



Education and Training Monitor 2017

Sweden

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EUROPEAN COMMISSION

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Volume 2 of the Education and Training Monitor 2017 includes twenty-eight individual country reports. It builds on the most up-to-date quantitative and qualitative evidence to present and assess the main recent and ongoing policy measures in each EU Member State, with a focus on developments since mid-2016. It therefore complements other sources of information which offer descriptions of national education and training systems.

Section 1 presents a statistical overview of the main education and training indicators. Section 2 briefly identifies the main strengths and challenges of the country's education and training system. Section 3 focuses on drivers of inequalities in education and measures to promote inclusion, building in particular on evidence from the OECD's 2015 Programme for International Skills Assessment (PISA), as well as recent developments in early school leaving and early childhood education and care. Section 4 looks at investment in education and training. Section 5 deals with policies to modernise school education, covering, inter alia, the teaching profession, digital and language skills. Section 6 discusses measures to modernise higher education. Finally, section 7 covers vocational education and adult learning.

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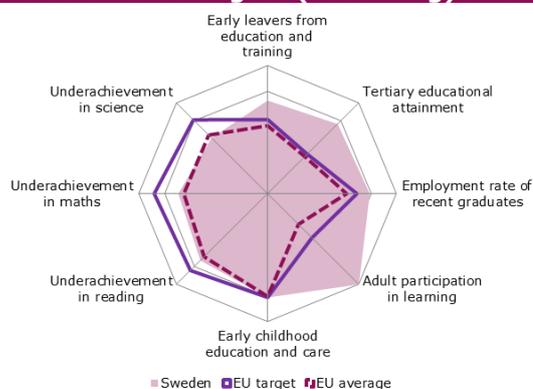
Additional contextual data can be found online (ec.europa.eu/education/monitor)

1. Key indicators

		Sweden		EU average		
		2013	2016	2013	2016	
ET 2020 benchmarks						
Early leavers from education and training (age 18-24)	Total	7.1%	7.4%	11.9%	10.7%	
Tertiary educational attainment (age 30-34)	Total	48.3%	51.0%	37.1%	39.1%	
Early childhood education and care (ECEC) (from age 4 to starting age of compulsory education)		95.9% ¹²	95.0% ¹⁵	93.9% ¹²	94.8% ¹⁵	
Proportion of 15 year-olds with underachievement in:	Reading	22.7% ¹²	18.4% ¹⁵	17.8% ¹²	19.7% ¹⁵	
	Maths	27.1% ¹²	20.8% ¹⁵	22.1% ¹²	22.2% ¹⁵	
	Science	22.2% ¹²	21.6% ¹⁵	16.6% ¹²	20.6% ¹⁵	
Employment rate of recent graduates by educational attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-8 (total)	84.9%	86.7%	75.4%	78.2%	
Adult participation in learning (age 25-64)	ISCED 0-8 (total)	28.4%	29.6%	10.7%	10.8%	
Other contextual indicators						
Education investment	Public expenditure on education as a percentage of GDP		6.6%	6.5% ¹⁵	5.0%	4.9% ¹⁵
	Expenditure on public and private institutions per student in € PPS	ISCED 1-2	€8 114	€8 020 ¹⁴	:	: ¹⁴
		ISCED 3-4	€8 242	€7 995 ¹⁴	:	: ¹⁴
		ISCED 5-8	€17 461	€17 568 ¹⁴	:	: ¹⁴
Early leavers from education and training (age 18-24)	Native-born	6.3%	5.9%	11.0%	9.8%	
	Foreign-born	12.2%	15.2%	21.9%	19.7%	
Tertiary educational attainment (age 30-34)	Native-born	49.6%	51.9%	37.8%	39.9%	
	Foreign-born	45.1%	49.2%	33.4%	35.3%	
Employment rate of recent graduates by educational attainment (age 20-34 having left education 1-3 years before reference year)	ISCED 3-4	80.2%	81.6%	69.4%	72.6%	
	ISCED 5-8	89.9%	91.4%	80.7%	82.8%	
Learning mobility	Inbound graduates mobility (bachelor)	2.5%	2.2% ¹⁵	5.5%	6.0% ¹⁵	
	Inbound graduates mobility (master)	24.0%	16.6% ¹⁵	13.6%	15.1% ¹⁵	

