

Preface	3
Education and research	5
Right to education of equal value	5
Everyone's right to development	5
Funding of education and research	6
Tuition is free of charge at many levels	6
Generous student aid at all levels	6
Research through public financing	6
School and higher education governance	7
School leaders, heads of preschool, teachers and preschool teachers	7
Universities and university colleges	8
Democratic values – the foundations	8
National minorities	9
International cooperation	9
Areas of responsibility	11
Preschool	
Other pedagogical activities	
Preschool classes	13
Out of school centres	14
Compulsory school	15
Upper secondary school	16
Adult education	17
Liberal adult education	18
Higher education	19
Research	20
Authorities and agencies that come under the	
responsibility of the Ministry of Education and Research	21
Swedish education system	22

Preface

All girls, boys, women and men should have the opportunity to test and develop their abilities and skills in order to achieve their full potential. A good education provides the individual with solid foundations for finding a job and lays the ground for a well-functioning society in which no one is discriminated against or excluded. This means a school that gives its pupils the support they need, and where teachers enjoy their work, are offered the opportunity to develop professionally and give all children a fair chance of succeeding in life.

Lifelong learning is gaining significance in the knowledge-intensive, complex and global world in which we live. It is therefore essential that we utilise and develop the skills of the whole population. In order to meet the demands of the labour market we need high quality education that takes account of developments in society. Being able to influence your situation and create a better life through education is important for people living in a democratic society.

If Sweden is to be a leading knowledge nation, we need an equal education system and world-class research that boosts our international competitiveness. To achieve this and tackle the major challenges faced by society, we therefore need to continue investing heavily in education and research.

This booklet provides a description of the Swedish education system and how it is financed, from preschool to university level. It also describes some of the publicly-financed research being conducted in Sweden.



Education and research

Lifelong learning starts in the important early years of childhood and continues throughout the whole of a person's life. From preschool and upwards, children, young people and adults are encouraged to acquire knowledge and think independently. Lifelong learning should produce knowledgeable and creative individuals, which is crucial in enabling Sweden to grow as a knowledge nation.

Almost 75 per cent of the adult population (24–64 year olds) have taken part in some form of education over the last year, which is the highest level in the EU. A high level of participation in studies is a result of major investment in education over a long period. In the last few decades, and particularly in recent years, a number of substantial reforms have been carried out in education and research in order to strengthen Sweden's position as a knowledge nation in the era of globalisation.

Sweden has strong traditions in education with not only an extensive public education system, but also voluntary initiatives and liberal adult education. The first university was established in 1477, the public elementary school was introduced in 1842, and study associations have been in existence for more than 100 years.

Right to education of equal value

Most people, irrespective of background or other circumstances, are entitled to education in Sweden. In

25-34

20

20 - 24

practical terms, this means that children have the right to a place in preschool and that pupils receive any special support they need. Quality, equivalence and high accessibility are the cornerstones of the education system. Key features are a system characterised by public funding, management by goals and results, and a high degree of decentralisation. Compulsory and similar forms of schooling, upper secondary schooling and upper secondary education for pupils with learning disabilities and adult education provided by municipalities are, as a rule, free of charge, and there is a generous, across-theboard student aid system.

Everyone's right to development

The government's education policy aims to even out socioeconomic differences and offer everyone the chance to develop. All children, young people and adults should also be given the opportunity to test and develop their ability and their skills to their full potential, irrespective of age, gender or disability.

In preschool, compulsory and upper secondary schools, the circumstances, needs and level of knowledge of each child or pupil should be taken into account. Authorities, education providers and teachers should strive to ensure their pupils achieve the knowledge requirements for the national goals of education, but have a large measure of freedom in determining how this is to be done.

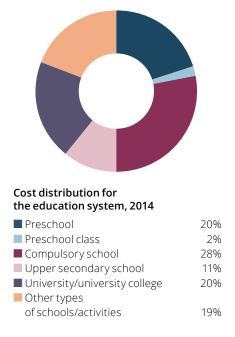
Access to adult education is high, owing in particular to initiatives taken to increase flexibility and expand infrastructure. Recruitment to higher education is broad and relatively independent of social background. Universities and university colleges are located throughout the country, and distance learning also provides excellent opportunities for the working population and older people.

Population's education level, 2015 % 100 80 60 40

55-64

45-54

35-44



Funding of education and research

Tuition is free of charge at many levels

Municipal and central government tax revenues provide the funding for the public school system so everyone contributes. Independent schools at compulsory and upper secondary level are also essentially financed out of public funds.

The major part of school funding comes from municipal tax revenues, but parts of the funding are also covered by a general central government grant to the municipalities. This is supplemented by targeted central government grants for special initiatives, such as in-service teacher training and projects to develop maths teaching.

