lower secondary education, and self-governing regions are in charge of upper secondary education (known as "regional education"). Regional education administration combines activities at the state, municipal and school levels. Perstudent expenditure by educational institutions as a percentage of GDP (all education levels combined) is among the lowest in OECD countries. Between 2005 and 2012, the Slovak Republic had one of the largest increases in per-student expenditures among OECD countries (primary, secondary and post-secondary non-tertiary levels combined).

Kev policy issues

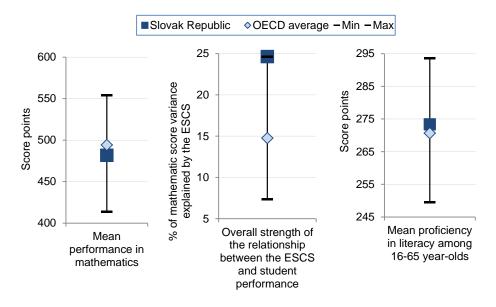
The Slovak Republic faces the challenge of ensuring better access to quality education for all children, in particular those from disadvantaged backgrounds. To address this, it needs to focus on increasing participation in early childhood education and care (ECEC) and providing measures targeting groups at greater risk of underperformance or dropout. Other priorities include raising the quality of vocational education and training (VET) to better prepare students for the labour market and developing an effective and internationally accepted method of quality assurance in higher education. Further improving the attractiveness of the teaching profession is also a key issue, as are improving the quality of interaction with schools during the initial teacher training practicum and increasing its duration. At the same time, the Slovak Republic needs to increase education funding, while addressing efficiency concerns and adjusting the funding allocation system for higher education institutions to provide adequate incentives for improvement.

Recent policy responses

The <u>School Act</u> (2008) aims to increase equity and quality in the education system and to prepare students for the future. Several funding schemes have been put in place by the Slovak Government, with support from the European Union, to facilitate access to ECEC, in particular for socially disadvantaged children. The <u>New Act on VET</u> (2015) aims to better link education and training to the needs of the labour market, and the <u>Act on Higher Education</u> (2013) aims to improve the higher education accreditation process. Conditions for teachers are being improved through annual 5% increases to teachers' salaries over 2013-15, while the <u>Pedagogical and Specialised Employees Act</u> (2009) introduced a new career system for teachers and grants teachers the freedom to choose pedagogical methods and training approaches. The Slovak Republic has increased funding for primary and secondary education and is further developing its system of higher education funding on an annual basis.

Students in the Slovak Republic achieved below-average scores in mathematics, reading and science in PISA 2012. Across PISA cycles, performance has decreased in mathematics and science and remained unchanged in reading. The impact of students' socio-economic status on mathematics scores (24.6%) is the greatest among all OECD countries (OECD average 14.8%), and it increased between 2003 and 2012. The literacy proficiency of adults (16-65 year-olds) in the Slovak Republic is slightly above average, compared to that of adults in the other OECD countries that participated in the 2012 OECD Survey of Adult Skills.

Figure 1. Performance of 15-year-olds in mathematics, relationship between student performance and economic, social and cultural status (ESCS) (PISA 2012) and performance of adults in literacy (PIAAC)

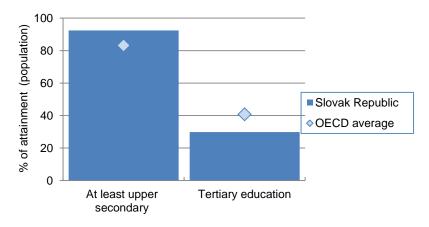


Note: "Min"/"Max" refer to OECD countries with the lowest/highest values.

Sources: PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading, and Science, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264208780-en; OECD (2013), OECD Skills Outlook 2013: First Results from the Survey of Adult Skills, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264204256-en.

In the Slovak Republic, the share of 25-34 year-olds with at least an upper secondary education is among the highest in all OECD countries (92%, compared to the OECD average of 83%). About 30% of 25-34 year-olds have a tertiary education. This is below the OECD average of 41% in 2014 (Figure 2), but has increased by 19 percentage points between 2000 and 2014.

Figure 2. Upper secondary and tertiary attainment for 25-34 year-olds (2014)



Source: OECD (2015), Education at a Glance 2015: OECD Indicators, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2015-en.



Spotlight 1. The European Union perspective: The Slovak Republic's education and training system and the Europe 2020 Strategy

In the European Union's growth and employment strategy, <u>Europe 2020</u>, education and training is recognised as a key policy area in contributing to Europe's economic growth and social inclusion. The EU set a two-fold target in education by 2020: reducing the rates of early school leaving below 10% and at least 40% of 30-34 year-olds completing tertiary or equivalent education. Countries set their own related national targets. The Europe 2020 goals are monitored by the EU's yearly assessment of the main economic and growth issues.

The <u>European Semester Country Report 2015</u> identified a number of challenges for the Slovak Republic in education:

- The early school leaving rate (6.7% in 2014) remains among the lowest in the EU (average of 11.2%), but it has increased from 4.7% in 2010 and surpassed the national target of 6% set for 2020. Regional differences are high, and the rate is also high among the Roma population, with an impact on employability.
- The rate of tertiary attainment in the Slovak Republic was 26.9% in 2014, compared to the EU average of 37.9%. The national target for 2020 is 40%.
- Other main challenges identified relate to low attractiveness of the teaching profession; persisting
 educational inequalities; low participation in early childhood education and care, in particular for socially
 disadvantaged students (including Roma); and the need to offer more professionally oriented bachelor
 programmes and enhance co-operation between academia and employers.

Positive developments identified include the new Act on Vocational Education and Training (2015). It aims to encourage practical experience in companies, which is expected to better prepare graduates for the labour market. In addition, increased capacity in early childhood education and care will contribute to boosting the participation rate and, if well targeted, could lead to higher participation by children from marginalised communities, contributing to improved educational outcomes.

Based on the 2015 National Reform Programme of Slovakia, the Council of the European Union <u>recommended</u> that the Slovak Republic take action in 2015 and 2016 to:

- Improve teacher training and the attractiveness of teaching as a profession to stem the decline in educational outcomes.
- Increase the participation of Roma children in mainstream education and in high-quality early childhood education.

