# Education and knowledge 

The Danish education system

Population by status of education

Full time education

Courses and adult education

Educational performance
Education in an international perspective

Research, development and innovation

Information society

## The Danish education system

The ordinary education system comprehends education ranging from $0^{\text {th }}$ grade to long-cycle higher education and Ph.D. degrees. The figure below gives a picture of how the education system is structured. The scale on the left side shows the minimum amount of years a student has been educated to complete the actual education level. It is also possible to see, the age of a student on a certain educational level - provided that the student has started in pre-school class as a 6-year old, has not had any breaks and has gone through the educational system at the normative time. The scale on the right side shows the different educations' placement in the international education nomenclature ISCED.

Beside the ordinary educational system, there is the educational system for adult. The educational system for adult is distinct from the ordinary system by consisting of short courses and part-time education. Typically this education system consists of isolated courses, which in some cases can be combined into a full qualification equivalent to the qualifications of the ordinary system.

Figure 1
Number of students in the educational system. 1 October 2015


[^0]
## Population by status of education

## Increase in the level of education

In 2015, 71 per cent of the 30-69-year-olds had completed education providing them with professional qualifications, defined as vocational or higher education aimed at specific types of jobs. The proportion was 65 per cent in 2005. There are slightly more women than men who have completed education courses providing them with professional qualifications.

## High frequency of vocational education

The highest level of qualifications among the 30-69 age group was most frequently a vocational education. 37 per cent had completed this type of education, while 33 per cent had completed a higher education in 2015 . In 2005, 38 per cent of the $30-$ 69-year-olds had completed a vocational education and 27 per cent had completed a higher education.
The proportion of 30-69 years old with a higher education has been increasing over the last 10 years while there has been a slight decrease in the proportion with a vocational education.

Among the remaining 30 per cent of the 30-69-year-olds of the population, 20 per cent had completed basic school education, 5 per cent general upper secondary education as the highest level of education, while there is no information for the last 4 per cent.

## Regional differences

Regional differences are evident with regard to educational patterns within the Danish population in 2015. There is, however, a trend for the highest proportion completing education courses providing them with professional qualifications to be found around the large cities, with correspondingly lower proportions being evident in the provinces.

Figure 2
Education providing professional qualifications among 30-69-year-olds in per cent


## Sharp divisions in educational patterns between the sexes

Sharp distinctions were observed in the educational patterns for 30-69-year-old men and women with regard to both educational levels and fields. More men than women had completed vocational education or short and long-cycle higher education in 2015, whereas more women than men had completed medium-cycle higher education in the same year. The difference in long-cycle higher education has become less pronounced during the last ten years, and since 2004 more women than men have finished a Master's degree.

Figure 3
30-69-year-olds with vocational education as the highest education completed

www.statbank.dk/hfudd10

Among the vocational educations, there are major male-dominated disciplines such as construction (e.g. carpenter) and the technology area within cycling, automotive and marine mechanics (e.g. mechanic) and power and electronics (e.g. electrician) Office, commercial and business services (e.g. assistant), care, health and education (e.g. social and health care) and experience and event (e.g. hairdressing) is however dominated by women.

## Most medium-cycle courses are dominated by either men or women

As far as medium-cycle education is concerned, three in ten disciplines were sharply dominated by men: These were technical science (e.g. technical engineers), maritime educations (e.g. marine engineers and shipmasters) and public security education. However, three disciplines humanities and theological, food, biotechnology and laboratory technology, and the health sector are dominated by women. Among the major courses are, for example, food engineering and trained nurses.

## Long-cycle higher education is more mixed

As far as long-cycle higher education is concerned, particular two disciplines technical sciences and police and armed forces were dominated by men, whereas the distribution between men and women were more equal in the following disciplines: education, humanities and theological, food, biotechnology and laboratory technology area.

Figure 4

www.statbank.dk/hfudd10

## Full time education

## Pre-school to 10th

Basic school forms the foundation of the Danish educational system. It begins with pre-school class and leads up to the voluntary 10th school year. In 2015, 709,000 pupils attended basic school. Of these, 64,800 had started in pre-school class, while 173,700 attended 8th to 10th grade, and among these, 28,000 attended continuation schools.

Higher number of students attending medium-cycle higher educations
In total 269,800 students are attending higher educations in 2015 - not including Ph.D. students. The largest part, 34 per cent, is attending the medium-cycle higher educations, followed by bachelor and long-cycle higher educations by 30 and 26 per cent respectively. The smaller part is accounted for by the students at shortcycle higher educations with 10 per cent of the attending students.

Typically, a short-cycle higher education can be taken at Business and Technology Academies and comprises educations such as estate agent, market economist and computer scientist. The medium-cycle higher educations are offered by University Colleges and comprise educations such as school teacher, social worker, nurse and pedagogue. Bachelor- and long-cycle higher educations are most often offered by the universities.

## Increase in students in vocational educations

The number of students in vocational educations has fallen 2 per cent and increased by 40 per cent in higher educations from 2005 to 2015. In 2015 there were 120,700 students in vocational educations and 269,800 students in higher educations, such as policeman, nurse or doctor. Ph.D.-students are not included in this figure.

Figure 5 Students attending education and training providing profess. qualifications

www.statbank.dk/uddakt10

## Courses and adult education

## Adult education at almost all levels of education

Outside the main educational system, there are a number of public-managed courses providing formal qualifications. Adult education courses covering almost all levels of education within the ordinary education system are available.

In the school year 2013-14, nearly 1.2 million course participants completed their participation in public-managed adult or supplementary courses, and course participants at adult vocational training constituted 51 per cent of these. Course participants at general courses, i.e. 8th and 9th form and higher preparatory course, constituted 32 per cent, while course participants at further education constituted 12 per cent, respectively.