Costs per pupil can vary between schools and municipalities. In lesspopulated municipalities, many children need transport to school, while some municipalities may have a large proportion of pupils with a foreign background, and thus higher costs for mother tongue tuition.

All municipalities are guaranteed equivalent financial conditions in accordance with a special equalisation system. Amongst other things, this means that access to education for all children and pupils should be as similar as possible in all parts of the country. Higher education is free of tuition charges and largely financed out of public funds through central government appropriations. However, students who are not citizens of a country in the European Economic Area or Switzerland are required to pay tuition fees for studies at first and second cycle levels in Swedish universities and university colleges.

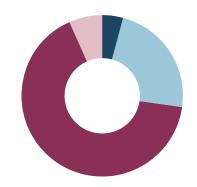
Generous student aid at all levels

No one should be deprived of the opportunity to study due to their financial circumstances. The student aid system system in Sweden is intended to support and broaden recruitment and thus contribute to a high level of participation in education. It should also help reduce differences in the circumstances of individuals and groups in the population, and thereby contribute to greater social equity. Student aid should also have beneficial effects on the economy over time; for example, it should help to ensure a high throughput.

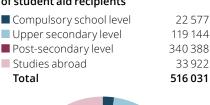
Student aid mainly finances students' living costs during studies, and is given to students irrespective of parental or family income. There are different kinds of student aid to meet varying needs. Post secondary student aid consisting of both grants and loans, is available to students in higher education and to adults studying at basic or upper secondary school levels. Post secondary student aid is also provided for both parttime and full-time studies, and can also be used for studies abroad. Young people (16-20 years old) attending an upper secondary course can receive upper secondary student aid. Students attending an upper secondary school for pupils with learning disabilities can receive a study allowance for people with disabilities (Rg-bidrag) as well as the upper secondary student aid. If they are a minor the funds are paid to the student's parent or guardian. Special support is sometimes available to groups such as students with children and people with disabilities.

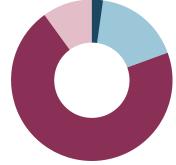
Research through public financing

Public financing of research and development is provided by means of direct appropriations from central government, municipalities and county councils, and also via research councils, research funding agencies and the EU. Research and development is also supported by research foundations and private foundations. The greatest proportion of resources for research in Sweden, however, comes from industry.



Number and distribution of student aid recipients





Distribution and amount of student aid paid, MSEK



628,2 4 407,9 18 094,6 2 560,4 **25 691,1**

School and higher education governance

School and higher education governance

Responsibility for the school system* is shared between the Swedish Riksdag, the government, principal providers (state, municipality, county council or independent school providers), and the schools themselves. The principal provider has overall responsibility for implementation, which means school leaders, preschool leaders, teachers, preschool teachers, other school staff, children, pupils and parents have every opportunity to be involved and have their say. A large measure of freedom exists at local level, as the system is managed by goals and results.

Frameworks and goals are set out in the various national regulatory documents adopted by the Riksdag and the government. The following are laid down for children and young people's education: the Education Act, ordinances on forms of schooling, curricula, syllabuses and timetables. These stipulate rules, goals and guidelines, what subjects are to be offered and the minimum guaranteed number of tuition hours pupils are entitled to in each subject. Based on the national regulatory documents, organisational structures and working approaches are chosen to suit the local circumstances. Municipalities and private school providers are responsible for the financial management, follow-up and evaluation of their respective activities. This means they have considerable responsibility for organising their work in order to achieve established goals.

The Education Act applies to education from preschool up to adult education, and the legislation provides a foundation for knowledge, freedom of choice and security in all the types of school and other activities covered by the Education Act.

School leaders, heads of preschool, teachers and preschool teachers

Many studies show that teachers are the most important factor in determining pupils' success in school, and that school leaders have an important role in fostering an environment in which teachers and pupils can work. The dialogue between school leaders and teachers about teaching is particularly important, and so multi-year initiatives in education and in-service training have been introduced for teachers, preschool teachers and school leaders. Specific initiatives have enabled teachers to broaden and deepen their knowledge, particularly in subject theory and subject didactics. The aim of these initiatives has principally been to give teachers the opportunity to become qualified in additional subjects or school years, if they are teaching subjects, or school years, for which they have no formal education. Teachers and preschool teachers also have the opportunity to participate in what are called 'Schools of Research' and, after obtaining a Licentiate degree and teaching qualifications, to be given the title of senior lecturer.