Sources: Eurostat (see section 9 for more details); OECD (PISA). Notes: data refer to weighted EU average, covering a different numbers of Member States depending on the source; b = break in time series, d = definition differs, e = estimated, p = provisional, u = low reliability, 12 = 2012, 14 = 2014, 15 = 2015. On learning mobility, the EU average is calculated by DG EAC based on available country data in all years. Further information is found in the respective section of Volume 1 (ec.europa.eu/education/monitor).

Figure 1. Position in relation to strongest (outer ring) and weakest performers (centre)



Source: DG Education and Culture calculations, based on data from Eurostat (LFS 2016) and OECD (PISA 2015). Note: all scores are set between a maximum (the strongest performers visualised by the outer ring) and a minimum (the weakest performers visualised by the centre of the figure).

2. Highlights

- Sweden invests heavily in education, with general government expenditure on education among the highest in the EU.
- Sweden has one of the highest tertiary educational attainment rates in the EU and the employment rate of its recent tertiary graduates is very high.
- School education outcomes have improved after years of deteriorating performance, with particularly strong improvements in mathematics and reading.
- Inequalities are growing: tackling the increasing performance gap between foreign-born and native students is a challenge.
- The attractiveness of vocational education and training is being improved.

3. Tackling inequalities and promoting inclusion

Sweden's school system has been relatively equitable, but there are signs of growing inequalities in learning outcomes. According to the OECD's 2015 Programme for International Skills Assessment (PISA), the impact of socioeconomic background on students' performance in science at age 15 is around the OECD average. However, where in 2006 a socioeconomically advantaged student scored 77 points higher in science than a disadvantaged one, in 2015 the difference increased to 94 points (equivalent to more than 3 years of schooling).

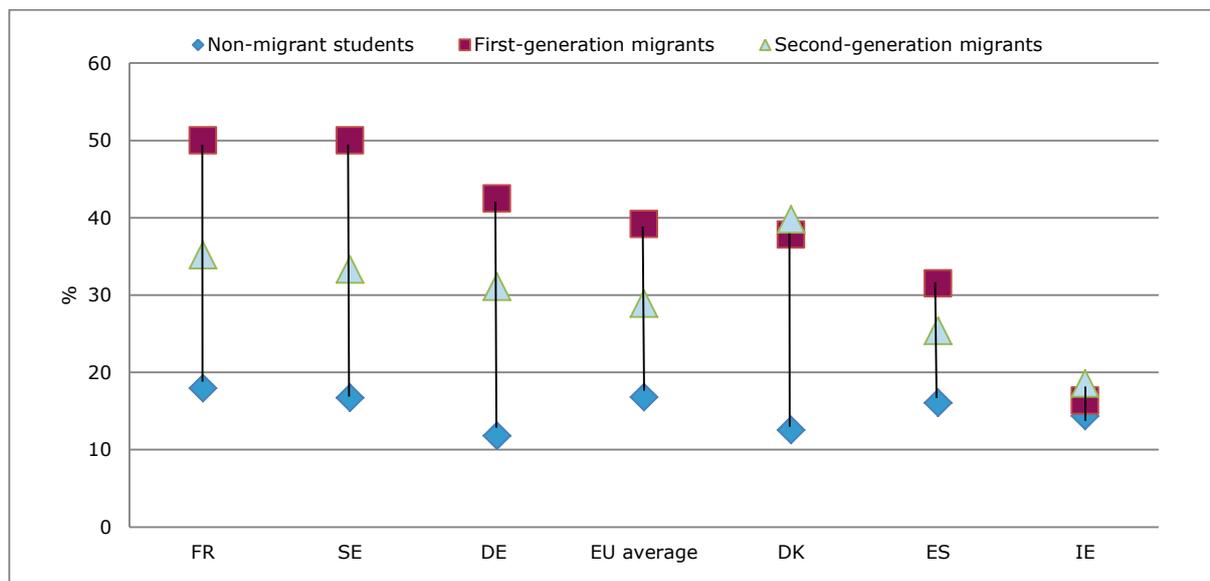
The performance gap between foreign-born and native students remains high and is of growing importance as the numbers with a migrant background rise. In PISA 2015, one in two foreign-born students performed below the baseline level in science. Although the proportion of low performers is smaller among the second generation (i.e. native with foreign-born parents), it remains high at 33.3 %. The proportion among non-migrant background students is by comparison 16.7 % (Figure 2). These results are important given the sharp rise in students from a migrant background. They made up 17.4 % of the 2015 PISA population, compared to 11 % in PISA 2006 (OECD, 2016c).