36 per cent of the course participants had vocational training as highest education completed, 31 per cent had basic school, 7 per cent had general upper secondary school, 11 per cent had unknown education stated, and 16 per cent had completed a higher education.

## 6 out of 10 of the course participants at general courses were women

50 per cent of the participants in public courses were women. The proportion of women at the general courses was 58 per cent, while the corresponding figure at the adult vocational training centres was a mere 42 per cent. At the higher education centres, 61 per cent were women.

## Educational performance

## Eight out of ten young people are in education immediately after primary school

Of all students leaving school in 2014, 84 per cent had commenced further education after a period of three months. 64 per cent had chosen to attend general uppersecondary education or vocational education (general programmes of education at second level, second stage, hhx, htx), while 20 per cent opted for vocational education and training, e.g. carpenters, bricklayers or hairdressers.

Figure 6 Students three months after leaving basic school

www.statbank.dk/forlob10

48 per cent of the students leaving school in 1995 attended traditional general up-per-secondary education or vocational general upper-secondary, while 16 per cent opted for vocational education and training within a period of three months after leaving basic school. In the period from 1995 to 2014 there has been an increase in the proportion of young people choosing an upper-secondary education, relatively while relatively only a few more young people choose a vocational education. The proportion of young people who are not enrolled in education three months after leaving primary school has decreased from 36 per cent to 18 per cent from 1995 to 2014.

24 per cent of students who graduated from traditional general upper-secondary education in 2014 continued their education immediately after completing their general upper-secondary education. The corresponding proportion of graduates from 2005 was 16 per cent. The proportion of graduates from 2014 who continued their education immediately after graduating from vocational general uppersecondary education was 35 per cent.

83 per cent of the graduates from general upper-secondary education or vocational education in 2014 who had enrolled for further education three months after their graduation chose higher education.

## Ten years after basic school half of the Danes have profess. qualifications

Ten years after leaving basic school in 2004-05, about 53 per cent had completed training providing them with professional qualifications. Of this group, 24 per cent had completed a vocational education course and 24 per cent had completed higher education, while 30 per cent were still studying. The educational remainder young people who had not attended any educational institution or had completed an education course providing them with professional qualifications ten years after leaving basic school - accounted for 17 per cent of the year 2004-05.

## Education has a significant effect on employment

In 201468 per cent of the age group 30-69 years were employed, 3 per cent unemployed, 27 per cent outside the workforce and 2 per cent under education. Persons with professional qualifications have a higher employment rate than those without professional qualifications. Higher levels of education can lead to better employment.

www.statbank.dk/krhfu2

## Education in an international perspective

## Level of education in Denmark above OECD average

In all OECD countries, an average of 33 per cent of the 25-64-year-olds had completed a higher education in 2013. At 36 per cent, Denmark was among OECD countries above average percentage. The three highest percentages were found in Canada, Israel, Republic of Korea while Brazil, Turkey and Italy, accounted for the lowest percentages.

## Danes proceed through 18.6 years of education

Children that began primary education in Denmark in 2013 will proceed through an average of 18.6 years of full time education during their lifetime. Australia, Iceland, New Zealand and Finland are topping the list with Denmark, all accounting for 18 years of education or more. Among countries lying around 15 years of education are Slovakia, Russia and Brasil. The OECD average was 16.5 years in 2013.

Figure 8 Persons having completed tertiary education in selected OECD countries. 2013


[^1]
## Research, development and innovation

## The private sector contributes with two thirds of total R\&D-expenditure

Research and development as well as innovation activities are important factors for the development of the competitiveness of the firms and, consequently, for economic growth in society. The creation of new knowledge and its subsequent use in the enterprises are important factors for the dynamics and innovation of the business sector by way of introducing new products and production processes.

R\&D activities take place both in the private and the public sector. Total Danish R\&D expenditure in the public and private sector has doubled in the period 20002014 and has been estimated at DKK 59 billion in 2014. The private sector's share of total R\&D expenditure has been approximately two thirds during the period, but has decreased during the recent years.

Figure 9 R\&D expenditure of the public and private sector

www.statbank.dk/forsk01 and fouoff07

## Manufacturing has the highest R\&D expenditure

R\&D expenditure is particularly high in manufacturing and total expenditure on own R\&D activities reached DKK 21.0 billion in 2014. This amount corresponds to 58 per cent of the private sector's expenditure on $R \& D$.

The remainder of private sectors R\&D expenditure is dominated by the industries business service, information and communication, and finance and insurance. Enterprises in business service accounted for R\&D expenditure amounting to DKK 5.7 billion (16 per cent) in 2014. Enterprises in finance and insurance accounted for 4.0 DKK billion ( 11 per cent) and enterprises in information and communication (television and radio, telecommunication and ICT and information services etc.) accounted for 3.5 DKK billion (10 per cent).

Figure 10 Percentage of innovative enterprises by industry. 2012-2014

www.statbank.dk/inn02

## 46 per cent of all enterprises are innovative

The greater majority of Danish enterprises do not carry out research and development activities. Instead, they attempt to increase their competitiveness by introducing new products and production processes, or by introducing new organisational methods or marketing initiatives, i.e. innovation. 44 per cent of the Danish enterprises have introduced innovations during the period 2012-2014.

Innovative enterprises are found primarily among businesses in information and communication where 52 per cent innovated during 2012-2014.

The innovation activities of Danish enterprises are characterized by large industrial variation. Enterprises in information and communication have more innovation in products than in processes, whereas enterprises in construction to a larger degree introduce new production processes.

Enterprises in manufacturing industry have almost the same frequency in product and process innovation ( 22 per cent each). Total innovation expenditure amounted to DKK 44.8 billion in 2014, of which DKK 36.3 billion was used for own R\&D. In addition Danish enterprises purchase of R\&D-services amounted to DKK 17.8 billion in 2014.

