

**Documentation of statistics for  
Vocational Education 2019**

## 1 Introduction

These statistics covers vocational education activity in Denmark. A vocational education is a youth education which gives the student a vocational qualification. Vocational education statistics is in its current form comparable since 2005 and is part of the overall Student Register, which contains information on all students and students in ordinary education in Denmark.

## 2 Statistical presentation

These statistics contains yearly estimates of on the activity on vocational educations in Denmark. This includes the number of entrants, the number of completed and the number of active students. The statistics are divided by education and enrolment type, and the students' age, sex, ancestry and national origin.

### 2.1 Data description

The statistics about vocational education shows the number of students on a vocational education in Denmark. The statistics are a part of the Student Register and is publicized yearly as a part of this. In StatBank Denmark, you can sort by students per 1 October, completed students and new students distributed by educational fields, age, ancestry, national origin, sex, education part and enrolment type (see under "Begynder og definitioner").

### 2.2 Classification system

Statistics Denmark's education classification [DISCED-15](#) is used to define vocational education.

The vocational educations consist of both basic courses and main courses. Before the vocational education reform of 2015 the split between basic courses and main courses in DISCED-15 was clear: Basic courses were under level 29, while main courses were under level 30. With the vocational education reform the basic courses were separated into two: basic course 1 and basic course 2. In DISCED-15, basic course 2 is placed under level 30, because you have to choose a specific vocational education before starting on basic course 2. Therefore, only basic course 1 is now under level 29.

### 2.3 Sector coverage

Not relevant for these statistics.

## 2.4 Statistical concepts and definitions

**Students per 1 October:** Persons enrolled on an education 1 October in the given year, for example 2017.

**Erhvervsuddannelse:** A professional education which gives the student a vocational qualification. A vocational education typically consists of a basic course and a main course, which both varies in content and length. The typical length of a vocational education is 4 years. Examples of vocational educations are bricklayer, carpenter and electrician.

**EUX:** An education where you combine an vocational education with an upper secondary education, which gives you competence to enroll on a higher education.

**Completed:** Persons completing an education in the period between 1 October the year before to 30 September in the given year, for example 1 October 2016 to 30 September 2017.

**Basic course on vocational education:** The first part of a vocational education. The basic course is split into two parts with a duration of half a year each. The first part of the basic course is only for pupils who have completed 9th or 10th form less than a year ago. Other pupils begin directly on the second part of the basic course. Before the vocational education reform of 2015, the basic course was one overall course with a duration of 1 year.

**Main course on vocational education:** The main part of the vocational education which comes after the basic course. On the main course you get the specific qualifications which is needed to carry out the profession of the education.

**Apprenticeship:** Students in an apprenticeship take their basic course as practical work in a firm instead of at a school.

**Practical line:** The student has a practice agreement which covers both basic and main course before beginning the education.

**School practice:** An offer for pupils who cannot find a traineeship. It is practice carried out on the school.

**School line:** The student does not have a practice agreement before beginning the education.

**Educational competence course on vocational education:** Pupils who choose an EUX education in a mercantile subject have an educational competence course with upper secondary subjects between the second part of the basic course and main course. The mercantile subjects are the retail trade education, event coordinator, the finance education, the trade education and the office education.

**Entrants:** Persons beginning their education in the period between 1 October the year before to 30 September in the given year, for example 1 October 2016 to 30 September 2017.

**Enrolment type on vocational education:** Enrolment type shows the combination of practice and school periods the pupil has during the education. For example, students on the practical line begin their education in practice, while students on the school line begin their education at school.

**Year:** In the education statistics a year is defined as the period from 1 October the previous year to 30 September the mentioned year. As an example, 2017 is defined as 1 October 2016 to 30 September 2017.

## **2.5 Statistical unit**

Persons.

## **2.6 Statistical population**

People who is enrolled on a publicly regulated vocational education in Denmark (The Ministry of Education or another ministry has set the rules for the education through a law or an executive order) or on a private vocational education giving access to public grants.

## **2.7 Reference area**

Denmark.

## **2.8 Time coverage**

The current time series in StatBank Denmark covers the time period from 2005 and onwards.

## **2.9 Base period**

Not relevant for these statistics.

## **2.10 Unit of measure**

The measuring unit is the number of persons.

## **2.11 Reference period**

The newest data collection was for the period of 1 October 2018-30 September 2019.

## **2.12 Frequency of dissemination**

Yearly.

