



Structures of Education,
Initial Training
and Adult Education
Systems in Europe

DENMARK

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If you wish to have more detailed information on education systems in Europe, we warmly recommend that you consult the EURYBASE database (<http://www.eurydice.org/>) and the CEDEFOP monographs (<http://www.cedefop.gr/>)

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INTRODUCTION

Europe is characterised by a very wide variety of education and training systems. In order that this diversity should be fully appreciated, EURYDICE, the information network on education in Europe and the European Centre for the Development of Vocational Training (CEDEFOP) jointly published *Education and Initial Training Systems in the European Union* for the first time in 1990. This book was updated in 1995 and then again in 1999/2000. Given the number of countries it now covers¹ and the amount of data available, this most recent update has been placed for consultation on the EURYDICE Network website (<http://www.eurydice.org>), instead of being distributed in printed paper form. In this way, it may be accessed by a maximum number of readers and updated on a more regular basis.

Descriptions relating to individual countries in turn include basic information on the administration and structure of their systems of education and initial vocational training at all levels, as well as brief accounts of their higher education and systems for initial and in-service teacher training, and of the status of teachers. EURYDICE and CEDEFOP have also used this latest update to add a chapter on adult education, which is an important topic in relation to the development of lifelong learning in Europe.

As in the previous edition, the information is structured with respect to a common table of contents to facilitate inter-country comparisons while ensuring that special features peculiar to each system are duly emphasised.

The first chapter within each country section is devoted to a short presentation of the country concerned, together with the basic principles governing its education and training, the division of responsibilities and then more specific information (relating to administration, inspection, financing, private schooling and advisory bodies). The major reforms of education systems are also considered.

The other chapters deal in turn with pre-primary education, compulsory and post-compulsory education (general, technical and vocational), the initial vocational training of young people and higher education. Here also, the way these chapters are structured depends on each national context. Where pre-primary education is not in reality separate from primary education, or where compulsory education spans different levels, no artificial division has been created. In the case of all countries, a brief description of the aims and structure of the level of education concerned is followed by further headings devoted to the curriculum, assessment, teachers and statistics.

Initial vocational training is the subject of a chapter in its own right, as it is generally provided outside the ordinary education system, whether as part of schemes for apprenticeship, the special training of young people or vocational integration. This is followed by a chapter on higher education, in which a summary description is supplemented by sections on admission, fees, the academic year, courses, qualifications and assessment.

As indicated above, this latest updating also provides for the first time a general description of the way formal systems of general education and vocational training for adults are organised. The legislative framework and financing of this kind of education are also covered.

The situation regarding teachers is dealt with in a specific section for each level of education discussed. Also provided are statistics on the number of pupils, students, teachers and educational institutions and, where figures are available, on pupil or student/teacher ratios,

¹ The European countries taking part in the Community Programme in Education, Socrates.

attendance and attainment rates or, yet again, on the choice of branches of study or areas of specialisation.

The description for each country is preceded by a diagram of its education system with explanatory notes. Here again, the way the diagrams are presented has, as far as possible, been standardised so that common – and differing – features of the various systems can be more easily identified and compared.