## Information society

## About the information society

An analysis of the information society can be made partly via the supply side in the form of enterprises and employment in the ICT sector and partly via the demand side in the form of the use of information technology by enterprises and by individuals.

## The ICT sector

The ICT sector comprises enterprises that produce products and services within electronics, ICT, computer software, telecommunications, and other areas primarily based on information technologies. The ICT sector can be divided into ICT manufacturing, ICT wholesale, telecommunications, and ICT consultancy services.

## Fall in employment in ICT manufacturing

In 2013, the Danish ICT sector employed a total of 83,314 full-time employees, which is minor decrease of 6 per cent compared to 2007. However, there was a fall in ICT manufacturing of 47 per cent and an increase of 8 per cent In ICT services, consultants, etc. Out of total employment in ICT manufacturing, 61 per cent was employed in ICT services, 18 per cent in telecommunications, 15 per cent in ICT wholesale and 6 per cent in ICT manufacturing.

Figure 11 Full-time employees in the ICT sector


## Use of ICT by enterprises

At the beginning of 2015, nearly all enterprises had access to the Internet and more than nine out of ten enterprises had their own website. Almost four out of ten enterprises used one or more cloud computing services.

Figure 12 Use of ICT by enterprises. 2015


Note: Broadband connection, connection faster than analog modem or ISDN.

## Almost everybody have a mobile phone

More and more families have access to IT products in the home e.g. PC, the Internet and mobile phones. The spread of mobile phones has since 2000 passed the dissemination of the PC, and in 2015 had more than 98 per cent of Danish families
mobile phone compared to 68 per cent in 2000. In 2015 had 92 per cent access to a computer which is a slight decrease compared to the year before.

Figure 13 Families' access to ICT goods


Note: 1 January.
www.statbank.dk/varforbr
Eight out of ten Danes uses Internet daily
The share of Danes between 16-89 years old who use the Internet daily or almost daily has increased during the recent years. The number is 83 per cent in 2015. As more and more people uses the Internet, the share of those who has never used the Internet declines. In 2015, this share is 6 per cent of the 16-89 years old. It is especially the elders who have never used the Internet; 40 per cent of the 75-89 year olds have never used the Internet, while the figure is only 13 per cent for the 65-74 year olds.

Figure 14 Daily use of Internet. 2015


Table 136 Students in the educational system. 2015

| 1.10.2014-30.09.2015 | Students 2014 | Entrance | Graduates ${ }^{1}$ | Did not complete education | Students 2015 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Total | 1261399 | 445602 | 249401 | 203561 | 1254039 |
| Basic school/preparatory | 715266 | 189364 | 103218 | 87347 | 714065 |
| General upper-secondary education | 147760 | 59537 | 46419 | 12262 | 148616 |
| Vocational education and training | 131400 | 94482 | 31926 | 73260 | 120696 |
| Qualifying educational programmes | 836 | 1188 | 899 | 267 | 858 |
| Short-cycle higher education | 25459 | 14070 | 8350 | 4754 | 26425 |
| Medium-cycle higher education | 90219 | 31389 | 20756 | 8585 | 92267 |
| Bachelor | 81579 | 29355 | 18311 | 11814 | 80809 |
| Long-cycle higher education | 68880 | 26217 | 19522 | 5272 | 70303 |
| Men, total | 628777 | 224111 | 119192 | 108275 | 625421 |
| Basic school/preparatory | 368070 | 97583 | 52673 | 44759 | 368221 |
| General upper-secondary education | 68896 | 27969 | 21112 | 6324 | 69429 |
| Vocational education and training | 73383 | 51484 | 15759 | 41408 | 67700 |
| Qualifying educational programmes | 642 | 925 | 696 | 205 | 666 |
| Short-cycle higher education | 13934 | 7441 | 4380 | 2793 | 14202 |
| Medium-cycle higher education | 34965 | 12831 | 7669 | 4078 | 36049 |
| Bachelor | 38887 | 14044 | 8332 | 6289 | 38310 |
| Long-cycle higher education | 30000 | 11834 | 8571 | 2419 | 30844 |
| Women, total | 632622 | 221491 | 130209 | 95286 | 628618 |
| Basic school/preparatory | 347196 | 91781 | 50545 | 42588 | 345844 |
| General upper-secondary education | 78864 | 31568 | 25307 | 5938 | 79187 |
| Vocational education and training | 58017 | 42998 | 16167 | 31852 | 52996 |
| Qualifying educational programmes | 194 | 263 | 203 | 62 | 192 |
| Short-cycle higher education | 11525 | 6629 | 3970 | 1961 | 12223 |
| Medium-cycle higher education | 55254 | 18558 | 13087 | 4507 | 56218 |
| Bachelor | 42692 | 15311 | 9979 | 5525 | 42499 |
| Long-cycle higher education | 38880 | 14383 | 10951 | 2853 | 39459 |

${ }^{1}$ Entrance of pupils to basic school comprises entrance of pupils to 0st to 6th class and to 7th and 10th
www.statbank.dk/uddakt10
class. ${ }^{2}$ Graduates from basic school equal graduates from basic school with 9th or 10th grade.
${ }^{3} \mathrm{Ph}$.D. is not included in the table.