There are four school authorities working on enhancing quality and outcomes in schools

- The National Agency for Education evaluates the school system and other forms of education and educational activities, draws up clear regulatory documents and supports municipalities and other principal providers in their activities. The work includes support for nationally prioritised in-service training and skills development programmes for staff.
- The Swedish Schools Inspectorate is responsible for approving providers of independent and other types of schools, inspection within the school system and quality auditing.
- The National Agency for Special Needs Education and Schools is responsible for overall state support for the special educational needs of pupils with disabilities.
- The Swedish Institute for Educational Research helps to give teachers and others working in preschools, schools and adult education are provided with good conditions for planning, implementing and evaluating teaching with the support of scientificallygrounded methods and practices.

^{*} The school system comprises preschools, out of school centres, preschool classes, compulsory schools, compulsory schools for pupils with learning disabilities, special schools, Sami schools, upper secondary schools and upper secondary education for pupils with learning disabilities, municipal adult education and education for adults with learning disabilities.

In order to tighten the requirements for teaching in schools and preschools, teachers and preschool teachers are required to be registered. In principle, only those who are qualified and registered can be employed permanently.

The aim is to raise the quality of schooling and the status of teachers and preschool teachers, so that all pupils and children receive highquality teaching from qualified and committed educators. All newly appointed school leaders attend a compulsory national training programme on university level to obtain the knowledge required to be able to lead their school. The training consists of three parts. Legislation on schools and the role of exercising the function of an authority, management by goals and results and school leadership. The three parts should be closely linked to each other. Preschool heads can also attend the programme on a voluntary basis.

Universities and university colleges

State universities and university colleges are autonomous agencies under the auspices of the government. Their activities are regulated through laws and other regulations in the field of higher education, and through resources and other frameworks determined by the Riksdag and the government. The government has also given some private providers of higher education the right to award certain degrees.

The Higher Education Act contains the overall provisions for higher education, and an appendix of the Higher Education Ordinance contains the system of qualifications that sets out the specific targets for each type of higher education qualification. Based on these frameworks, universities and university colleges themselves decide how the appropriations they receive are to be used. The Swedish Higher Education Authority is responsible for regularly evaluating the quality of higher education and making decisions on the right to award qualifications.

Freedom of research is safeguarded at institutions of higher education. Important principles include the freedom of researchers to choose the problems they wish to research, develop methodologies and publish their findings.

Universities and university colleges should work in partnership with their communities and seek to ensure that research findings are exploited.

Democratic values – the foundations

The sanctity of human life, individual freedom and integrity, the equal value of all people, equality between women and men, and also solidarity between people are the values that schools should represent and communicate. All education at all levels in Sweden should be designed with these fundamental democratic values in mind. All education should actively and consciously further equal rights and opportunities for women and men. The way in which girls, boys,

women and men are treated and assessed in school and the demands and expectations that are placed on them contribute to their perception of gender differences. Schools have a responsibility to counteract traditional gender patterns. They should therefore provide scope for pupils to explore and develop their abilities and interests regardless of gender. Gender equality in the education system is thus about each girl, boy, woman or man having the opportunity to develop their abilities and interests without being restricted by stereotyped gender attitudes. In a school characterised by gender equality, choice of study and profession are individual matters and not restricted by gender.

There must be zero tolerance of degrading treatment and discrimination in learning environments. This applies to everything from bullying in the school playground to discrimination against students in higher education. The Education Act contains provisions for action to counteract degrading treatment.

The Child and School Student
Representative comes under the
Swedish Schools Inspectorate and its
responsibilities include tasks aimed
at safeguarding the rights of children
and pupils in respect of action to
tackle degrading treatment in accordance with the Education Act. The
Child and School Student Representative can, for example, represent a child
or pupil in a damages case. The
Education Act also states that all those
who work in schools are under an obligation to report any suspected cases of
degrading treatment, harassment or

sexual harassment. The Discrimination Act essentially covers all areas of society, including education. No-one may be exposed to discrimination on the grounds of:

- gender,
- transgender identity or expression,
- ethnic affiliation,
- religion or other belief system,
- disability,
- sexual orientation, or
- age.

National minorities

Sweden has five formally-recognised national minorities: Jews, Roma, Sami, Swedish Finns and Tornedalers. These groups have existed in Sweden for a long period and have their own religious, linguistic or cultural affiliation, as well as a keen interest in maintaining their identity.

Children who belong to a national minority are entitled to learn their mother tongue in compulsory school. An upper secondary pupil who belongs to one of the national minorities has the right to mother tongue tuition in their national minority language if the pupil is already proficient in the language. The curriculum requires all children and young people in Sweden to be taught about the history, culture, language and religion of the national minorities. Some universities and university colleges are also charged with providing education in the national minority languages.