EQUITY AND QUALITY: BOOSTING PERFORMANCE AND IMPROVING EQUITY

In the Slovak Republic, **equity indicators** for 15-year-olds are below the OECD average, as is overall performance in PISA 2012. The share of top performers is slightly below the OECD average (11.0% of students are at or above Level 5, compared to the OECD average of 12.6%). The share of low performers has increased since 2003 and is now above the OECD average (27.5% of students are below proficiency Level 2, compared to the OECD average of 23.0%) (Figure 3). Among OECD countries, socio-economic background had the greatest impact on student performance in the Slovak Republic, and this effect has grown since PISA 2003 (Figure 1). Between-school variation in student performance in mathematics (59%) is well above the OECD average (37%), and within-school variation (59%) is similar to the OECD average (63%).

Early childhood education and care policies aim to increase a comparatively low participation of students from disadvantaged backgrounds. Enrolment in ECEC in the Slovak Republic is comparatively low. About 63% of 3-year-olds and 74% of 4-year-olds were enrolled in ECEC in 2013 (below the OECD average of 74% for 3-year-olds and 88% for 4-year-olds). *Evidence* shows that only 28% of Roma children were enrolled in pre-primary education in 2011. Up to age 3, children may attend care centres or home-based nurseries (*detské jasle*). Between ages 3 and 6, children attend kindergartens (*materské školy*). The great majority of students in pre-primary education attend public institutions (95%), well above the OECD average (61%). Education is provided free of charge to all children at age 5, one year before the age of compulsory school attendance, and to children from disadvantaged backgrounds irrespective of their age. In all other cases, there may be tuition fees for ECEC. The certification required for ECEC teachers in the Slovak Republic (ISCED 3 Level) is one of the lowest, in OECD countries (ISCED 5 level). The OECD report, *Quality Matters in Early Childhood Education and Care: Slovak Republic 2012*, identified improving staff qualifications as a key challenge.

System-level policies, such as early tracking, school choice and academic selection, may hinder equity if not appropriately managed. In the Slovak Republic, education is compulsory from age 6 to age 16. Tracking starts at age 11 (compared to the OECD average of age 14) and is based on the student's academic records and reports from previous schools. School choice is widespread, and schools apply selective admission criteria. School competition is greater in the Slovak Republic than in most other OECD countries. In PISA 2012, 75.7% of students attended schools that competed with two or more schools (compared to the OECD average of 60.7%). Grade repetition is below the OECD average (7.6%, compared to the OECD average of 12.4%).

Roma, and some other population subgroups have less access to mainstream educational opportunities. Roma students in the Slovak Republic have high rates of early school leaving (83%). More than 70% of Roma have no upper secondary education, and almost no Roma attain tertiary education. Although the School Act (2008) prohibits discrimination and separation in education on grounds of ethnicity, 58% of Roma students in areas where Roma live in higher density are enrolled in ethnically separated classes, and 20% of Roma students attend special schools and classes. Significant regional disparities between rural areas and cities are another concern, as are differences between the West of the country and the East (where poor households are highly concentrated). For example, the share of 15-29 year-olds not in education or employment (NEETs) in the East is 23%, more than double the share in Bratislava (9%).

The challenge: Increasing inclusiveness of mainstream education, particularly in ECEC, with targeted measures for students at greater risk of underperformance or dropping out of school.

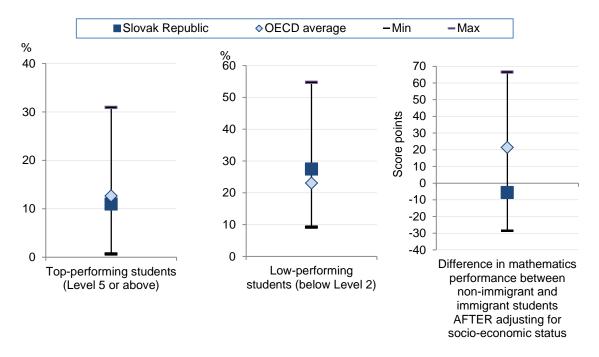
Recent policies and practices

The Slovak Republic has taken several measures to improve access to ECEC, including allocating EUR 15 million for expansion of pre-school capacity (see Spotlight 2).

The <u>Strategy of the Slovak Republic for Roma Integration by 2020</u> aims to improve the position of vulnerable Roma communities in coming years. This includes better access for Roma to all levels of education (including ECEC), focusing on eliminating ethnic separation at schools, preventing early school leaving, and ensuring a successful transition to the labour market. In addition, the <u>Operational Programme Human Resources</u> (2014-20), co-financed by the European Social Fund, entails measures to support integration of Roma students by means of an all-day schooling system, education programmes for teachers and teaching assistants that focus on the needs of Roma students, and awareness-raising activities in Roma communities.

In 2015, the Parliament adopted legislation to tackle segregation of Roma students in special schools and classes. It states that students whose special educational needs are due to their disadvantaged background cannot be placed in special schools or classes. In addition, control mechanisms have been introduced, and financial incentives for placing socially disadvantaged students in mainstream education are being discussed.

Figure 3. Percentage of top and low performers and difference in mathematics performance between non-immigrant and immigrant students, PISA 2012



Note: "Min"/"Max" refer to OECD countries with the lowest/highest values.

Source: OECD (2014), PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264208780-en.

Spotlight 2. Improving access to early childhood education and care

The Slovak Republic has taken actions to improve access to early childhood education and care, with a focus on expanding kindergarten capacity in high demand areas, supporting participation of disadvantaged children and providing childcare in the workplace. This support is financed both from the state budget and European Union structural funds.

In 2015, municipalities with highest demand for ECEC were able to apply for financial support to <u>expand their pre-school capacity</u> (total budget allocation of EUR 15 million from the state budget). In the first round, the Ministry of Education, Science, Research and Sport will support the creation of 3 600 new ECEC places in 113 municipalities. Due to the high number of applicants, the government intends to allocate additional resources to satisfy the remaining demand.

The European Union and the Slovak Government are co-financing <u>inclusive education in kindergartens in 82 municipalities</u> to increase the participation in ECEC of disadvantaged children, including Roma children. <u>Additional national projects</u> focus on raising awareness of the importance of ECEC among Roma parents, developing and implementing an inclusive kindergarten curriculum, training ECEC teachers to work with Roma children, hiring teaching assistants and preventing unjustified placement of Roma children in special schools.

Some childcare services primarily aim to provide employers with incentives to offer ECEC to support working mothers. From 2015, EU funds will cover salaries for qualified teachers working in childcare facilities that companies provide in their workplace. The same EU support applies to kindergartens that hire new staff to expand their capacity to serve the children of working mothers.