| Table 137 | Students by national origin. 2015 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Basic school/ preparatory | General uppersecondary school | Vocational education and training | Shortcycle higher education | Mediumcycle higher education | Bachelor | Long-cycle higher education ph.d | Total |
|  | $\longrightarrow$ per cent |  |  |  |  |  |  |  |
| Men and women, total | 57 | 12 | 10 | 2 | 7 | 6 | 6 | 1254039 |
| Of whom: immigrants and descendants | 51 | 11 | 9 | 4 | 9 | 7 | 9 | 151541 |
| Western countries | 33 | 6 | 7 | 8 | 13 | 10 | 22 | 37911 |
| Non western countries | 58 | 12 | 10 | 2 | 7 | 6 | 5 | 113627 |
| Men, total | 59 | 11 | 11 | 2 | 6 | 6 | 5 | 625421 |
| Of whom: immigrants and descendants | 55 | 10 | 8 | 4 | 8 | 6 | 8 | 73382 |
| Western countries | 36 | 6 | 7 | 9 | 13 | 9 | 21 | 17802 |
| Non western countries | 61 | 12 | 9 | 3 | 6 | 6 | 4 | 55578 |
| Women, total | 55 | 13 | 8 | 2 | 9 | 7 | 6 | 628618 |
| Of whom: immigrants and descendants | 48 | 11 | 10 | 3 | 10 | 8 | 10 | 78159 |
| Western countries | 31 | 6 | 8 | 7 | 14 | 10 | 23 | 3700 |
| Non western countries | 54 | 12 | 11 | 2 | 8 | 7 | 5 | 37932 |


| Table 138 | ts enrol | in gen | al educ | ion |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Entrance of students 01.10.14-30.09.15 |  | $\begin{gathered} \text { Graduates } \\ 01.10 .14-30.09 .15 \end{gathered}$ |  | Disrupted educations |  | Students$01.10 .15^{1}$ |  |
|  | Men | Women | Men | Women | Men | Women | Men | Women |
| Total | 126477 | 123612 | 74481 | 76055 | 51288 | 48588 | 438316 | 425223 |
| Basic school/preparatory | 97583 | 91781 | 52673 | 50545 | 44759 | 42588 | 368221 | 345844 |
| Upper secondary education | 27969 | 31568 | 21112 | 25307 | 6324 | 5938 | 69429 | 79187 |
| General (stx, hf, student courses) | 16886 | 24693 | 13547 | 20547 | 3827 | 4295 | 42453 | 63152 |
| General (hhx, htx) | 10545 | 5986 | 7378 | 4418 | 2172 | 1135 | 26240 | 14865 |
| International | 538 | 889 | 187 | 342 | 325 | 508 | 736 | 1170 |
| Qualifying educational programmes | 925 | 263 | 696 | 203 | 205 | 62 | 666 | 192 |
| Access courses - higher edu. | 40 | 131 | 20 | 104 | 8 | 23 | 40 | 135 |
| Access Exams - engineering education | 885 | 132 | 676 | 99 | 197 | 39 | 626 | 57 |

${ }^{1}$ The newest number of students is equal to the old number of students plus the
www.statbank.dk/uddakt10
entrance of students minus those who either graduates or leaves without examination.

| Table 139 | Students in upper-secondary education. 2015 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Completed educations |  |  | Average mark |  |  |
|  | Men | Women | Total | Men | Women | Total |
| Total | 21808 | 25510 | 47318 |  |  |  |
| Upper-secondary school | 10660 | 16416 | 27076 | 6,9 | 7,4 | 7,2 |
| Higher preparatory examination | 2807 | 3980 | 6787 | 6,3 | 6,3 | 6,3 |
| Adult upper-secondary school | 80 | 151 | 231 | 6,5 | 6,8 | 6,7 |
| Entrance course to higher education | 20 | 104 | 124 | - | - | - |
| Higher commercial examination | 4553 | 3395 | 7948 | 6,4 | 6,9 | 6,6 |
| Higher technical examination | 2825 | 1023 | 3848 | 6,7 | 7,6 | 6,9 |
| International Upper-secondary school | 187 | 342 | 529 | 6,5 | 7,2 | 6,8 |
| Entrance examination to engineers | 676 | 99 | 775 | - | - | - |