International cooperation

International cooperation and increased mobility at all levels is an important part of efforts to encourage greater internationalisation and thus higher quality in the field of education. Many students in higher education institutions study for part of their course in a country other than Sweden, and some seven per cent have studied abroad in recent years. There are also good opportunities abroad in terms of work-placebased education. From preschool to upper secondary school, teachers, trainee teachers, children and young people take part in partnerships, study trips, education programmes and cross-border work placements and projects. In addition, many foreign teachers, students and pupils come to teach or study for a period in Sweden. The proportion of university students that have come here from another country to study in Sweden over the past few years is around eight per cent of all students. Swedish research has numerous international contacts and mobility of researchers is key to maintaining scientific excellence. Sweden and Swedish research also derive great benefit from cooperation with international bodies.

Sweden has wide-ranging cooperation with other countries and with international organisations, councils and associations in the field of education and research, including the EU, the Council of Europe, the

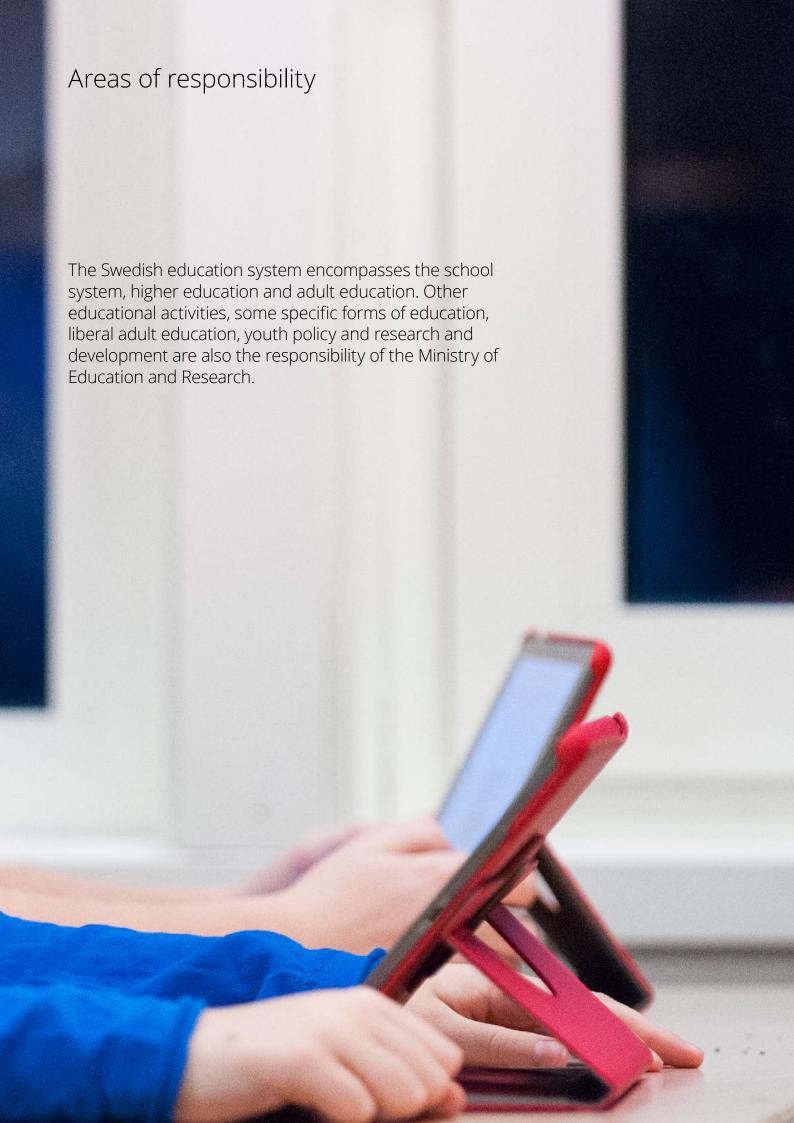
Nordic Council of Ministers, the OECD and UNESCO. In terms of EU cooperation, Europe 2020 and Education and Training 2020¹ are notable strategic frameworks for cooperation in the field of education. The goals of cooperation are essentially to:

- make lifelong learning and mobility a reality,
- improve the quality and effectiveness of education,
- promote equal opportunities for all, social cohesion and active citizenship, and
- increase creativity and innovation, including entrepreneurship, at all levels of education.

Swedish organisations are relatively active in European research and innovation as part of Horizon 2020, the EU Framework Programme for Research and Innovation, which is the largest cohesive programme in the world. Sweden, and Swedish organisations, also have extensive bilateral international research and innovation partnerships with countries around the world.

¹ Europe 2020 is the EU's ten-year growth strategy. Education & Training 2020 is the strategic framework for European cooperation in the field of education and training, which builds on the work of the previous programme, Education & Training 2010.





Preschool

Enjoyable learning, play and creativity. Children should have a stable foundation in safe surroundings for their development and lifelong learning.

All municipalities are obliged to provide preschooling for children aged between 1 and 5. In general, preschools are open from morning to evening throughout the year, closing only at weekends and on national holidays. Preschooling is publicly-funded and fees are both low and capped, irrespective of the financial circumstances of the parents.