PREPARING STUDENTS FOR THE FUTURE: IMPROVING TRANSITIONS TO THE LABOUR MARKET

The capacity of education systems to effectively develop **skills and labour market perspectives** can play an important role in the educational decisions of individuals. Adults (16-65 year-olds) in the Slovak Republic perform above the average in literacy and numeracy compared to their peers in countries that participated in the 2012 OECD <u>Survey of Adult Skills</u> (Figure 1). Young Slovak adults (16-24 year-olds) score higher in literacy and numeracy than 25-65 year-olds. They also outperform the OECD average of their peers on numeracy, but do less well than average on literacy. The labour market in the Slovak Republic is characterised by relatively high unemployment, particularly for 25-34 year-olds holding less than an upper secondary qualification (55.9% unemployment, compared to the OECD average of 19.1% in 2014). The unemployment rate for 25-64 year-olds with only lower secondary education was 42.7%, the highest among OECD countries in 2014 (OECD average of 12.9%). At the same time, a larger share of 15-29 year-old upper secondary and non-tertiary post-secondary graduates in the Slovak Republic are neither employed nor in education or training (NEET) (18.7%, compared to the OECD average of 15.5%) (Figure 4).

General **upper secondary** education in the Slovak Republic is offered in gymnasiums in four-year or eight-year programmes. Gymnasiums are highly selective. Their programmes lead to the *Maturita*, the secondary leaving certificate that provides access to tertiary education. Around 32% of students in the Slovak Republic enrol in general secondary programmes (below the OECD average of 54%), and the percentage of graduates under age 25 (99%) is above the OECD average (97%).

Vocational Education and Training (VET) is offered by secondary vocational schools (*stredná odborná škola*), which specialise in different fields of study, ranging from traditional industrial fields and crafts to economics and management. Individual programs lead to either *Maturita* (ISCED 3A), *Maturita* and an apprenticeship certificate (ISCED 3A) or an apprenticeship certificate only (ISCED 3C). Students who do not successfully complete basic school may continue their studies in a secondary vocational school and receive a lower secondary vocational education certificate (ISCED 2C). Around 68% of students in the Slovak Republic are enrolled in vocational upper secondary tracks (above the OECD average of 46%), and graduation rates (59%) are also higher than the OECD average (46%). Recently, work-based learning in VET programmes has been modified (see Spotlight 3). According to a *study*, automotive industry employers estimated that only 6% of VET graduates in the Slovak Republic have appropriate training and are ready to enter the workplace.

Attainment rates in **tertiary education** among 25-34 year-olds in the Slovak Republic (30%) are below the OECD average (41%), but more Slovak tertiary graduates attained a master's level (23%) as their highest tertiary qualification than in other OECD countries (14%). According to the OECD *Review of Skills beyond School*, this limited provision of practical tertiary education may be insufficient to meet future demand for higher-level vocational skills, and may deter more able students from entering a vocational track. The earnings advantage of 25-64 year-old tertiary degree holders compared to upper secondary degree holders (71%) is above the OECD average (61%), while the earnings penalty of those holding less than an upper secondary credential is comparatively large (-32%, compared to -23% across the OECD). A large proportion of 25-64 year-old Slovaks study abroad (14%, compared to the OECD average of 2%).

The challenge: Facilitating the transition from education to the labour market while increasing the supply of tertiary vocational education and training.

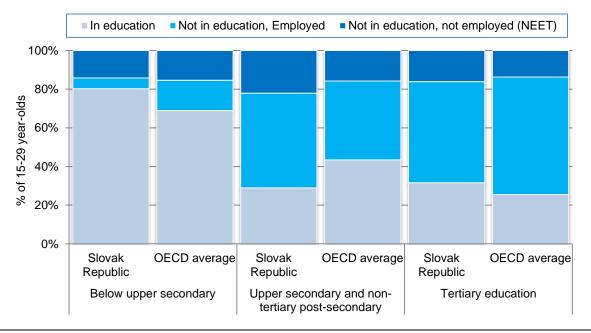
Recent policies and practices

A new <u>career guidance and counselling model</u> is being developed to improve labour market outcomes of VET in the Slovak Republic. This ongoing national project, co-financed by EU funds, aims to redesign and standardise career guidance and counselling practices at schools. In 2015, 400 career advisors also followed new tailor-made training. This training course was designed according to an <u>analysis of the current state of the career and counselling service</u> focusing on creating networks that include various stakeholders (including pedagogical staff, parents, employers and universities).

The <u>New Act on Vocational Education and Training</u> (2015) introduces an option for providing VET in a dual system, in which employers will take responsibility for practical training directly in the workplace and take on all related costs (see Spotlight 3).

<u>Digipedia 2020</u>, the Strategy for Informatisation of the Education Sector 2020, defines the route to align the education sector with global digitalisation trends and to equip students with information and communications technology skills demanded in the labour market. Key objectives include providing digital education and teaching materials (e.g. interactive boards), fully digitalised learning materials and access to the digital world for all students.

Figure 4. Percentage of 15-29 year-olds in education and not in education, by educational attainment and work status (2014)



NEET: Neither employed, nor in education and training (by higher education status)

Source: OECD (2015), *Education at a Glance 2015: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2015-en.

Spotlight 3. Introducing features of dual vocational education and training

The National Council approved the <u>New Act on Vocational Education and Training</u> (2015) which introduces the provision of VET in a dual system based on collaboration between employers and vocational schools.

Under the dual system, employers will provide and cover the costs of practical training for students in the workplace, while vocational schools will be responsible for general and theoretical vocational subjects. The rights and duties of all actors involved in the dual system are on a contractual basis, with contracts between the school and the employer, and contracts between students (or their legal guardian) and employers. The reform aims to encourage employers to provide sufficient work-based learning of good quality through the following incentives and control mechanisms:

- per-student tax exemptions for employers fixed according to the extent of practical training provided per year (EUR 3 200 per pupil for 200-400 hours of work-based learning or EUR 1 600 per pupil for less than 200 hours)
- direct influence on educational content at school level through design of the school educational programme in co-operation with partner vocational schools
- certification of employers entering the dual system to verify their ability to provide training at their workplace (e.g. the necessary material, technical and personal requirements), conducted by employers' chambers and associations and the Ministry of Education
- control of educational and training processes in the workplace by designated employees of the partner vocational school and external control by the State Inspectorate.

The reform represents a first step towards implementing the dual system on a wider scale in Slovak VET. Further action will be taken in consultation with relevant stakeholders based on experience acquired over the initial years of the reform.