The transition from compulsory to upper secondary school is a hurdle for many foreign-born students. On reaching the end of compulsory schooling after grade 9 (age 16), one in two students who migrated after the age of 7 do not qualify for an upper secondary 'national programme'.¹ This very high proportion compares to less than 10 % for native students (NAE, 2015b). The figure jumps to 72 % among those who arrive in the last 4 years of compulsory schooling. Students who are not eligible for a 'national programme' are directed to one of the five 'introductory programmes'.² These were originally designed to provide tailored support for small numbers of struggling students and help them bridge the gap to the labour market or further education. In practice, however, these programmes, in particular the 'individual alternative', accommodate students with skills gaps and act as a holding bay until students leave the education system. 31 % of all 'individual alternative' students are foreign-born, often trapped in courses alongside weakly motivated native students (OECD, 2016d). Guidelines are lacking on how to organise these programmes, and links between 'national' and 'introductory programmes' are underdeveloped (SOU, 2016a).

¹ Since 1 July 2011 there have been 18 'national' upper secondary programmes: 6 higher education preparatory programmes and 12 vocational programmes.

² These are: preparatory education, programme-oriented individual options, vocational introduction, individual alternative and language introduction.

Figure 2. Proportion of low achievers in science by migrant background in 2015 (%)



Source: OECD (PISA 2015). Online data code: [Table I.7.5a](#).

The achievement gap between foreign-born and native students has widened since 2008.

This probably reflects changes in the composition of foreign-born students. A higher proportion of recent migrants have arrived at an older age; those who migrated after the age of 7 have increasingly come from countries with weaker school systems. Students born in Africa and unaccompanied minors run the highest risk of failing at school (NAE, 2016a; Grönqvist et al., 2017). Although the early school leaving rate is below the EU average (7.4 % v 10.7 % in 2016), there is a growing difference between native students (5.9 %) and those born abroad (15.2 %).

High-quality early childhood education and care (ECEC), delayed tracking and low grade repetition, favour equity. But school choice may hinder it. ECEC is well developed, with a curriculum ensuring both academic and socio-emotional development. Participation rates are high: 93 % of 3-year-olds are in an ECEC programme and participation from age 4 is 95 %. Compulsory education — primary and lower secondary education — is organised into a single structure and tracking takes place at the end of compulsory schooling. Grade repetition rates are low: only 4 % of 15-year-olds have repeated a grade, against the OECD average of over 11 % (OECD, 2017b). However, the distribution of school resources varies between municipalities and does not guarantee equal learning opportunities. There is also a strong relationship between performance and the types of school that students attend (OECD, 2017b). The concentration of students of low socioeconomic status in disadvantaged schools is largely a result of residential segregation. Nevertheless, evidence also suggests that school choice, which was part of the 1990s comprehensive school reforms, has exacerbated school segregation (Kallstenius, 2010).³

Getting newly arrived pupils into the school system remains a priority. In the 2016/2017 school year, close to 80 000 pupils in compulsory schools were newly arrived,⁴ 17 000 more than a year before. Although admission to schools is still largely left to the discretion of the local municipality and the head teacher, central government guidelines have started to set standards. From 1 January 2016 skills mapping is the basis for placing students in a grade and for planning their instruction. Newly arrived students may be offered introductory classes for up to 2 years to ensure their phased transition to regular schooling. Nevertheless, structured assessment of students' knowledge in various subjects is still inadequate. Their progress is not systematically

³ The school choice policy was intended to create incentives for schools to offer better quality to all. In practice, socioeconomically advantaged students with well-informed parents tend to opt out of schools dominated by socioeconomically disadvantaged students, thus contributing to school segregation.