## **2.13 Legal acts and other agreements**

Law on Statistics Denmark § 6 and § 8 stk. 3. Regulation (EC) No 452/2008 of the European Parliament and of the Council of 23 April 2008 concerning the production and development of statistics on education and lifelong learning.

## **2.14 Cost and burden**

The respondent burden is minimal. Data are collected from local school-based administrative registers although a few institutions report via spreadsheets.

## **2.15 Comment**

Further information can be found on Statistics Denmark's homepage: [Fulltime education](#) or by contacting Statistics Denmark directly. On the homepage, notes about historic revisions of the statistics can be found.

## **3 Statistical processing**

The data for the statistics are collected yearly in October from the administrative systems of the educational institutions. The collected data are converted into the format used by the Student Register. In cooperation with the National Agency for It and Learning, Statistics Denmark has set guidelines for this conversion, since the conversion depends on the type of student. The data is also validated by error searching at both the macro and micro level, where fluctuations in the number of students across time are controlled for errors and irregularities at the individual level, for example overlap between educations, are corrected.

### **3.1 Source data**

The sources for the statistics are data from the educational institutions' administrative systems.

### **3.2 Frequency of data collection**

The statistics are based on information collected once a year.

### **3.3 Data collection**

From 2019 the main source for the statistics is data from the National Agency of IT and Learning. The National Agency of IT and Learning collects data from institutions offering vocational education and sends a total dataset to Statistics Denmark. In dialogue with the National Agency of IT and Learning, Statistics Denmark have corrected errors and omissions. This has been done through supplemental data from the administrative system EASY-A which some institutions use and data from the administrative system for apprenticeships EASY-P.

Some institutions report through a spreadsheet.

### **3.4 Data validation**

The data validation mainly consists of two types of error searching: macro error searching and micro error searching.

Macro error searching consists in searching after fluctuations on four parameters: Population (students per 1 October), Entrants, Completed, and Discontinuations. It is examined whether there are a larger or smaller number of students in each of the categories compared to earlier years. If there are large fluctuations, further investigation is done to find out whether the development is correct or whether it is an error. In contrast to other fields of education, there is no macro error searching at specific educations on specific institutions. This is because of the complexity of the vocational education field and because the fluctuations on vocational educations generally are larger than on other types of education. The macro error searching is therefore only done for the total number of students on specific educations.

Micro error searching focuses on errors in the data received about specific students. Examples of micro errors could be an invalid education code or the student's start date being after the end date. It is also checked whether the pupils are enrolled on multiple institutions at the same time, since there is not always agreement between the dates provided when the students change institutions. Statistics Denmark corrects the dates or deletes records so the student does not seem to be enrolled on two institutions at the same time.

### **3.5 Data compilation**

The data is converted to the format used in the Student Register. Data from the National Agency of It and Learning has been delivered in a format close to the Student Register. However, some conversion is still necessary, especially because data mainly shows periods in which the student is at school and not out in apprenticeship and these periods therefore need to be combined into one observation. In cooperation with the National Agency for It and Learning, Statistics Denmark has set rules for the conversion of data.

### **3.6 Adjustment**

No corrections of data are made except what has already been described under Data validation and Data compilation.

## **4 Relevance**

The statistics are relevant for public administrators, scientists and other analysts, journalists and citizens etc. as basis for prognoses, analyses and planning purposes in the educational field, but also for example in the labour market field and the integration field. The basic data for the statistics are used as background data for most of the personal statistics at Statistics Denmark, and it is the basis for the tables in StatBank Denmark about education.

#### **4.1 User Needs**

The users are many and varied. The statistics are often used for external tasks ordered at Statistics Denmark by ministries, municipalities, research institutions, non-governmental organizations, private companies, individuals and the press.

The basic data is used in more than 2000 research projects every year where scientists and researchers gain access to the data via Research Services at Statistics Denmark.

The Ministry of Education and the Ministry of Higher Education and Science receives the basic data, which is used for planning purposes, analyses and prognoses etc.

#### **4.2 User Satisfaction**

The users are involved as much as possible. Some users can help by securing data from the educational institutions of a high quality is reported to Statistics Denmark on time and other users can give inspiration for new statistics and analyses. Through user involvement, Statistics Denmark get inspiration to the development of methods and models that can contribute to the continued development and improvement of the statistics. Statistics Denmark also has a contact group for education statistics which meet once a year.