SCHOOL IMPROVEMENT:

INCREASING ATTRACTIVENESS OF THE TEACHING PROFESSION

Schools in the Slovak Republic serve more than 153 000 pre-primary and 500 000 primary and secondary students. Slovak students receive fewer hours of compulsory instruction than the OECD average: 673 hours annually in primary education and 819 hours in lower secondary education (compared to the OECD average of 804 hours in primary education and 916 hours in lower secondary education). While principals report that students arrive late to school less often (3.1%) than the OECD average (3.8%), they indicate that more students skip classes (14.0%) than the OECD average (4.5%). Students report less positive views of their learning environments than the OECD average (Figure 5). Between 2003 and 2012, Slovak students reported the highest decrease among OECD countries in instrumental and intrinsic motivation to learn mathematics.

School leaders are elected by the school board for a five year-term, but school founders (organising bodies) can reject a school board's candidate and choose one of their own. Eligible candidates must have at least five years of teaching experience and hold an initial teacher certification. After their appointment, they are required to participate in a training programme of 160 hours, and must participate regularly in continuous professional development activities. School leaders are responsible for recruiting teachers, establishing a plan for their further education and training, and conducting their annual appraisal. Leaders also ensure that the school complies with legal regulations. A formal leadership team is typically in place to support the school leader. School leaders are less involved in instructional leadership activities than the average of their OECD peers (Figure 5).

Attracting and developing new **teachers** are important to maintain the quality of education. Admission to a teacher training programme in the Slovak Republic is based on the results of the secondary school leaving exam, and individual faculties can apply further selection criteria, such as a written test. For all levels of education except pre-primary education, a five-year master's degree is required, including a mandatory teaching practicum. Since 2009, a new career model has been in place, which allows teachers to progress across four career steps. Upon entry into teaching, they start as beginning teachers, receiving mentoring support and induction courses. Within two years, beginning teachers have to pass a school evaluation, allowing them to progress to independent teacher. Teachers climb further up the career ladder by acquiring professional qualifications, and they receive corresponding financial rewards. Compared to the average of their peers across TALIS countries, more Slovak teachers feel very well prepared for teaching their subject content (71%, compared to the TALIS average of 60%) and in pedagogy (54%, compared to the TALIS average of 45%). At the same time, teachers report lower-than-average participation in continuous professional development (73.3% in the Slovak Republic, compared to the TALIS average of 88.4%). An OECD study points out that the duration of the initial teaching practicum and the quality of interaction with schools are insufficient.

Teaching conditions in the Slovak Republic include below-average class sizes at primary and secondary levels, below-average teaching time in secondary education and above-average teaching time in primary education. The difference in salary between teachers with minimum qualifications at the beginning of their career and teachers with maximum qualifications at the end of their career at lower secondary level is one of the lowest all OECD countries (USD 5 753, compared to the OECD average of USD 19 401). Teachers' salaries are low compared to earnings in other professions that require tertiary qualification. Pre-primary teachers earn 75% of the salary of similarly educated workers, and primary and secondary teachers earn 57% (compared to the OECD average of 78% for pre-primary, 78% for primary, 80% % for lower secondary and 82% for upper secondary). In the Slovak Republic, far fewer teachers than the TALIS average feel that their profession is valued in society (4%, compared to the TALIS average of 31%). The share of Slovak teachers who are satisfied with their jobs (89%) is close to the TALIS average (92%).

The challenge: Strengthening efforts to improve salaries and professional development opportunities in the teaching profession.

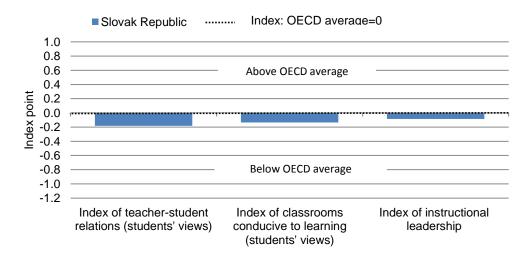
Recent policies and practices

The <u>Act on Pedagogical Employees and Specialist Employees</u> (2009) guarantees teachers freedom to choose pedagogical methods and teaching approaches. It also creates a salary/career system based on teachers' qualifications and a bonus system based on performance or on credits gained from professional development training. In addition, the government raised teachers' salaries by 5% per year between 2013 and 2015.

The Ministry of Education introduced a <u>new state curriculum</u> for pre-primary schools (optional in 2015), as well as for primary, lower secondary and general upper secondary schools/gymnasiums (all mandatory from 2015). The new curriculum defines education areas, focuses on development of logical thinking and working with texts, and increases the number of compulsory hours of instruction in mathematics and natural sciences.

To tackle the teacher shortage, student teachers in certain subjects (e.g. science, technology, engineering and mathematics) may apply for <u>scholarships</u> (EUR 1 000 for approximately 15% of students in each subject). Universities can set the level of per-student support.

Figure 5. The learning environment, PISA 2012



Source: OECD (2013), PISA 2012 Results: What Makes Schools Successful (Volume IV): Resources, Policies and Practices, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264201156-en.

EVALUATION AND ASSESSMENT TO IMPROVE STUDENT OUTCOMES: ENHANCING THE EVALUATION AND ASSESSMENT FRAMEWORK

System evaluations aim to provide evidence about the state of the education system. The Ministry of Education, Science, Research and Sport (MoE) has overall responsibility for evaluation and assessment policy. To monitor student performance, it draws on the expertise of the National Institute for Certified Educational Measurements. Based on the School Act 2008, the MoE sets educational standards and learning plans in a competency-based curriculum that is further developed at school level. The Slovak Republic also takes part in international student assessments, such as *PISA*, *PIRLS* and *TIMSS*.

On **school evaluation**, all Slovak schools are evaluated externally by the National School Inspectorate (Štátna školská inšpekcia, ŠŠI). Comprehensive evaluations rate the quality of teaching and learning processes, the condition of the school resources, and the management and leadership of the school on a five-grade scale. In addition to these comprehensive evaluations, carried out every five years, the ŠŠI also conducts compliance checks, thematic evaluations and follow-up observations. Since resources are scarce, inspections may not always be carried out as planned. An Annual Inspection Report provides a summary evaluation of the system as a whole. School self-evaluation is receiving increased policy attention in the Slovak Republic. Several new measures have been adopted, including an annual reporting requirement for schools and initiatives to support self-evaluation activities. According to the OECD Review of Evaluation and Assessment in Education: Slovak Republic, clearer guidance for schools on evaluation criteria and quality indicators could help strengthen self-evaluation.