⁴ Newly arrived students are students aged 7-18, who have migrated to Sweden without a basic knowledge of Swedish. A student is considered newly arrived for up to 4 years after starting school.

tracked and documentation on their abilities may not be passed on if they move to another municipality (National School Inspectorate, 2017). Bridging the gap between schools and newly arrived parents is a further challenge (Bunar, 2016). In addition, the distribution of newly arrived pupils remains unequal, both between municipalities and between schools (NAE, 2017a).⁵

The government has boosted resources to tackle inequalities. In the 2017 spring budget the most disadvantaged compulsory schools received an additional SEK 500 million (EUR 52 million). SEK 150 million (EUR 15.6 million) was allocated to improve the quality of the 'introductory programmes'. In the 2018 draft budget a further SEK 1.5 billion (EUR 153 million) has been earmarked to improve equity across schools. The government's increased focus on inequality is in line with the proposal made by the Swedish School Commission, which called for an additional SEK 6 billion (EUR 613 million) to be invested in the coming 3 years to tackle inequality (SOU, 2017). In January 2017, the government also announced a long-term investment plan (covering 2017-2025) to support municipalities and independent school providers in offering high quality education to newly arrived students (MoER, 2017).

Box 1: 'Plug In 2.0' prevents young people from leaving school early

The 'Plug In 2.0' project (2015-2018) aims at improving the quality of upper secondary education and increasing the number of young people who successfully complete it. The target group is students aged 15-24, either in compulsory or upper secondary school or in an introductory programme at upper secondary level, who are at risk of interrupting their studies or have already dropped out of school. Newly arrived students are an important target group.

Eighty of Sweden's 290 municipalities have participated in activities including:

- *mentoring and coaching to build positive relationships with students;*
- *identifying obstacles which prevent students from going to school;*
- *developing individualised study plans and more effective study paths for the newly arrived.*

Plug In 2.0 is implemented by the Swedish Association of Local Authorities and Regions in cooperation with eight Swedish regions. It is co-financed by the participating municipalities and regions and the European Social Fund (ESF). With a budget of SEK 160 million (EUR 16.4 million) and close to 11 000 young people benefiting, Plug In 2.0 is the largest cooperation project in Sweden that tackles early school leaving.

The digital platform 'Pluginnovation' at <http://pluginnovation.se/eng> follows projects, shares methods, research findings and lessons learnt. More information is at <https://skl.se/english-plugin/>.

4. Investing in education and training

Investment in education has been stable over the past decade. General government expenditure on education was among the highest in the EU in 2015, as a proportion both of GDP (6.5 %) and of total general government expenditure (13 %). The financing of both compulsory and upper secondary education has been fully decentralised since the early 1990s. Education takes a major proportion of municipalities' total expenditure, representing on average 40 % of a municipality's budget (OECD, 2016b). The majority of school funding comes from municipal tax revenues while about 10 % is direct central government investment.⁶ There are variations between municipalities in how they allocate resources to schools, with some weighting funding by

⁵ 10 % of municipalities have accommodated 41 % of all newly arrived pupils. 9 % of the pupils in municipal schools are newly arrived compared to 3 % in independent schools.

⁶ In 2017, the total direct central government investment in education amounted to SEK 11 billion (EUR 1.14 billion).

socioeconomic criteria. All schools are publicly funded regardless of whether they are municipal or independent.⁷

Sweden invests more in tertiary education than the EU average. Total expenditure on the higher education sector, including research, the costs of the central government managing agencies and study support to students, corresponds to 1.81 % of GDP. The largest proportion of funding (80 %) comes from public sources. Private funding is mainly additional funding for research undertaken. A further 5 % consists of funding from the EU, other international sources and financial revenues (Swedish Higher Education Authority, 2017).