| Table 140 | Students in higher education |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Entrance of students 01.10.14-30.09.15 |  | $\begin{gathered} \text { Graduates } \\ 01.10 .14-30.09 .15 \end{gathered}$ |  | Disrupted educations |  | $\begin{aligned} & \text { Students1 } \\ & 01.10 .15 \end{aligned}$ |  |
|  | Men | Women | Men | Women | Men | Women | Men | Women |
| Total | 46150 | 54881 | 28952 | 37987 | 15579 | 14846 | 119405 | 150399 |
| Short cycle higher education | 7441 | 6629 | 4380 | 3970 | 2793 | 1961 | 14202 | 12223 |
| Educational | 5 | 30 | 1 | 19 | 0 | 15 | 8 | 73 |
| Media and Communication | 866 | 753 | 594 | 470 | 356 | 254 | 1706 | 1372 |
| Arts | 28 | 28 | 12 | 28 | 1 | 7 | 60 | 84 |
| Social science, Economics-Mercantile | 3682 | 4059 | 2017 | 2115 | 1266 | 1170 | 6608 | 6877 |
| Technical educations | 2401 | 933 | 1421 | 761 | 998 | 241 | 4886 | 1875 |
| Food, biotechnology and laboratory |  |  |  |  |  |  |  |  |
| Agriculture, nature and environment | 101 | 131 | 101 | 95 | 40 | 32 | 210 | 272 |
| Maritime | 56 | 2 | 56 | 4 | 19 | 0 | 68 | 2 |
| Health | 35 | 252 | 26 | 173 | 6 | 49 | 74 | 624 |
| Police, armed forces etc. | 37 | 18 | 41 | 24 | 2 | 3 | 98 | 44 |
| Vocational bachelors educations | 12831 | 18558 | 7669 | 13087 | 4078 | 4507 | 36049 | 56218 |
| Educational | 2814 | 5897 | 1964 | 4701 | 962 | 1388 | 9673 | 20454 |
| Media and Communication | 560 | 744 | 437 | 433 | 109 | 165 | 1688 | 1973 |
| Humanities and theological | 13 | 32 | 9 | 20 | 0 | 2 | 16 | 31 |
| Arts | 148 | 627 | 133 | 496 | 9 | 65 | 360 | 1395 |
| Social science, Economics-Mercantile | 2182 | 3585 | 1063 | 2109 | 622 | 892 | 4740 | 9316 |
| Social Sciences | 15 | 12 | 20 | 14 | 2 | 2 | 44 | 47 |
| Technical educations | 5645 | 1377 | 2972 | 648 | 1932 | 469 | 15129 | 3411 |
| Technical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Food, biotechnology and laboratory |  |  |  |  |  |  |  |  |
| technology | 118 | 518 | 52 | 408 | 46 | 176 | 300 | 1687 |
| Agriculture, nature and environment | 101 | 58 | 44 | 50 | 32 | 15 | 273 | 151 |
| Maritime | 74 | 11 | 66 | 10 | 36 | 3 | 232 | 32 |
| Health | 950 | 5636 | 652 | 4149 | 320 | 1324 | 2954 | 17541 |
| Police, armed forces etc. | 211 | 61 | 257 | 49 | 8 | 6 | 640 | 180 |
| Bachelors programmes | 14044 | 15311 | 8332 | 9979 | 6289 | 5525 | 38310 | 42499 |
| Educational | 17 | 178 | 18 | 132 | 13 | 62 | 46 | 473 |
| Humanities and theological | 2697 | 4753 | 1553 | 3141 | 1737 | 2347 | 7443 | 13199 |
| Arts | 457 | 473 | 364 | 382 | 108 | 123 | 1379 | 1498 |
| Science | 2521 | 1657 | 1382 | 900 | 1399 | 733 | 7013 | 4536 |
| Social Sciences | 5330 | 5484 | 3318 | 3541 | 2079 | 1562 | 14181 | 14697 |
| Technical sciences | 2097 | 846 | 1090 | 511 | 710 | 251 | 5398 | 2204 |
| Food, biotechnology and laboratory technology | 39 | 73 | 18 | 37 | 14 | 29 | 108 | 240 |
| Agriculture, nature and environment | 121 | 362 | 65 | 263 | 41 | 112 | 361 | 1072 |
| Health science | 765 | 1485 | 524 | 1072 | 188 | 306 | 2381 | 4580 |
| Masters programmes | 11834 | 14383 | 8571 | 10951 | 2419 | 2853 | 30844 | 39459 |
| Educational | 233 | 916 | 175 | 776 | 149 | 499 | 680 | 2939 |
| Humanities and theological | 1574 | 3089 | 1163 | 2342 | 486 | 832 | 4328 | 8505 |
| Arts | 376 | 431 | 335 | 429 | 67 | 72 | 962 | 1230 |
| Science | 1450 | 1113 | 917 | 743 | 272 | 143 | 3396 | 2740 |
| Social Sciences | 4586 | 5355 | 3313 | 4122 | 920 | 932 | 12987 | 15275 |
| Technical sciences | 2711 | 1322 | 1964 | 871 | 450 | 183 | 5712 | 2501 |
| Food, biotechnology and laboratory technology | 34 | 115 | 36 | 97 | 5 | 13 | 81 | 335 |
| Agriculture, nature and environment | 199 | 427 | 147 | 330 | 42 | 76 | 505 | 1069 |
| Health science | 671 | 1615 | 521 | 1241 | 28 | 103 | 2193 | 4865 |
| Police, armed forces etc. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

[^2]
## Table 141

Participants in courses of adult and supplementary education. 2013/2014


[^3]www.statbank.dk/veu10

Table 142 Educational level three years after leaving basic school. 2015

|  | Year of leaving school |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Graduation class, total | 64585 | 67751 | 67162 | 69612 | 69575 | 70549 | 70378 | 71264 |
| Total number receiving education | 23929 | 27197 | 28439 | 30076 | 30079 | 29640 | 27895 | 26312 |
| Preparatory education | 95 | 277 | 261 | 337 | 394 | 455 | 515 | 557 |
| General upper secondary school | 5078 | 6064 | 5655 | 6116 | 6195 | 6118 | 5753 | 5606 |
| Vocational upper secondary school | 2219 | 3109 | 3584 | 3906 | 3792 | 3633 | 3496 | 973 |
| Vocational basic education | 12094 | 12608 | 12894 | 12580 | 11923 | 11174 | 10362 | 11854 |
| Vocational education | 75 | 76 | 67 | 84 | 55 | 47 | 31 | 27 |
| Short-cycle higher education | 649 | 811 | 890 | 1011 | 1081 | 1120 | 1053 | 1027 |
| Medium-cycle higher education | 1281 | 1613 | 1924 | 2136 | 2292 | 2280 | 2221 | 2103 |
| Bachelor | 2434 | 2635 | 3159 | 3902 | 4342 | 4804 | 4463 | 4164 |
| Long-cycle higher education | 4 | 4 | 5 | 4 | 5 | 9 | 1 | 1 |

www.statbank.dk/forlob10
$\begin{array}{ll}\text { Table } 143 & \begin{array}{l}\text { Educational level three years after leaving general upper sec. education. } \\ 2015\end{array}\end{array}$

|  | Year of leaving school |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Graduation class, total | 20740 | 22263 | 22545 | 23289 | 25427 | 26743 | 28393 | 30321 |
| Total number receiving education | 15999 | 17261 | 17999 | 19265 | 21255 | 22269 | 23640 | 24520 |
| Preparatory education | 1 | - | 1 | - | - | - | 9 | - |
| General upper secondary school | - | 3 | 3 | 3 | 4 | 3 | - | 3 |
| Vocational upper secondary school | 150 | 211 | 169 | 218 | 259 | 276 | 331 | 64 |
| Vocational basic education | 1114 | 1003 | 886 | 820 | 921 | 1012 | 1200 | 1688 |
| Vocational education | 10 | 18 | 19 | 11 | 12 | 10 | 5 | 5 |
| Short-cycle higher education | 732 | 899 | 900 | 900 | 1015 | 1176 | 1342 | 1569 |
| Medium-cycle higher education | 5445 | 5966 | 6327 | 6769 | 7541 | 7894 | 8506 | 8732 |
| Bachelor | 7976 | 8479 | 8816 | 9820 | 10771 | 11028 | 11226 | 11255 |
| Long-cycle higher education | 571 | 682 | 878 | 724 | 732 | 870 | 1021 | 1204 |