According to the School Act (2008), school leaders are required to conduct internal **teacher appraisals** once a year, based on the schools' own criteria. Appraisal reports, written at the end of the academic year are stored in the teachers' files; they are not forwarded to any other level of the education system. While there are mandatory courses to prepare school leaders for teacher appraisal, there is no authoritative set of teaching standards to promote a shared understanding of accomplished teaching. Internal teacher appraisal has little influence on teachers' career progression. An external teacher appraisal system based on credit points obtained for participation in continuous professional development is crucial for career progression, but is not explicitly connected to classroom teaching performance.

In the Slovak Republic, there is a strong focus on summative **student assessment**. Since 2015, national student assessments are in fifth grade (*Testovanie 5*, when the first selection to different school tracks takes place), at the end of lower secondary schooling (*Testovanie 9*) and at the end of upper secondary school (*Maturita*). As these final examinations are set by individual schools, the upper secondary level (*Maturita*) also has an externally regulated component. Exams mainly serve to certify student achievement (Figure 6) and to stream students into upper secondary school or higher education. Students receive formal assessment reports at the end of the first and second semester of the school year, with grades for both academic achievement and behaviour.

While the importance of **evaluation and assessment** has grown in the Slovak Republic over recent years, the <u>OECD Review of Evaluation and Assessment in Education: Slovak Republic</u> recommends setting long-term goals for schooling in order to build a coherent evaluation and assessment framework. The Slovak Republic also needs to pay more attention to equity, for example by integrating school contexts into reporting. Slovak schools could also make more use of formative assessment to improve progress in student learning.

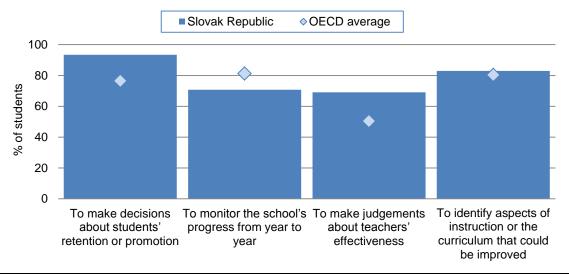
The challenge: Building an integrated evaluation and assessment framework that more effectively promotes student learning improvement.

Recent policies and practices

<u>National standardised assessments</u> (2005-15) have gradually been introduced at all education levels, with the primary level starting in 2015 and lower secondary and upper secondary *Maturita* starting in 2005. These nation-wide tests focus on assessment of students' knowledge in mathematics, Slovak language, and languages of national minorities, as well as, in the case of the *Maturita*, in foreign languages.

Experts from the Methodology and Pedagogy Centre, universities and practitioners developed new teaching standards within a national project, Professional and Career Growth of Pedagogical Employees.

Figure 6. Percentage of students in schools where the principal reported the following uses for student assessments, PISA 2012



Source: OECD (2013), PISA 2012 Results: What Makes Schools Successful (Volume IV): Resources, Policies and Practices, PISA, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264201156-en.



GOVERNANCE: ENSURING HIGH LEVELS OF AUTONOMY FOR SCHOOLS WITHIN A CENTRAL FRAMEWORK

Three separate levels of public administration steer the Slovak **education system**: the central government, regional and municipal authorities, and schools. At the central level, the Ministry of Education, Science, Research and Sport of the Slovak Republic defines policies for pre-primary, primary, secondary and higher education. It is also responsible for educational facilities and lifelong learning. The MoE sets the framework for schooling, manages the school network, allocates financial resources, and monitors school compliance and student performance. Other central bodies also shape education policy:

- The National Institute of Education (Štátny pedagogický ústav, ŠPÚ) is in charge of professional and methodological management of schools and education activities of teachers, and the National School Inspectorate (Štátna školská inšpekcia, ŠŠI) acts on behalf of the state as a supervisory body over the quality of pedagogical management, education and material-technical conditions.
- The National Institute for Certified Educational Measurements (Národný ústav certifikovaných meraní vzdelávania, NÚCEM) administers, develops and oversees national examinations and also manages Slovak participation in international assessments.
- The National Institute of Vocational Education (Štátny inštitút odborného vzdelávania, ŠIOV)
 prepares and implements strategies and concepts for developing vocational education. The
 Institute also conducts surveys about needs and trends in the national economy and labour market.
- The Methodology and Pedagogy Centre (*Metodicko-pedagogické centrum*, MPC) organises and implements educational activities for teaching and non-teaching staff of schools and school facilities.
- The Slovak Centre of Scientific and Technical Information (*Centrum vedecko-technických informácií SR*, CVTI SR), the national information centre and specialised scientific library of the Slovak Republic, focuses on technology, economics, natural sciences and social sciences.

Self-governing regions and municipalities exert a direct influence over public schools as school founders (organising bodies). While regional authorities manage upper secondary schools and apprenticeship training centres, municipal authorities manage pre-primary, primary and lower secondary education. Most students in the Slovak Republic attend public schools (91%, compared to the OECD average of 82%). Decisions are relatively concentrated at the central level (33%, compared to the OECD average of 24%), with fewer decisions taken at the local level (7%, compared to the OECD average of 35%) (Figure 7).

The School Act (2008) increased autonomy at the **school level**, particularly in curriculum development. Slovak lower secondary schools make 59% of decisions (above the OECD average of 41%) (Figure 7). Slovak schools are the employers of teachers and other staff. In addition to the school leader, the School Board and other advisory bodies (such as the pedagogical board and subject committees) participate in school management.

The governance of **VET institutions** has been decentralised to eight regional councils. These councils determine the mix of provision, while the MoE retains responsibility for setting policy priorities and for the VET delivery framework. **Higher education institutions** (HEI) are managed by an elected senate and a rector appointed by the senate. The Slovak National Accreditation Commission accredits study programmes. The Slovak Rectors' Conference (SRC) represents Slovak universities to create a common higher education policy.

The challenge: Enhancing evidenced-based policy making with clear implementation strategies, building capacity at local and regional levels, and introducing co-ordination and planning mechanisms to manage the school network.

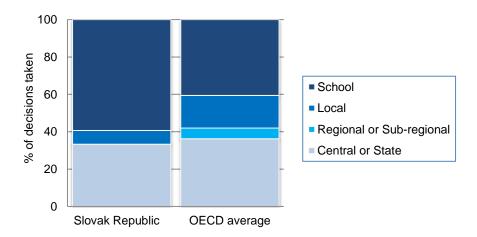
Recent policies and practices

The Educational Policy Institute (<u>Inštitút vzdelávacej politiky</u>, IVP) was established within the MoE in 2013 to fill the gap on provision of evidence-based policy. Its mission is to provide expert advice on strategic policy decisions, based on analyses and forecasts utilising data from national and international sources and best practices from other countries.