#### **4.3 Data completeness rate**

The statistics fulfill the demands of the regulation as put forward by the EU.

### **5 Accuracy and reliability**

The administrative systems that is the basis for the statistics are used by the institutions for their own daily administration of the pupils and also for the payment of different economic grants. Correct registers are therefore necessary for the economy of the institutions and contributes to an expected high quality of the data source. The vocational education field is a field with many different ways to get an education, which creates more possibilities for incorrect registrations e.g. wrong registrations of the students on the institutions or errors in the conversion to the correct format.

#### **5.1 Overall accuracy**

There are many different types of vocational education, ways to take an vocational education and types of institutions. This means that the risk of errors in the data are increased since the complexity of the vocational education system increases the possibility of errors in the entries in the administrative systems. Moreover, there are different administrative practices between the schools that create discrepancies. Finally, the schools' administrative systems use a different format than the one used in the Student Register. That means that there is a risk that errors arise in the treatment of data at either the National Agency of IT and Learning or Statistics Denmark. Especially for specific groups and educations there is a uncertainty in the statistics. The uncertainty is especially with regards to the latest year, since many errors are corrected by the institutions in the following year.

#### **5.2 Sampling error**

Not relevant for these statistics, since it is a total counting.

### **5.3 Non-sampling error**

Coverage errors can be persons enrolled on a vocational education that is not registered in the statistics. Measurement errors can occur due to the many different parts and ways to obtain a vocational education. Calculation errors can happen when converting to the format used for production of the statistics. When dates overlap for a student, the student usually is registered as finished on the first education on the date where he is registered to begin on the next education.

### **5.4 Quality management**

Statistics Denmark follows the recommendations on organisation and management of quality given in the Code of Practice for European Statistics (CoP) and the implementation guidelines given in the Quality Assurance Framework of the European Statistical System (QAF). A Working Group on Quality and a central quality assurance function have been established to continuously carry through control of products and processes.

### **5.5 Quality assurance**

Statistics Denmark follows the principles in the Code of Practice for European Statistics (CoP) and uses the Quality Assurance Framework of the European Statistical System (QAF) for the implementation of the principles. This involves continuous decentralized and central control of products and processes based on documentation following international standards. The central quality assurance function reports to the Working Group on Quality. Reports include suggestions for improvement that are assessed, decided and subsequently implemented.

### **5.6 Quality assessment**

The strength of the statistics are that data are collected from the institutions' administrative registers, which the institutions use for the administrations of their students. There are however certain challenges with regards to vocational education which makes the quality of the data a bit more uncertain than with other types of education.

Vocational education is complicated. The student needs to be placed on a basic or main course and on a so-called "education road", which shows whether the student begins their education at school or in practical training, which means more possible sources of errors.

In addition, there are often large fluctuations from year to year in this field. That makes it harder to find eventual errors, since large fluctuations not necessarily is an error.

All in all, the data quality in the vocational education field is therefore more uncertain than in other educational fields.

### **5.7 Data revision - policy**

Statistics Denmark revises published figures in accordance with the [Revision Policy for Statistics Denmark](#). The common procedures and principles of the Revision Policy are for some statistics supplemented by a specific revision practice.



## **5.8 Data revision practice**

The institutions have the possibility of updating backwards in time when reporting data. When that happens, data from previous years are revised.

## **6 Timeliness and punctuality**

The statistics are published about 5 months after the reference time which is 1 October. This is a month later than usual, but is due to delays in other areas of the Student Register.

### **6.1 Timeliness and time lag - final results**

The statistics are published approximately 5 months after the reference time which is 1 October.

### **6.2 Punctuality**

The statistics are usually published without delay in accordance with the scheduled date. In 2019 the statistics are published a month late due to delays on other areas of the Student Register.

## **7 Comparability**

The current time series of these statistics goes back to 2005, but statistics on vocational education have been made further back than this. Vocational education reforms can be a challenge when comparing figures over time. Furthermore, it may be difficult to compare the figures internationally, as vocational training is defined differently from country to country.

### **7.1 Comparability - geographical**

The statistics form part of the basis of data in the OECD publication [Education at a Glance](#) with international comparisons of entrance to and graduations from the education system.

The vocational education system varies a lot between different countries. When comparing across countries one should therefore take into account that vocational education can be understood differently. An education which is a vocational education in one country might not be a vocational education in another country.

## 7.2 Comparability over time

The current time series of these statistics goes back to 2005. When comparing over time, it is good to keep in mind that a reform was implemented in 2015.