Although all preschools follow the same curriculum, not all preschools are the same. Quite the opposite in fact, as there is a wide variation in teaching approaches and focus. The basic principle is that care, socialisation and learning are all key elements of the overall approach. Children should be encouraged to play, be creative and enjoy learning. Great emphasis is placed on stimulating the linguistic and mathematical development of each child. Creative activities and environmental and nature conservation issues are also a major focus. Some preschools specialise in music, language or gender equality, while others focus on the natural world, with the children spending time outdoors in all weathers. Preschool teachers and preschool heads are responsible for educational content and implementation. Preschools' core values, tasks and goals are laid down in a specific curriculum.

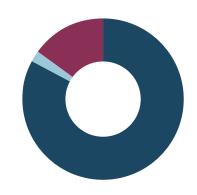
Other pedagogical activities

There are also other forms of pedagogical provision, including pedagogical care, open preschool, open out of school centres and care during periods when no preschool or out of school centre is available.

Pedagogical care for children aged 1 to 13 may be provided through family day care homes or various multi-family solutions. The aim of pedagogical provision and care is to stimulate the child's learning and development, and also prepare children for further learning.

Open preschool offers young children pedagogical activities alongside the adults accompanying them, while giving the adults the opportunity to socialise with other adults. Visitors to open preschool do not need to register in any way; they simply decide when and how often they wish to attend. Open out of school centres for children aged 10 to 13 should supplement education in schools and provide children with

opportunities for development and learning as well as meaningful recreation.



Proportion children (ages 1–5) in preschool and pedagogical care

- Proportion in preschoolProportion in
- pedagogical activities
- Other

2 % 15 %

83 %

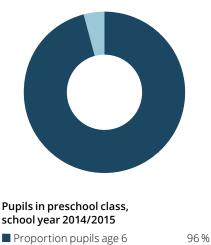


Preschool classes

Play, creativity and exploration. For children, the route to compulsory school goes via the preschool class – a gentle transition during which six-year-olds are gradually introduced to the school environment.

Almost all six-year-olds in Sweden attend a preschool class, as it functions as a bridge between preschool and school. The preschool class is an optional form of schooling that is free of charge and intended to encourage the development and learning of each child and prepare them for further education. It should take a holistic view of the child and the child's needs, and is most often arranged in conjunction with the compulsory school where the child will start school in year 1. One

important goal is for the preschool class, compulsory school and out of school centre to be more closely linked and to support each other through an interactive mix of different educational traditions. This integration aims to create a more cohesive education system underpinned by a shared view of the child, knowledge, development and learning.



Proportion non-participants age 6

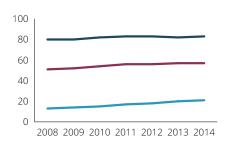


Out of school centres

Learning, excursions, help with homework, football and rest. Between the ages of 6 and 13, pupils who attend school or a preschool class can attend a out of school centre before and after school.

Out of school centres are intended to supplement education in preschool classes and school, stimulate the child's development and learning, and provide opportunities for meaningful recreation. The centres also enable parents to combine parenthood with work or studies. Most children attend a out of school centre that is coordinated with the school. Out of school centres are open throughout the year, and their opening hours are tailored to school hours and holidays.

Proportion children registered at leisure-time centres, 2008–2014



- Ages 6-9Ages 6-12Ages 10-12

Compulsory school

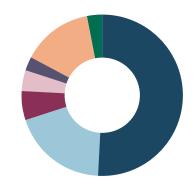
Reading, writing, maths – baking and carpentry. In compulsory school, pupils develop the basic skills and knowledge that will support them in their future studies and as members of society.

All children between the ages of 7 and 16 are required to attend school and have the right to education in the nine-year compulsory school. Children who are unable to attend a regular compulsory school due to a particular disability can attend a compulsory school or special school for children with disabilities.

Subjects taught in compulsory school are Swedish, mathematics, English, social and science subjects, language options, and also practical and aesthetic subjects such as crafts, art, home and consumer studies, physical education and health, and music.

Compulsory schools and equivalent forms of schooling are governed by national curricula, which set out the core values of the school and fundamental goals and guidelines. The syllabuses state the aim and the core content of each subject. National timetables lay down the minimum guaranteed number of tuition hours to which each pupil is entitled for each subject or group of subjects.

Most children attend a municipal school close to their home. There are also many independent schools that are open to any pupil. These schools are not permitted to charge pupils and must be approved by the Swedish Schools Inspectorate. Under the terms of the Education Act, independent schools should as far as possible follow the same rules and have the same rights as municipal schools. Sami children can attend a Sami school up to school year six.