The *public administration reform* (2013) shifted responsibility for departments of regional state authorities in education (which establish mainly special schools) from the MoE to the Ministry of Interior. Since then, all schools (except those established by self-governing regions) are financed from the budget of the Ministry of Interior. The School Act (2008) gave schools greater autonomy with respect to curriculum by creating a participative two-level model of educational provision. The state defines mandatory educational content, and schools develop and adjust it to meet local needs in their own curriculum.

The <u>Act on Higher Education</u> (2012) broadened self-governance of HEIs. The new Act defines stricter accreditation criteria for universities and introduces new criteria for assessing a university's competence to award the academic titles of assistant professor and professor (see Spotlight 4).

Figure 7. Percentage of decisions taken in public lower secondary schools at each level of government (2011)



Source: OECD (2012), Education at a Glance 2012: OECD Indicators, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2012-en.

Spotlight 4: Improving the higher education accreditation process

Improvements in the quality of tertiary education stem from the latest amendment (2013) of the *Act on Higher Education*. As of 2015, in compliance with the act, "complex accreditation" of most universities has already taken place, using stricter rules that take into account internal systems of quality control. Complex accreditation is a process under which, every six years, the Accreditation Commission reviews and evaluates education and research and development activities of individual universities along with corresponding personal, material and technical information. Universities submit applications to have their study programmes accredited. The Accreditation Commission then comments on the eligibility of universities to offer the submitted study programmes. Research activities now play a stronger role in accreditation, and new criteria have been approved for assessing a university's competence to award the academic titles of assistant professor and professor. The Accreditation Commission judges whether individual universities meet these criteria.

Further reform of the accreditation process and of the process for awarding academic titles is foreseen. The intention is to simplify the accreditation process and to reinforce the staff and competence of the Accreditation Commission. Accreditation will be awarded to fields of study rather than programmes of study. Academic titles will be canceled, and only the corresponding functional positions retained. The intention is to make academic careers more flexible, opening them up to applicants from abroad or to those who have been professionally active in the industry segment relevant to the field of study.

FUNDING: ADAPTING FUNDING TO ADDRESS EVOLVING CHALLENGES

The Slovak Republic's **investment in educational institutions** at all education levels (3.8% of GDP) is one of the lowest among OECD countries (the OECD average is 5.3% of GDP) (Figure 8). By far the largest share of expenditure on educational institutions comes from public sources (84.6% in 2012, compared to the OECD average of 83.5%). Private expenditure is highest at the tertiary level (26.2% of all expenditures). In primary, secondary and post-secondary non-tertiary education, private funds account for 11.9% of funding (above the OECD average of 9.4% %). Between 2005 and 2012, public expenditure at all education levels increased by 28% (compared to the OECD average of 14%), and private expenditure increased by 8% (compared to the OECD average of 37%).

Annual expenditure per student at primary through tertiary levels was USD 6 072, well below the OECD average of USD 10 220. Expenditure per student in primary education (USD 5 415) is closer to the OECD average (USD 8 247) than expenditure in secondary education (USD 5 152, compared to the OECD average of USD 9 518). Between 2005 and 2012, expenditure per student in primary, secondary and post-secondary nontertiary education increased by 59%, while enrolment decreased by 21%. Over the same period, expenditure per student in tertiary education increased by 30%, while enrolment increased by 17%. In the Slovak Republic, the state provides public funding to school founders (organising bodies), who then allocate funds to the schools. Founders who operate several schools have some freedom to reallocate a certain proportion of the budget among them. Only kindergartens, basic arts schools and language schools are financed directly at the local level. Funding to founders depends on the number of students enrolled and the type of school (the "money follows the student" principle). Funding is adjusted where special conditions apply (e.g., for students with special educational needs or for bilingual study). According to national data, this may have led to an increase of students categorised as having special educational needs. In addition, schools receive earmarked funding for teaching assistants, contributions for education of socially disadvantaged students and vouchers to finance students' extra-curricular activities. School founders may provide additional funds to their schools. Integrated provision of ECEC alongside basic education could be supported by moving ECEC funding from municipalities' own revenues to the state budget.

With a large student population, three times more resources are allocated to **vocational education** than to general education. According to <u>national data</u>, in 2011, the total amount spent on vocational education represented 0.72% of GDP, compared to 0.25% spent on general education. In **higher education**, the state distributes a lump sum to higher education institutions. Expenditure on HEIs from public and private sources remains below the OECD average (1.0% of GDP, compared to the OECD average of 1.5% of GDP). A new funding system for higher education was introduced in 2002 and is being continuously updated (see Spotlight 5).

In future years, the Slovak Republic faces **significant demographic changes** which will have an impact on the planning of educational resources. The population of young children has been in decline, leading to a decrease of the student population, unused school capacity and a growing number of small schools. According to <u>national data</u>, the total number of students decreased by 21% between 2005 and 2012. Over the same period, the number of schools dropped by 7%, and the number of teachers' shrank by almost 14%. Since 2002, the birth-rate has seen a cyclical rise, particularly in Bratislava. This trend is generating pressures on pre-schools and schools in a number of regions. To accommodate the peak in enrolment, new capacity is being developed (e.g. introduction of modular schools).

The challenge: Increasing public spending on education, while addressing key efficiency concerns.

Recent policies and practices

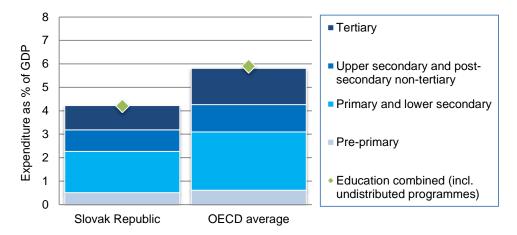
After declines due to the global financial crisis every year since 2011, the Slovak Republic has increased public funding of primary and secondary education. The system of funding in higher education (introduced in 2002) and the system of funding of regional education (introduced in 2003) are being further developed through annual updates of corresponding lower-level legislation (See Spotlight 5).

The funding system for schools has been revised to take into account quality criteria such as employability. For instance, from 2015/16, VET schools receive a higher per-student allocation (110%) for students in *fields of study identified as having low output* (shortages) with respect to labour market needs, and a lower per-student allocation (90%) for students in fields identified as having high output (oversupply). The MoE issues lists of the relevant fields of study based on *published guidelines*.

To foster efficiency, the long-term trend of a decreasing student population has led to the introduction of minimum class-size thresholds (2015).