### Vocational education reform in 2015

For vocational education, the reform in 2015 caused a change in the pattern of entrants. Before the reform there was only one basic course. With the vocational education reform the basic courses were split into two: basic course 1 and basic course 2. In DISCED-15 basic course 2 is classified under the same main level as the main courses in StatBank Denmark, because you need to choose a specific education before starting on basic course 2. Therefore, now only basic course 1 is under basic courses in StatBank Denmark. In addition, basic course 1 is only for students who has left 9th or 10th grade less than a year ago, while other students begin directly on either basic course 2 or the main course. Many students are therefore now never registered under basic courses in StatBank Denmark. It is therefore necessary to remember when comparing numbers before and after the reform that eventual fluctuations might be a cause of the reform.

### Archived tables in the StatBank

The earliest figures on vocational education in the StatBank are from 1991. In addition, there are two time series covering the periods from 1997 to 2006 and from 2005 to 2014 respectively. The break in the time series is due to the municipal reform of 2005 and the fact that data after 2005 is from Statistics Denmark's so-called module data which is not directly comparable with data from before 2005. However, these are not directly comparable with the active tables. Firstly, the archived tables are based on the old educational classification, which is no longer used. Second, the archived tables are based on an older version of the Student Register.

## 7.3 Coherence - cross domain

Since the statistic is publicized together with the statistic about other educational fields in the Student Register, it is possible to compare with statistics for other educational levels.

## 7.4 Coherence - internal

From 2019 most of the data is from the same source, which is the National Agency of IT and Learning's collection of data.

## 8 Accessibility and clarity

Statistics are released yearly in a Danish press release, at the same time as the tables are updated in the StatBank. In the StatBank, these statistics can be found under the subject [Vocational education](#). For further information, see the [homepage of education statistics](#).

### 8.1 Release calendar

The publication date appears in the release calendar. The date is confirmed in the weeks before.

## 8.2 Release calendar access

The Release Calendar can be accessed on our English website: [Release Calendar](#).

## 8.3 User access

Statistics are always published at 8:00 a.m. at the day announced in the release calendar. No one outside of Statistics Denmark can access the statistics before they are published.

## 8.4 News release

These statistics are published yearly in a Danish press release.

## 8.5 Publications

Publications only in Danish.

## 8.6 On-line database

The statistics are published in the StatBank under [Vocational education](#) in the following tables:

- [UDDAKT34](#): Educational activity at upper secondary vocational educations by education, age, ancestry, national origin, sex, status and education part
- [UDDAKT35](#): Educational activity at upper secondary vocational educations by education, age, ancestry, national origin, sex, status and enrolment type

## 8.7 Micro-data access

The different versions of The Student Register are stored in Statistics Denmark's Database PSD. Researchers and other analysts from authorized research institutions, can be granted access to the underlying micro-data by contacting [Research Services](#).

## 8.8 Other

The Student Register forms the basis of data in the publication [Education at a Glance](#) with international comparisons of entrance to and graduations from the education system.

## 8.9 Confidentiality - policy

[Data Confidentiality Policy](#) for Statistics Denmark.

## 8.10 Confidentiality - data treatment

In the tables in StatBank Denmark, the numbers of variables are limited, which eliminates the possibility of identifying individual persons.

## 8.11 Documentation on methodology

For further information see:

- [Documentation of the variables in the Student Register](#)
- [The manual for education statistics](#)

## 8.12 Quality documentation

Results from the quality evaluation of products and selected processes are available in detail for each statistics and in summary reports for the Working Group on Quality.

## 9 Contact

Administratively, the statistic is placed in the Division of Population and Education. The person responsible for the statistic is Nikolaj Kær Schrøder Larsen, tel. +45 3917 3259, e-mail: [nkl@dst.dk](mailto:nkl@dst.dk)

### 9.1 Contact organisation

Statistics Denmark

### 9.2 Contact organisation unit

Population and Education, Social Statistics.

### 9.3 Contact name

Nikolaj Kær Schrøder Larsen

### 9.4 Contact person function

Responsible for the statistics

### 9.5 Contact mail address

Sejrøgade 11, 2100 Copenhagen

### 9.6 Contact email address

[nkl@dst.dk](mailto:nkl@dst.dk)

### 9.7 Contact phone number

+45 39 17 32 59

## **9.8 Contact fax number**

+45 39 17 39 99