5. Modernising school education

School education outcomes in terms of basic skills proficiency have improved after years of deteriorating performance. In PISA 2015, student performance improved significantly in mathematics and reading compared to 2012, and remained broadly stable in science. The proportion of low-achievers is now close to the EU average in all three core domains. 3.9 % of 15-year-olds are top performers in all three subjects, just above the EU average of 3.7 %. In mathematics, Sweden has managed to raise excellence by increasing the proportion of top performers to around 10 %. This is higher than in 2012, but the trend since 2003 still shows a decline in the proportion of top performers in mathematics. The proportion of top performers has not changed significantly in science compared to 2006, or in reading compared to 2009. Girls and boys perform similarly in science and mathematics, but in reading twice as many boys (24 %) as girls (12 %) are low achievers (OECD, 2016), a wider gap than the EU average.

Measures aim at improving students' basic skills. The government is prioritising 'early intervention', i.e. the first years of schooling, and continues to allocate a central grant of SEK 2.3 billion (EUR 0.2 billion) per school year for the pre-school class and grades 1-3 (age 7-9). Education providers and schools can use the grant to reduce class sizes and employ more primary or special needs teachers. Under the 'reading-writing-arithmetic guarantee', due to enter into force in July 2018, all students should have achieved a baseline level in reading, writing and mathematics on finishing grade 3. To make the guarantee work, a mandatory mapping of pupils' competences in the pre-school class and further diagnostic tests in grades 1 and 3 are proposed. They will also have a right to support in mathematical, reading and writing development (SOU, 2016b).

Recruiting and retaining talented professionals in the teaching profession remains a challenge. Teachers are leaving the profession (SOU, 2016c) and 39 % of teachers are 50 or older (OECD, 2017a). Close to 60 000 new full-time teachers and over 24 000 pre-school teachers would need to be recruited by 2019 to meet demand (NAE, 2015a). At the start of the 2016/2017 school year there was a shortfall of 5 000 teachers, according to the National Union of Teachers. Recruitment is hindered by the low perceived status of teachers and by wages below both the OECD and EU-22 averages later in the career (OECD, 2014 and OECD, 2016a).

The government is increasing financing incentives to make the teaching profession more attractive. The government has earmarked SEK 3 billion (EUR 0.31 billion) per year to increase teacher salaries. Since the start of the 2016/2017 academic year, one in three teachers and pre-school teachers, 65 369 in total, have benefited from the government's 'Boost for Teacher Salaries' initiative. This has given them a monthly salary increase of SEK 2 600 (EUR 271) on average. Since autumn 2016, SEK 1.4 billion (EUR 0.15 billion) has been passed on to teachers and pre-school teachers, representing 90 % of the budget earmarked (NAE, 2017b). The career development reform, launched in 2013, also provides a salary raise linked to career advancement steps for one in six teachers. This amounts to SEK 5 000 (EUR 528) per month for 'first-class teachers'⁸ and SEK 10 000 (EUR 1 056) per month for 'senior lecturers'.⁹ The government continues to support teachers' continuing professional development (Box 2) and will finance around 3 600 new study places, with a focus on teachers of Swedish as a second language.

⁷ In 2015/2016, one in seven compulsory school students and more than one in four upper secondary students attended an independent school.

⁸ Teachers who stand out in their teaching practice.

⁹ Teachers with a licentiate degree.

Box 2: Innovative professional development in mathematics and reading

'Boost for Mathematics' ('Matematiklyftet') and 'Boost for Reading' ('Läslyftet') are the most significant collaborative learning programmes targeting the teaching workforce ever developed in Sweden. The programmes are based on research in school improvement and take place locally in schools. They focus on peer learning between teachers on how they plan, conduct and evaluate their teaching – a different approach from traditional individual-based professional development. The 'Boosts' provide teachers with new tools to develop their own teaching and ultimately improve the skills of their students (NAE, 2016d).