Distribution of costs per pupil in compulsory school

compulsory school	
■ Teaching	51 %
Premises and equipment	19 %
■ School meals	6 %
Educational tools/equipment,	
school libraries	49
■ Pupil health care	3 %
Other	149
School transport and	
travel expenses	3 %



Upper secondary school

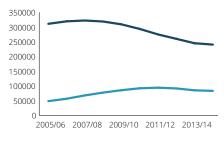
Astronauts, dentists, chefs or plumbers? Upper secondary school should be the place where students are able to lay the foundations for their future dreams.

After compulsory school, almost all students proceed to upper secondary school, which is optional. Municipalities are obliged to provide residents aged between 16 and 20 with good quality upper secondary education, either under their own auspices, or in conjunction with other providers. The courses offered and the number of places should as far as possible be tailored to the preferences of the young people. There is a national curriculum setting out the upper secondary school's core values, tasks and overall goals.

Upper secondary school offers six diploma programmes preparatory for higher education and 12 vocational programmes leading to a vocational diploma. Students on vocational programmes are also entitled to study in order to obtain basic eligibility for higher education, but this is no longer a requirement. Students must as a minimum have passing grades in Swedish, English, mathematics and nine other subjects to be eligible for a programme preparatory for higher education. The vocational programmes require passing grades in Swedish, English, mathematics and five other subjects. An apprenticeship programme, where at least half of the programme is spent at a workplace, is included as an alternative to schoolbased vocational education. Within the national programmes, providers are able to offer special variants of national programmes determined by the National Agency for Education. There is also some opportunity to set up programmes with nationwide recruitment. Students wishing to study an upper secondary engineering course can study for a fourth year on the Technology Programme. Pilot projects are also underway with leading-edge programmes in mathematics, natural sciences, social sciences and the humanities. There are five induction programmes for those young people who do not satisfy the admission requirements for a national programme.

Students with learning difficulties can attend an upper secondary school for students with learning disabilities. Education at upper secondary schools for students with learning disabilities must be tailored to the target group and offer a solid foundation for vocational activity and continued study, as well as for personal development and active participation in society.

Number of pupils in independent and municipal upper secondary school, 2005–2014



MunicipalIndependent



Adult education

Language, computer skills, Swedish for immigrants and vocational training. Sweden has a long tradition of providing adult education that is both broad and flexible and adapted to people's varying needs and life situations.

The school system for adults encompasses municipal adult education (komvux) and special needs education for adults (särvux). Komvux and särvux are divided into basic and upper secondary level. Swedish tuition for immigrants (sfi) is now part of komvux. Vocational adult education (yrkesvux) is state-funded education within komvux that aims to combat labour shortages by providing vocational education and also to reach the groups that either lack upper secondary education or have upper secondary education but need supplementary training. Adult education also extends to vocational higher education courses, art and cultural courses and liberal adult education. A wide range of courses is offered in both public and private settings to enable individuals to develop and deepen their knowledge. Reasons for studying might include a desire to build on professional skills, change profession or become eligible for further education.

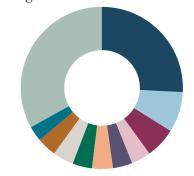
The adult education system focuses on supporting the individual and also strengthening the development of adult learning through access to academic and vocational guidance, validation and student aid. Adult education provision is typified by a high degree of accessibility and flexibility. This type of education is entirely course-based, which provides good opportunities for individuals to build on their knowledge in a flexible way based on an individual study plan. The objective of komvux and särvux is to support and encourage adults in their learning. They must

be given the opportunity to develop their abilities and skills with the aim of strengthening their position in society and in the world of work and promoting their personal growth. Education must be based on the needs and circumstances of the individual.

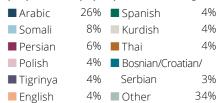
The Swedish National Agency for Higher Vocational Education was established in 2009 and provides information about post-upper secondary vocational programmes that are not part of the higher education system. They share a common regulatory framework and national quality assurance. The programmes can lead to two different qualifications - a diploma in higher vocational education, and an advanced diploma in higher vocational education, which also includes independent work. Vocational expertise plays a key role in the programmes and should aim to help students acquire the specific skills needed for the world of work. The planning and implementation of the programmes should involve the world of work, particularly since the majority of the programmes include modules directly related to working life. There are programmes in areas such as IT, finance, healthcare, tourism, catering, construction, agriculture, media and technology. Close cooperation between higher vocational education and the world of work is a key success factor.

Art and cultural programmes are offered as post-upper secondary forms of education. Programmes are offered in subjects such as dance, music, drama, film, art and fashion. These are run by private education providers but come under state supervision and receive support in the form of government grants and/or student aid eligibility for students.