| Table 144 | Highest general education completed by population. 2015 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Age on 1 January 2015 | 1-6 grade or unknown | 7-10 grade | Upper- secondary school, higher preparatory examination, adult upper-secondary school | Higher commercial education, higher tech. education, and entrance examination for technical colleges | Total |
| Total | 280147 | 2352083 | 1013082 | 352507 | 3997819 |
| 15-24 years | 40257 | 473402 | 159877 | 56408 | 729944 |
| 25-29 years | 53559 | 132357 | 114653 | 45789 | 346358 |
| 30-39 years | 78777 | 282471 | 211826 | 105660 | 678734 |
| 40-49 years | 46369 | 427338 | 231547 | 97954 | 803208 |
| $50-59$ years | 43808 | 488219 | 180716 | 38135 | 750878 |
| 60-69 years | 17377 | 548296 | 114463 | 8561 | 688697 |
| Men | 143521 | 1271770 | 410493 | 185918 | 2011702 |
| 15-24 years | 19457 | 258801 | 60541 | 34524 | 373323 |
| 25-29 years | 26511 | 80228 | 43555 | 25867 | 176161 |
| 30-39 years | 41230 | 169573 | 77477 | 53287 | 341567 |
| 40-49 years | 24157 | 242576 | 92212 | 45567 | 404512 |
| $50-59$ years | 24240 | 254018 | 78309 | 20348 | 376915 |
| 60-69 years | 7926 | 266574 | 58399 | 6325 | 339224 |
| Women | 136626 | 1080313 | 602589 | 166589 | 1986117 |
| 15-24 years | 20800 | 214601 | 99336 | 21884 | 356621 |
| 25-29 years | 27048 | 52129 | 71098 | 19922 | 170197 |
| 30-39 years | 37547 | 112898 | 134349 | 52373 | 337167 |
| 40-49 years | 22212 | 184762 | 139335 | 52387 | 398696 |
| $50-59$ years | 19568 | 234201 | 102407 | 17787 | 373963 |
| 60-69 years | 9451 | 281722 | 56064 | 2236 | 349473 |

Table 145 Highest education completed analysed by age and sex. 2015

| Age on <br> 1 Jan. 2015 | Basic school $G$ or not known | eneral uppersecondary education | Vocational education and training | Short-cycle higher education | Medium-cycle higher education | Bachelor | Long-cycle higher education/ ph.d. | Unknown | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | per cent |  |  |  |  |  |  |  |  |
| Total | 20,3 | 4,8 | 37,4 | 4,8 | 16,7 | 1,6 | 10,0 | 4,3 | 2921517 |
| 30-39 years | 14,2 | 5,6 | 31,3 | 5,4 | 16,7 | 2,8 | 14,9 | 9,0 | 678734 |
| 40-49 years | 16,8 | 5,7 | 38,2 | 6,0 | 16,7 | 1,7 | 11,0 | 3,8 | 803208 |
| 50-59 years | 23,2 | 4,8 | 38,9 | 4,5 | 16,6 | 1,1 | 7,7 | 3,2 | 750878 |
| 60-69 years | 27,3 | 2,7 | 41,0 | 3,2 | 16,8 | 0,8 | 6,5 | 1,6 | 688697 |
| Men | 20,7 | 4,9 | 40,7 | 5,3 | 11,6 | 1,4 | 10,5 | 4,8 | 1462218 |
| 30-39 years | 16,7 | 5,9 | 34,7 | 5,7 | 10,8 | 2,5 | 13,7 | 9,9 | 341567 |
| 40-49 years | 19,2 | 5,5 | 40,2 | 6,9 | 11,2 | 1,5 | 11,0 | 4,2 | 404512 |
| $50-59$ years | 23,2 | 4,9 | 42,2 | 4,8 | 11,4 | 1,0 | 8,7 | 3,7 | 376915 |
| $60-69$ years | 23,7 | 3,3 | 45,4 | 3,6 | 13,2 | 0,7 | 8,5 | 1,6 | 339224 |
| Women | 19,9 | 4,6 | 34,2 | 4,3 | 21,8 | 1,7 | 9,5 | 3,9 | 1459299 |
| 30-39 years | 11,7 | 5,3 | 27,8 | 5,2 | 22,7 | 3,1 | 16,0 | 8,1 | 337167 |
| 40-49 years | 14,4 | 6,0 | 36,2 | 5,1 | 22,3 | 1,8 | 11,0 | 3,3 | 398696 |
| 50-59 years | 23,1 | 4,7 | 35,6 | 4,1 | 21,9 | 1,1 | 6,7 | 2,7 | 373963 |
| $60-69$ years | 30,9 | 2,2 | 36,7 | 2,9 | 20,3 | 0,9 | 4,6 | 1,6 | 349473 |