By the end of 2016, 35 580 teachers of mathematics – three out of four maths teachers in compulsory and upper secondary schools – had participated in the 'Boost for Mathematics' (2012-2016) for at least 1 year. In addition, 1 668 tutors and 2 961 head teachers were trained. The didactic material was developed by the National Agency for Education, together with over 20 universities and the National Centre for Mathematics Education. According to surveys (NAE, 2016b), teachers have embraced the initiative and believe that they are now more aware of their role, communicate better in the classroom and manage to tailor their teaching to students' different needs. The cost of the programme is estimated at EUR 56 million.

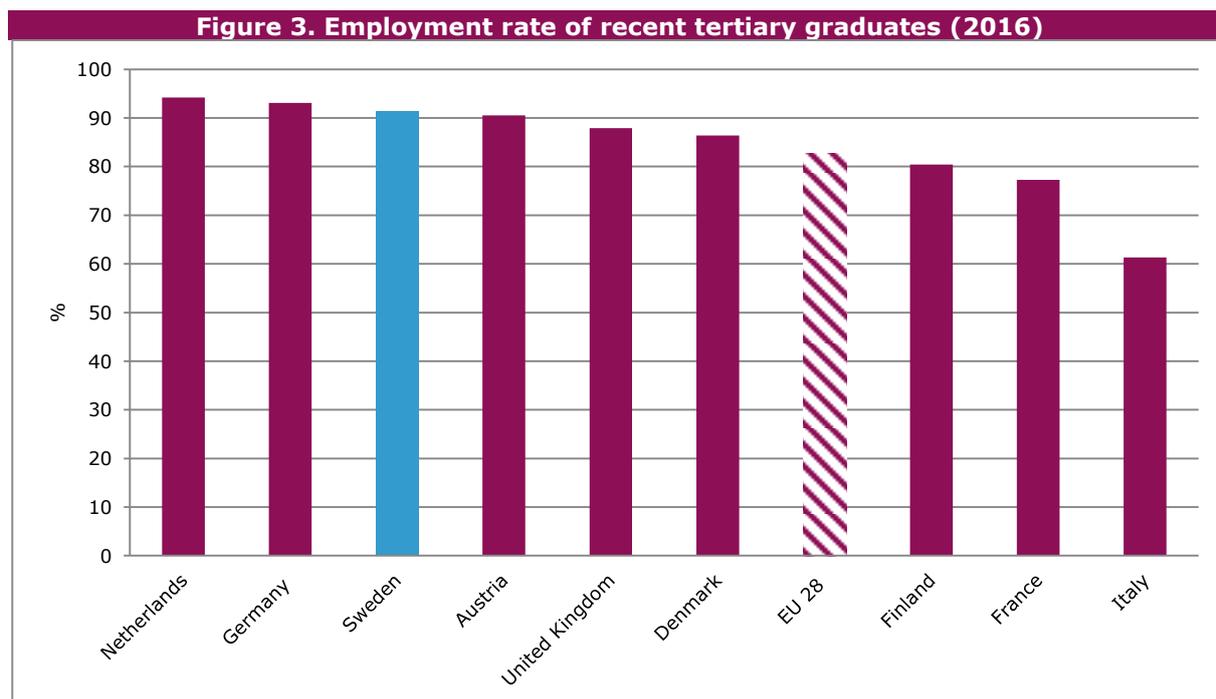
20 000 teachers and 1 600 schools have been taking part in the 'Boost for Reading' (2015-2018). While the main target group is teachers in compulsory and upper secondary schools, the programme has been extended to pre-schools to improve the teaching of Swedish to non-mother tongue children. Total funding of the programme is being increased from EUR 6.2 million to EUR 9.5 million, while pre-schools will receive EUR 0.62 million in 2017-2019.