'Adult Education Initiative' is the umbrella term for a series of ongoing state initiatives within the field of adult education. These include the funding of permanent student places within a number of different forms of education and schools for adults, along with initiatives to increase the quality of adult education. The initiatives also affect other associated policy areas, such as youth policy, labour market policy, regional policy and integration policy. Adult Education Initiative includes programmes in adult vocational education, higher vocational education, folk high schools and university and university colleges.



Swedish for immigrants 2014, proportion of pupils per mother tongue



Liberal adult education

Sweden has a long history of liberal adult education (or folkbildning as it is called in Swedish). The first folk high school was founded in the 1860s and the oldest study associations have been in existence for more than 100 years.

Liberal adult education currently comprises 154 folk high schools and 11study associations (including SISU - Swedish Sports Education). Activities mainly take the form of courses, study circles and cultural programmes. Liberal adult education is characterised by a wide range of subject areas and considerable freedom when it comes to determining appropriate formats for the activity. Activities strengthen and develop democracy, make it easier for the individual to shape their life situation, reduce educational gaps and raise the general level of education in society. The diversity of participants and their differences are reflected in the varying profiles of

folk high schools and study associations and in their differing focuses and types of activity.

Liberal adult education is also an important player in civil society and democratic structures in society. There are strong historical links between popular movements and organisations in civil society on the one hand and study associations and folk high schools on the other that remain to this day. Liberal adult education has long played an important role in young people's and adult learning in Sweden, and is an important aspect of non-formal education and lifelong learning.

Folk high schools and study associations receive grants from the state, municipalities and county councils. The Riksdag determines the purpose of the state grant for liberal adult education, but the providers themselves are independent from the state and establish their goals and organise their provision. The grants from the state is distributed by the non-profit organisation Swedish National Council of Adult Education.



Higher education

Knowledgeable, independent individuals capable of critical thinking. There are high demands on higher education to prepare students for their future working lives in a changing world.

A flexible system comprising both educational programmes and independent courses is the hallmark of higher education in Sweden. Today there are a total of 30 public universities and university colleges, along with a number of private education providers with the right to award higher education qualifications. The principal remit of these educational institutions is education and research. Within the framework of this remit, the institutions should cooperate with the local community, provide information about their activities and work to ensure their research results can be exploited, for example through dissemination to a wider audience.

In addition to providing knowledge and skills, higher education should enhance a student's ability to make independent and critical assessments and to independently identify, formulate and solve problems. Students' interests and the knowledge they wish to acquire should guide the direction and shaping of higher education, but it is also important that the needs of the labour market are taken into account.

The current structure of the higher education and degree system is aligned with the Bologna Process². Higher education is divided into three levels, or 'cycles': first cycle (undergraduate degree), second cycle (master's degree) and third cycle (doctoral degree). Education at the first and second cycle levels is provided in the form of courses that can be combined into an education

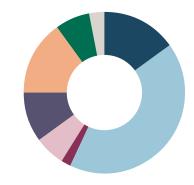
programme. These combined education programmes are now the most common form of higher education studies. However, having courses as the building blocks provides a flexible system that also enhances opportunities for students to return to higher education after completing a degree, or to study shorter courses for professional development.

There are three different categories of qualifications: general qualifications, qualifications in the arts and professional qualifications. Universities and university colleges are allocated resources for education at first and second cycle levels based on the number of students and completed higher education credits.

The majority of higher education institutions in Sweden provide instruction in English and accept students from abroad. Around seven per cent of Swedish students also choose to study in another country for part of their course.

Student influence is an important aspect of the Swedish higher education system and students have the right to be represented on the boards of universities or university colleges and in other decision-making and planning bodies dealing with education and student issues.

The government works to ensure that all higher education provision is of high quality and that everyone who satisfies the prior knowledge requireThe government is also working to improve the sector's ability to validate foreign education and professional experience. This also involves improving opportunities for supplementing foreign higher education qualifications, for example for people with qualifications in health and medical care from third countries, and teachers with overseas qualifications.



Distribution of full-time equivalent students per subject area, 2014

students per subject area, 2014	
■ Humanities/theology	15 %
Law/social studies	42 %
■ Fine arts	2 %
Medicine/odontology	6 %
■ Natural science	10 %
Technology	15 %
Health and social care	7 %
Other	3 %

 $^{^2\,\}text{The Bologna}$ Process has created a European area for higher education in a collaboration between 50 European countries.

ments is given the same opportunity to undertake a course of higher education, irrespective of their background. Universities are therefore being expanded, mainly in respect of courses relating to certain shortage occupations. Quality initiatives are also being implemented and a new quality assurance system is being developed. The volume of student applications and the needs of the labour market will increasingly determine how educational courses are designed.

Research

Climate, health and energy. Research in Sweden looks at identifying solutions to social challenges of global interest and at how new findings and rapid developments within medicine, technology and digitisation can contribute to the development of society.