The MoE, in co-operation with the Ministry of Finance, has launched the <u>Return Home grant programme</u> to encourage graduates of prestigious international universities who have become successful professionals to return to the Slovak Republic to work in public administration or a tertiary institution.

Figure 8. Expenditure on educational institutions as a percentage of GDP, by level of education (2012)



Source: OECD (2015), Education at a Glance 2015: OECD Indicators, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2015-en.

Spotlight 5. Promoting a new system for funding higher education

The new financing system for HEIs introduced in the Higher Education Act (2002), has been continually evaluated and updated. It sets out overall changes in HEI financial management and changes in the allocation of funds from the state budget.

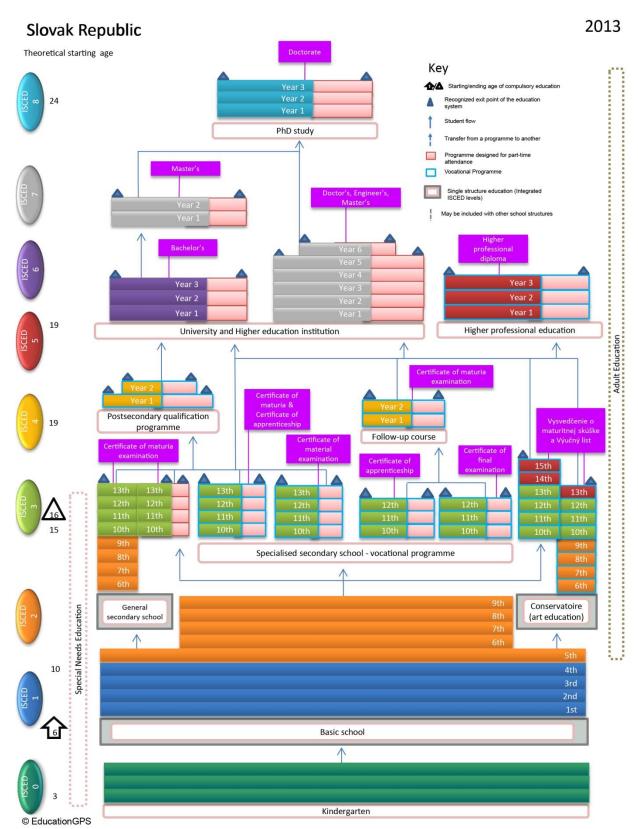
New financial management of HEIs includes: 1) the introduction of multi-source financing, with funds coming mostly (but not solely) from the state budget, allowing unspent state subsidies to be carried over to the following year; 2) subsidies in the form of block grants; 3) the possibility for HEIs to own property; and 4) a provision to better assess the true financial conditions of HEIs through the introduction of full accrual accounting, which has also enabled the recent inauguration of a full costing project.

The new system of allocation from the state budget to HEIs introduced four kinds of subsidies: 1) for accredited study programmes, depending on the teaching performance of the HEI; 2) for research, depending on the research performance of the HEI; 3) for approved projects to further develop the HEI; and 4) for support of students in the form of grants, accommodation, meals, sport and culture.

In the view of the Slovak Republic, the strengths of this funding system include clear rules on allocation of subsidies from the state budget, motivation to encourage HEIs to increase teaching and research activities, specific and focused support for development in selected areas, and support for access to higher education through the system of social scholarships.



ANNEX A: STRUCTURE OF THE SLOVAK REPUBLIC'S EDUCATION SYSTEM



Source: OECD (2012-13), "Slovak Republic: Overview of the education system", OECD Education GPS, http://gpseducation.oecd.org/Content/MapOfEducationSystem/SVK/SVK_1997_EN.pdf.



ANNEX B: STATISTICS

#	List of key indicators	Slovak Republic	Average or total	Min OECD	Max OECD
	Background information				
Pol	itical context				
1	Public expenditure on education as a percentage of GDP, 2012 (EAG 2015)	3.5%	4.8%	3.5%	7.7%
Ecc	onomy		•		
2	GDP per capita, 2012, in equivalent USD converted using PPPs (EAG 2015)	25 725	n/a	16 767	91 754
3	GDP growth 2013 (OECD National Accounts)	0.9%	1.3%	-3.9%	4.1%
Soc	ciety				
4	Population density, inhab/km ² , 2014 (OECD Statistics)	110.5	142	3.1	507
5	Population aged less than 15 as a percentage of total population, 2010 (OECD Factbook 2014)	15.5%	18.6%	13.1%	29.6%
6	Foreign-born population as a percentage of total population, 2011 or latest available year (OECD Factbook 2014)	4.6%	0%	0.3%	42.1%
	Education outcomes				
7	Mean performance in mathematics (PISA 2012)	482	494	413	554
8	Annualised change in mathematics performance across PISA assessments (PISA 2012) ^{4,5}	-1.4	-0.3	-3.3	4.2
9	Annualised change in reading performance across PISA assessments (PISA 2012) ^{4,5}	-0.1	0.3	-2.8	4.1
10	Annualised change in science performance across PISA assessments (PISA 2012) ^{4,5}	-2.7	0.5	-3.1	6.4
	Enrolment rates of 3-4 year-olds in early childhood education and				
11	primary education as a percentage of the population of the same	68%	81%	22%	100%
12	age group, 2013 (EAG 2015) % of 25-64 year-olds whose highest level of attainment is lower secondary, post-secondary non-tertiary education or below, 2014 (EAG 2015)	7%	15%	0%	33%
13	% of 25-34 year-olds whose highest level of attainment is at least upper secondary education, 2014 (EAG 2015)	92%	83%	46%	98%
14	% of 25-34 year-olds whose highest level of attainment is tertiary education, 2014 (EAG 2015)	30%	41%	24%	68%
15	% of 25-64 year-olds whose highest level of attainment is vocational upper-secondary or post-secondary non-tertiary education, 2014 (EAG 2015)	67%	26%	6%	67%
	Unemployment rates of 25-34 year-olds by educational attainmen	nt, 2014 (EAG	2015)		
16	Below upper secondary	55.9%	19.1%	4.7%	55.9%
10	Upper secondary and post-secondary non-tertiary	15.4%	10.2%	3.7%	36%
	Tertiary education	8.6%	7.5%	2.9%	32.5%
	Students: Raising outcomes				
	icy lever 1: Equity and quality				
17	First age of selection in the education system (PISA 2012)	11	14	10	16
	Students performing at the highest or lowest levels in mathematic				
18	Students performing below Level 2	27.5%	23%	9.1%	54.7%
	Students performing at Level 5 or above	11%	12.6%	0.6%	30.9%
19	Variance in mathematics performance between schools and within schools as a percentage of the OECD average variance in mathematics performance (PISA 2012)				
ı	Between-schools percentage of variance	59%	37%	6%	65%
	Within-schools percentage of variance	59%	63%	34%	90%
20	% of students reporting that they have repeated at least a grade in	7.6%	12.4%	0.0%	36.1%