In PISA 2015, student performance in mathematics improved markedly compared to 2012. Although it is early to say what reversed the previous negative trend, the 'Boost for Mathematics' may have played a role.

6. Modernising higher education

Sweden's tertiary educational attainment rate is at an all-time high and the employment rate of recent tertiary graduates is one of the highest in the EU (Figure 3). 51 %¹⁰ of 30- to 34-year-olds completed tertiary education, above both the EU average of 39.1 % and the national Europe 2020 target of 45-50 %. The current upward trend may slow as the number of higher education entrants declined each year between the peak in 2009/2010 (107 000 entrants) and 2015/2016 (86 000 entrants). One quarter of all entrants come from abroad, over half of them from countries in the EU/EEA and Switzerland. Following a heavy drop in 2011/2012 when tuition fees were introduced for students from outside the EU/EEA and Switzerland, the total of foreign students, including fee-paying ones, has now started to increase (Swedish Higher Education Authority, 2017). The average age of university entrants has traditionally been high but the proportion of 21-year-old or younger entrants has grown in recent years, with one in two now 21 or below. This is partly due to the size of the 19- to 21-year-old cohort, but mainly to changes in the admission regulations which favour younger applicants.

¹⁰ In 2016, the rate was 59.2 % for women and 43.4 % for men. The number of women in higher education has risen faster than the number of men over the past 30 years.



Source: European Commission elaboration on Eurostat data. Online data code: [edat_lfse_24](#).

Sweden's student support system is highly equitable. The majority of students finance their studies with the financial support, a combination of study grants and study loans, they receive from the state. In 2016, the maximum financial support for an academic year of 40 weeks, for a student pursuing full-time studies, amounted to SEK 99 040 (EUR 10 305).¹¹ Students may receive financial support for a maximum of 12 semesters or 6 academic years and can apply for the support until they turn 56. Repayment of the loan is based on an annuity system and the debt is to be repaid within 25 years or before the borrower reaches the age of 60.

The government is putting resources into widening participation. It will finance around 14 600 new study places by 2019 and has also allocated an additional SEK 250 million (EUR 25.56 million) for 2016 and 2017 to humanities, social sciences, law, theology, and teacher and pre-school teacher education. The government has earmarked the same amount for 2018 for the same subjects. The additional funding will support more teacher-led instruction aiming at improving students' chances of successfully completing higher education. Since 2017 a new quality assurance system is in place, developed by the Swedish Higher Education Authority in conjunction with the higher education sector. In April 2017 the government launched an inquiry into the governance and financing of higher education. The objectives are to develop a system that allows more people from socioeconomically disadvantaged backgrounds to enter higher education and to enhance links between research, study programmes and the society.

¹¹ In 2016, the study grant for an academic year was SEK 28 160 (EUR 2 930) and the loan ceiling amounted to SEK 70 880 (EUR 7 375).

7. Modernising vocational education and training and promoting adult learning

The government aims at increasing the attractiveness of vocational education and training (VET), yet challenges remain. The participation of upper secondary students in VET is decreasing. By contrast, the employment rate of recent upper secondary VET graduates, at 83.9 % in 2016, is well above the EU average. The number of apprenticeships at upper secondary level has increased every year since apprenticeship was introduced in 2011.¹² The government is working towards VET programmes granting again eligibility to higher education.¹³ The Parliament has also endorsed a 5-year pilot scheme creating so-called 'branch-schools'. Students will follow specialised VET-courses in 'branch-schools', located around the country, as part of their training in an upper secondary school in their home municipality.

Access to adult education is being widened, primarily to improve labour market outcomes for the low-skilled. Participation by adults (25-64) in learning is high and growing: in 2016 the rate was 29.6 % compared to the EU average of 10.8 %. However, participation by the low-educated, who stand to benefit the most, is lagging behind (19.3 % in 2016). From 2017, at an estimated cost of SEK 537 million (EUR 56 million) a year, all adults have the right to education at upper secondary level. This is a significant extension of the previous entitlement to complete compulsory schooling. Around 70 000 adults are expected to complement their previous studies and obtain an upper secondary qualification that gives access to higher education and improves their chances in the jobs market. To help curb skills mismatches among newly arrived adults, a Swedish Tuition for Immigrants (SFI) course is offered to migrant residents aged 16 or older, in combination with employment, vocational education or other studies.