Sweden is a leading player in international research in a number of areas, and is one of the countries in the world investing most in research and development (R&D) in relation to gross domestic product (GDP). Public funds corresponding to around one per cent of GDP were allocated to research in 2015.

Of the publicly-financed research in Sweden, almost two thirds is carried out at universities and university colleges. The larger higher education institutions carry out research in most subjects and areas. At smaller institutions, research is most often focused on a smaller number of research areas that are often important for local industry. In Sweden, both universities and university colleges conduct research and are allocated resources for this purpose. Other publicly-funded bodies carrying out research include industrial research institutes and some sectoral agencies, as well as municipalities and county councils. Research infrastructure is often essential for undertaking research and development of the highest

quality. For this reason, there are facilities and other resources for research in several different places in Sweden that can be used by a number of research groups.

The government's research policy goal is for Sweden to be an outstanding research nation which undertakes high-quality research and innovation that contributes to social development and supports the competitiveness of trade and industry. Between 2007 and 2015, annual state appropriations for research and development were increased by more than SEK 10 billion. At the same time, a new, performance-based method was introduced to redistribute a portion of the basic grant to universities and university colleges. The method used is based on quality indicators that take into account the amount of external funds applicants have obtained, academic output and how often applicants' publications are cited by other researchers. A special initiative has been launched addressing research in areas of strategic importance for society and industry.

This includes identifying and finding solutions to global problems and challenges such as climate change, degradation of the environment and severe illnesses. Other strategic initiatives include projects to boost business competitiveness and government interventions that can encourage companies to keep or locate their R&D operations in Sweden.

Research results that can be transformed into products and services are an important prerequisite for growth and an investment in future prosperity. Support is therefore given to help commercialise research results and funds are also set aside to provide greater access to funding in the early stages of commercialisation. All universities now have their own innovation offices, which also provide support to university colleges. Collaboration and cooperation between educational institutions, departments, business and the public sector is important for innovation and the exploitation of public investment in research.

	Current prices			2015 price level		
	2014	2015	Change	2014	2015	Chang
Total	32 871	33 132	261	33 316	33 132	-18
HEIs	16 370	16 602	232	16 591	16 602	1
Research-funding public authorities	9 849	9 932	83	9 982	9 932	-5
Defence authorities	1 259	1 135	-124	1 276	1 135	-14
Civilian authorities	5 358	5 449	91	5 430	5 449	1
International organisations	32	13	-19	32	13	-1

Authorities and agencies that come under the responsibility of the Ministry of Education and Research

Swedish National Agency for Education (Statens skolverk)

www.skolverket.se

Swedish Schools Inspectorate (Statens skolinspektion)

www.skolinspektionen.se

National Agency for Special Needs Education and Schools (Specialpedagogiska skolmyndigheten)

www.spsm.se

Sami Education Board (Sameskolestyrelsen)

www.sameskolstyrelsen.se

Swedish Institute for Educational Research (Skolforskningsinstitutet)

www.skolfi.se

Swedish Higher Education Authority (Universitetskanslersämbetet)

www.uka.se

Swedish Council for Higher Education (Universitets- och högskolerådet)

www.uhr.se

Swedish Research Council (Vetenskapsrådet)

www.vr.se

Information about research in Sweden

www.forskning.se

Swedish Board of Study Support (Centrala studiestödsnämnden)

www.csn.se

Swedish Institute (Svenska institutet)

www.si.se

Swedish National Agency for Higher Vocational Education (Myndigheten för yrkeshögskolan)

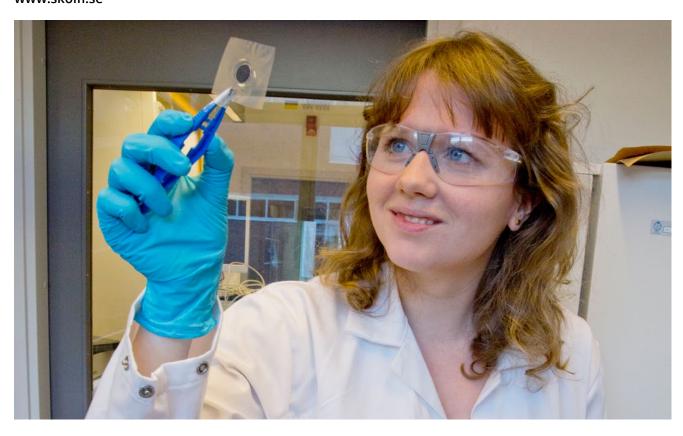
www.myh.se

Information about universities in Sweden

www.uka.se

The National Board of Appeal for Student Aid (Överklagandenämnden för studiestöd)

www.oks.se



Swedish education system