| Highest education completed analysed by region. 2015 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 30-69 year-olds <br> Place of residence on <br> 1 Jan. 2015 | Basic school or not known | General uppersecondary education | Vocational education and training |  | Short-cycle higher education | Mediumcycle higher education | Bachelor | Long-cycle higher education/ ph.d. | Unknown | Total |
| Denmark, total | 593831 | 139000 | 1093826 | 1407 | 140596 | 488207 | 46143 | 292295 | 126212 | 2921517 |
| Region Hovedstaden | 149937 | 60257 | 267569 | 359 | 42359 | 153122 | 23609 | 156045 | 53672 | 906929 |
| Copenhagen | 44897 | 22791 | 61705 | 124 | 11990 | 47224 | 11345 | 63088 | 24931 | 288095 |
| Frederiksberg | 5737 | 4099 | 10385 | 12 | 2257 | 9285 | 2035 | 14880 | 3266 | 51956 |
| Region Sjælland | 100370 | 17660 | 187283 | 105 | 20534 | 69592 | 4310 | 26004 | 14087 | 439945 |
| Region Syddanmark | 140863 | 23070 | 256584 | 277 | 30272 | 106002 | 6766 | 35977 | 24154 | 623965 |
| Region Midtjylland | 132433 | 27974 | 256378 | 487 | 34289 | 112842 | 8222 | 55561 | 23641 | 651827 |
| Region Nordjylland | 70228 | 10039 | 126012 | 179 | 13142 | 46649 | 3236 | 18708 | 10658 | 298851 |

Table 147 Highest completed education, by labour market. 2014

| 30-69 year-olds | Students | Non-students |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Employed | Unemployed | Not in the labour force |  |
| Total | 68278 | 1982711 | 89105 | 789322 | 2929416 |
| Basic school/not stated | 14593 | 349098 | 28256 | 335756 | 727703 |
| General upper-secondary education | 9204 | 94567 | 5137 | 30447 | 139355 |
| Vocational education and training | 18615 | 780033 | 32937 | 275137 | 1106722 |
| Qualifying educational programmes | 431 | 560 | 59 | 297 | 1347 |
| Higher education/PhD | 25435 | 758453 | 22716 | 147685 | 954289 |
| Men | 27425 | 1043427 | 46679 | 347834 | 1465365 |
| Basic school/not stated | 6294 | 206763 | 16291 | 142888 | 372236 |
| General upper-secondary education | 4134 | 50546 | 2738 | 14430 | 71848 |
| Vocational education and training | 7077 | 445156 | 17707 | 131595 | 601535 |
| Qualifying educational programmes | 216 | 450 | 42 | 172 | 880 |
| Higher education/PhD | 9704 | 340512 | 9901 | 58749 | 418866 |
| Women | 40853 | 939284 | 42426 | 441488 | 1464051 |
| Basic school/not stated | 8299 | 142335 | 11965 | 192868 | 355467 |
| General upper-secondary education | 5070 | 44021 | 2399 | 16017 | 67507 |
| Vocational education and training | 11538 | 334877 | 15230 | 143542 | 505187 |
| Qualifying educational programmes | 215 | 110 | 17 | 125 | 467 |
| Higher education/PhD | 15731 | 417941 | 12815 | 88936 | 535423 |

Table 148 The ICT sector in Denmark. 2013

|  | Enterprises | Full-time employees | Turnover | Wages and salaries |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 工 DKK mio. |  |  |
| ICT industries, total | 13074 | 81314 | 198379 | 49185 |
| ICT manufacturing | 285 | 4894 | 10498 | 2380 |
| ICT wholesale trade | 1025 | 12332 | 60941 | 7767 |
| Telecommunications | 390 | 14718 | 45330 | 7680 |
| ICT services industries | 11374 | 49370 | 81610 | 31359 |


| Table 149 | Enterprises' use of ICT. 2015 |  |  |
| :---: | :---: | :---: | :---: |
|  | Internet access | $\begin{array}{r} \text { Own } \\ \text { web site } \end{array}$ | Mobile internet |
|  |  |  |  |
| All enterprises ${ }^{1}$ | 100 | 92 | 85 |
| Sectors |  |  |  |
| Manufacturing | 100 | 97 | 87 |
| Construction | 100 | 91 | 91 |
| Trade and transport etc. | 99 | 88 | 80 |
| Information and communication | 100 | 96 | 94 |
| Business service and finance | 100 | 94 | 87 |
| Fuldtidsansatte |  |  |  |
| 10-19 employees | 99 | 89 | 83 |
| 20-49 employees | 100 | 94 | 86 |
| 50-99 employees | 99 | 95 | 90 |
| 100 employes + | 100 | 97 | 95 |

[^4]| Table 150 | Goods and services purchased on the Internet. 2015 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 16-24 years | 25-34 years | 35-44 years | 45-54 years | 55-64 years | 65-74 years | 75-89 years | Total |
|  | per cent of age group |  |  |  |  |  |  |  |
| Total | 88 | 88 | 89 | 82 | 70 | 53 | 24 | 74 |
| Tickets for events | 65 | 68 | 66 | 59 | 39 | 28 | 10 | 51 |
| Other tavel arrangements | 47 | 57 | 58 | 55 | 43 | 32 | 10 | 46 |
| Clothes, sports, goods | 63 | 54 | 61 | 51 | 29 | 14 | 5 | 43 |
| Holiday accommodation | 33 | 50 | 57 | 57 | 41 | 28 | 10 | 42 |
| Household goods (e.g. furniture, toys, etc) | 22 | 47 | 48 | 34 | 27 | 18 | 5 | 31 |
| Internet, television, phone subscription | 33 | 40 | 41 | 31 | 23 | 16 | 6 | 29 |
| Music, movies | 28 | 26 | 28 | 23 | 14 | 7 | 3 | 20 |
| Electronic equipment | 31 | 31 | 30 | 25 | 16 | 10 | 4 | 22 |
| Computer hardware | 30 | 31 | 28 | 22 | 17 | 11 | 6 | 22 |
| Books, magazines, newspapers | 22 | 28 | 23 | 24 | 18 | 15 | 6 | 20 |
| Video games software | 32 | 25 | 22 | 14 | 4 | 2 | 1 | 15 |
| Share purchases, financial services |  |  |  |  |  |  |  |  |
| or insurances | 17 | 22 | 17 | 15 | 10 | 7 | 4 | 14 |
| Food or groceries | 7 | 18 | 21 | 16 | 11 | 7 | 2 | 13 |
| Medicine | 5 | 5 | 9 | 10 | 11 | 9 | 5 | 8 |
| E-learning material | 9 | 10 | 5 | 5 | 2 | 1 | 0 | 5 |