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¹² In autumn 2015 the number of apprentices was 8 400, up from 6 000 in autumn 2013, representing around 9 % of all VET students (NAE, 2016c).

¹³ Before the 2011 upper secondary school reform, all vocational 'national' programmes had courses that granted eligibility to higher education.

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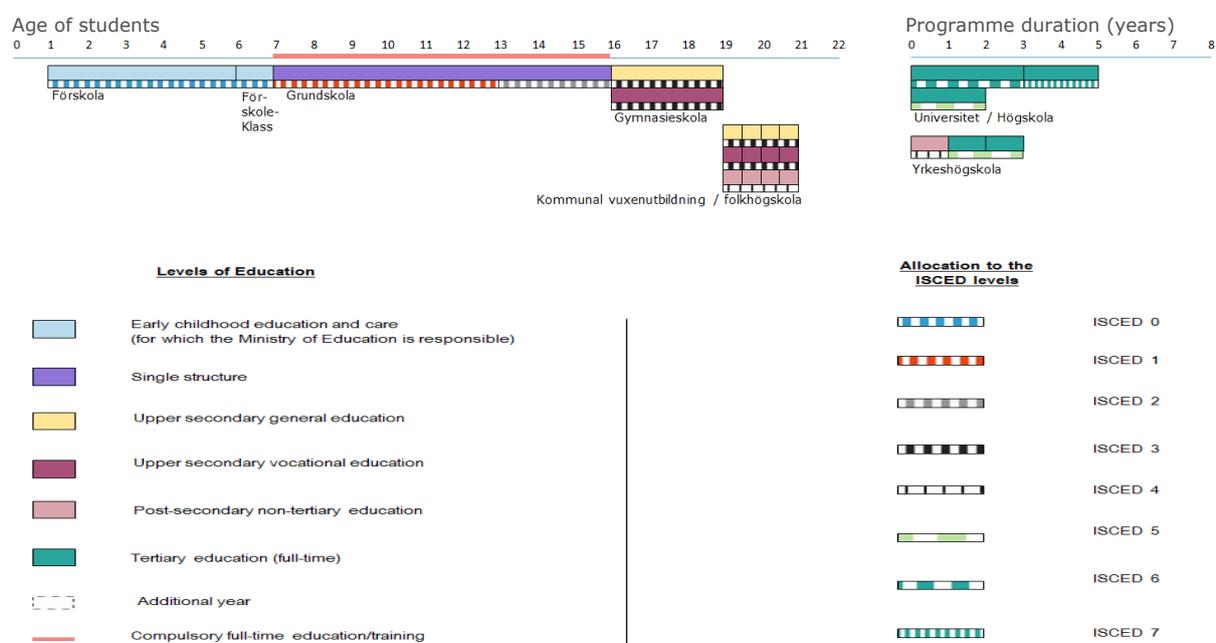
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9. Annex I. Key indicator sources

Indicator	Eurostat online data code
Early leavers from education and training	edat_lfse_02 + edat_lfse_14
Tertiary educational attainment	edat_lfse_03 + edat_lfs_9912
Early childhood education and care	educ_uoe_enra10 + tps00179
Employment rate of recent graduates	edat_lfse_24
Adult participation in learning	trng_lfse_03
Public expenditure on education as a percentage of GDP	gov_10a_exp
Expenditure on public and private institutions per student	educ_uoe_fini04
Learning mobility	educ_uoe_mobg03

10. Annex II. Structure of the education system



Source: European Commission/EACEA/Eurydice, 2016. *The Structure of the European Education Systems 2016/17: Schematic Diagrams*. Eurydice Facts and Figures. Luxembourg: Publications Office of the European Union.

Comments and questions on this report are welcome and can be sent by email to:
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