#	List of key indicators	Slovak Republic	Average or total	Min OECD	Max OECD		
21	Percentage of variance in mathematics performance in PISA test explained by ESCS (PISA 2012) ⁴	24.6%	14.8%	7.4%	24.6%		
22	Score difference in mathematics performance in PISA between non-immigrant and immigrant students AFTER adjusting for socioeconomic status (PISA 2012) ⁴	-6	21	-29	66		
23	Score differences between boys and girls in mathematics (PISA 2012) ⁴	9	11	-6	25		
Pol	icy lever 2: Preparing students for the future						
	Adjusted mean proficiency in literacy among adults on a scale of 500 (Survey of Adult Skills, 2012)						
24	Among 16-65 year-olds (adjusted)	273.3	270.7	249.4	293.6		
	Among 16-24 year-olds (adjusted)	275.5	278.0	260.0	297.0		
	Upper secondary graduation rates in % by programme of orienta	tion, 2013 (EA	(G 2015)				
25	General programmes	28%	52%	19%	82%		
	Pre-vocational/vocational programmes	59%	47%	0%	0%		
	First-time graduation rates, by tertiary ISCED level, 2013 (EAG 20	015)					
	Short tertiary (2-3 years), ISCED 5	1%	11%	0%	28%		
26	Bachelor's or equivalent, ISCED 6	42%	36%	9%	61%		
	Master's or equivalent, ISCED 7	40%	17%	3%	40%		
	Doctorate or equivalent, ISCED 8	2.5%	1.7%	0.2%	3.6%		
27	% of 15-29 year-olds not in education, employment or training, 2012 (EAG 2015)	19%	16%	7%	32%		
	Institutions: Improving school	s					
Pol	icy lever 3: School improvement						
28	Mean index of teacher-student relations based on students' reports (PISA 2012)	-0.18	0.00	-0.42	0.47		
29	Mean index of disciplinary climate based on students' reports (PISA 2012)	-0.13	0.00	-0.33	0.67		
	% of teachers above the age of 50 by education level, 2013 (EAG 2015)						
30	Primary education	27%	31%	16%	57%		
30	Lower secondary education	36%	34%	17%	63%		
	Upper secondary education	40%	38%	26%	73%		
	Number of teaching hours per year in public institutions by education level, 2013 (EAG 2015)						
31	Primary education	832	772	569	1 129		
.	Lower secondary education, general programmes	645	694	415	1 129		
	Upper secondary education, general programmes	617	643	369	1 129		
	Ratio of actual teachers' salaries to earnings for full-time, full-year adult workers similarly educated, 2013 (EAG 2015)						
32	Primary education	0.57	0.78	0.52	1.09		
	Lower secondary education, general programmes	0.57	0.80	0.52	1.24		
	Upper secondary education, general programmes	0.57	0.82	0.48	1.24		
33	Growth rate of teachers' salaries between 2005 and 2013 in lower secondary education, 2013 (EAG 2015)	m	2%	-32%	31%		
34	% of lower secondary education teachers who report a "moderate" or "large" positive change on their knowledge and understanding of their main subject field(s) (TALIS 2013)	61.5%	53.5%	26.7%	86.2%		

21



#	List of key indicators	Slovak	Average	Min	Max		
		Republic	or total	OECD	OECD		
Po	licy lever 4: Evaluation and assessment to improve student outcomes	S					
35	Percentage of lower secondary education principals who report that they use student performance and student evaluation results (including national/international assessments) to develop the school's educational goals and programmes (TALIS 2013)	88.4%	88.8%	58.5%	99.5%		
	% of students whose school principals reported that assessments are used for the following purposes (PISA 2012)						
	To make decisions about students' retention or promotion	93%	77%	1%	98%		
36	To monitor the school's progress from year to year	71%	81%	48%	100%		
	To make judgements about teachers' effectiveness	69%	50%	14%	88%		
	To identify aspects of instruction or the curriculum that could be improved	83%	80%	49%	99%		
	% of lower secondary education teachers reporting appraisal/fee	edback from t	he school	orincipal	on their		
	work with this frequency (TALIS 2013)		-	-			
37	Once every two years or less	7%	33.9%	3.2%	88.8%		
	Once per year	46.3%	41.5%	9.5%	82.1%		
	Twice or more per year	46.7%	24.7%	1.0%	49.6%		
	Systems: Organising the syste	m					
Po	licy lever 5: Governance						
	% of decisions taken at each level of government in public lower	secondary ed	ducation, 2	011 (EAC	3 2012)		
	Central or state government	33%	36%	0%	87%		
38	Regional or sub-regional government	0%	6%	0%	36%		
	Local government	7%	17%	0%	100%		
	School government	59%	41%	5%	86%		
Po	licy lever 6: Funding						
	Annual expenditure per student by educational institutions, for all using PPPs for GDP, 2012 (EAG 2015)	l services, in	equivalent	USD cor	nverted		
39	Pre-primary education	4 694	7 612	3 416	19 719		
00	Primary education	5 415	8 247	2 577	20 020		
	Secondary education	5 152	9 518	2 904	20 617		
	Tertiary education	9 022	15 028	7 779	32 876		
	Relative proportions of public and private expenditure on educational institutions, 2012 (EAG 2015)						
	Public sources	85%	83%	60%	98%		
40	All private sources	15%	17%	2%	40%		
	Index of change in expenditure on educational institutions, public sources, (constant prices, 2005=100)	128	114	75	165		
	Index of change in expenditure on educational institutions, all private sources, (constant prices, 2005=100)	108	137	76	538		

Notes

- 1. The average, total, minimums and maximums refer to OECD countries except in TALIS and the Survey of Adult Skills, where they refer to participating countries.
- 2. "m": included w hen data is not available.
- 3. "NP": included if the country is not participating in the study.
- 4. Statistically significant values of the indicator are shown in bold (PISA 2012 only)
- 5. The annualised change is the average annual change in PISA score points from a country's/economy's earliest participation in PISA to PISA 2012. It is calculated taking into account all of a country's/economy's participation in PISA.

 See w w w .oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf.

6. "n/a": included when the category is not applicable.

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