www.statbank.dk/bebrit08

| Table 151 | Access to computer and internet in the home |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2011 | 2012 | 2013 | 2014 | 2015 |
|  | per cent of households |  |  |  |  |
| Computer access from home |  |  |  |  |  |
| Total | 90 | 92 | 93 | 94 | 94 |
| Single adult without children | 84 | 84 | 85 | 90 | 87 |
| Couple without children | 93 | 94 | 99 | 96 | 96 |
| Single adult with children | 94 | 97 | 96 | 96 | 95 |
| Couple with children | 98 | 99 | 99 | 98 | 99 |
| Internet access from home |  |  |  |  |  |
| Total | 90 | 92 | 93 | 93 | 94 |
| Single adult without children | 84 | 83 | 85 | 89 | 86 |
| Couple without children | 93 | 93 | 97 | 94 | 95 |
| Single adult with children | 91 | 99 | 96 | 98 | 97 |
| Couple with children | 99 | 99 | 99 | 98 | 98 |


| I52 Internet and telephony |  |  |  |
| :---: | :---: | :---: | :---: |
|  | first half $2011^{1}$ | first half $2013{ }^{1}$ | first half 2015 |
| Subscriber line, fixed network (1.000) ${ }^{2}$ | 2212 | 1926 | 1580 |
| Per 100 inhabitants | 39,7 | 34,3 | 27,8 |
| Mobile subscriptions ${ }^{3}$ (1.000) | 7907 | 8220 | 8411 |
| Per 100 inhabitants ${ }^{3}$ | 142 | 146,6 | 148,1 |
| Internet subscriptions (1.000) | 2147 | 2262 | 2392 |
| Per 100 inhabitants | 38,6 | 40,3 | 42,1 |
| xDSL subscriptions (1.000) | 1221 | 1178 | 1140 |
| Cable modem subscriptions (1.000) | 563 | 636 | 677 |
| Fibre subscriptions (1.000) | 187 | 295 | 420 |
| Mobile broadband subscriptions ${ }^{4}$ (1.000) | 4258 | 5483 | 6351 |
| Dedicated data subscriptions (1.000) | 854 | 1038 | 1182 |
| mio. minutes (first half) |  |  |  |
| Domestic traffic, fixed network ${ }^{5}$ | 5685 | 4203 | 3181 |
| International traffic, fixed network ${ }^{5}$ | 419 | 421 | 333 |
| Domestic traffic, mobile network | 11086 | 11556 | 12578 |
| International traffic, mobile network | 682 | 730 | 689 |
|  | mio. (first half) |  |  |
| SMS sent | 12567 | 10527 | 8206 |
| MMS sent | 87 | 172 | 230 |
|  | mio. MB in period (year) |  |  |
| Mobile data traffic | 19808 | 54395 | 164483 |
|  |  | (year) |  |
| Revenues | 39466 | 34750 | $\ldots$ |

${ }^{1} 2010$ and 2012 have been updated to 1 H figures compared to last year. ${ }^{2}$ Including fixed network IP Source: Danish Energy Agenvy, www.ens.dk/en telephony subscriptions ${ }^{3}$ Include GSM-, UMTS-, CDMA2000-subscriptions, mobile broadband and active GSM- og UMTS-prepaid cards. A prepaid card is active, if there within the last three months was incoming or outgoing traffic or reloads of the prepaid card. ${ }^{4}$ Cover the following subscriptions with a marketed/theoretical downstream capacity of a minimum of 256 kbit/s: Standard mobile subscriptions used for Internet data traffic, supplementary data subscriptions for mobile subscriptions and dedicated data subscriptions. ${ }^{5}$ Including traffic from fixed network IP telephony.

| Table 153 | Expenses for Research \& Development (R\&D) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2009 | 2010 | 2011 | 2012 | 2013 | 2014* |
|  | DKK mio. in 2014-prices |  |  |  |  |  |
| Total R\&D expenses | 56502 | 55402 | 57086 | 57708 | 57769 | 58661 |
| The public sector | 17073 | 18262 | 18996 | 19868 | 21177 | 22396 |
| The private sector | 39430 | 37140 | 38089 | 37841 | 36592 | 36265 |
| DKK mio. in current prices |  |  |  |  |  |  |
| Total R\&D expenses | 52611 | 52826 | 54383 | 56495 | 57321 | 58661 |
| The public sector | 15897 | 17413 | 18097 | 19450 | 21013 | 22396 |
| The private sector | 36714 | 35413 | 36286 | 37045 | 36308 | 36265 |
| - per cent |  |  |  |  |  |  |
| R\&D-expenses in per cent of GDP | 3.07 | 2.94 | 2.97 | 3.00 | 3.01 | 3.02 |
| The public sector | 0.93 | 0.97 | 0.99 | 1.03 | 1.10 | 1.15 |
| The private sector | 2.14 | 1.97 | 1.98 | 1.97 | 1.91 | 1.87 |


[^0]:    ${ }^{1}$ Higher preparatory examination. ${ }^{2}$ Higher commercial examination. ${ }^{3}$ Higher technical examination.
    ${ }^{4}$ International Standard Classification of Education. ${ }^{5}$ Enrolled 2014.

[^1]:    Source: OECD, Education at a glance 2015.

[^2]:    ${ }^{1}$ The newest number of students is equal to the old number of students plus the
    entrance of students minus those who either graduates or leaves without examination.

[^3]:    ${ }^{1}$ Includes only courses which are publicly financed and supervised.

[^4]:    ${ }^{1}$ All enterprises with at least 10 employees.