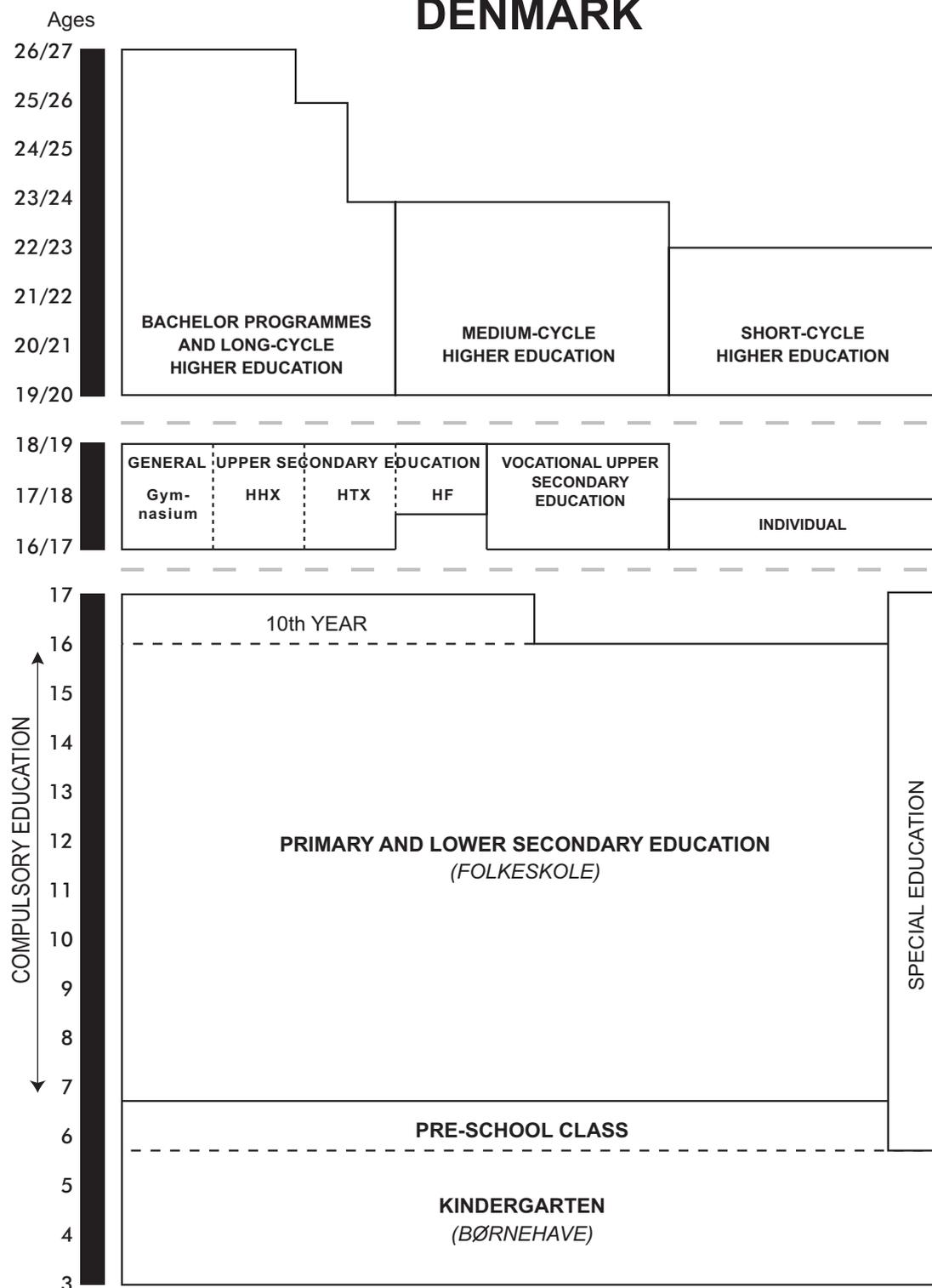
The National Units in the EURYDICE Network have drafted the descriptions for their countries, each using the same proposed outline of content as a common framework. The information on initial vocational training and on adult education has been prepared in close collaboration with members of the documentary information network of CEDEFOP (in the case of the European Union and EFTA/EEA countries) and the National Observatories of the European Training Foundation – ETF (as regards the ten countries of central and eastern Europe). We are extremely grateful to them and to all those who were involved in this project, both in the EURYDICE European Unit in Brussels and at CEDEFOP in Thessaloniki, for their invaluable contribution to this fundamental source of information which is vital to a better understanding of education and training systems in Europe.

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DENMARK



Note: The age is the theoretical minimum age for the formal courses of education, i.e. excluding adult education. After basic school, the pupils are often older due to sabbaticals, waiting time, change of study programme etc. The arrows illustrate general connections between basic school, upper secondary and higher education but not all actual transitions. Moreover, see section 2.1

1. RESPONSIBILITIES AND ADMINISTRATION

1.1 Background

During the Viking Age and the Middle Ages, Denmark was an expansive power which reached its height in 1397, when the so-called 'Kalmar Union' united Denmark, Norway and Sweden with Finland. The Swedes broke out in the beginning of the 16th century, and over the next two centuries, frequent Danish-Swedish wars were fought for the command of the Baltic Sea region. Denmark finally lost the struggle and its old eastern provinces of *Scania*, *Blekinge* and *Halland* (now southern Sweden). In 1814, it also lost Norway as one of the costs of its alliance with Napoleon. After a war in 1864, Denmark lost *Schleswig-Holstein* to Prussia. After World War I and a referendum in 1920, the northern part of *Schleswig*, however, came back to Denmark. The outcome of this historical development is a country with a very homogeneous population – apart from a small German minority and relatively few immigrants compared with other Western-European countries.

Denmark covers a total area of 43,000 square kilometres, and has a population of around 5 million. The Kingdom of Denmark also comprises the two self-governing territories: the *Faroe Islands* in the Atlantic and *Greenland*.

Denmark is a constitutional monarchy. Legislative power lies with the Queen and Parliament; executive power lies with the Queen through the ministries (central administration). The electoral system is based on proportional representation, which has normally resulted in coalition or minority governments. After the last General Election in 1998, 10 political parties are represented in Parliament. The present government, which came into place in March 1998, is a two-party government based on the Social Democratic Party and the Social Liberal Party.

Local government is exercised through the 14 counties (*amter*) and the 275 municipalities (*kommuner*).

The Evangelical Lutheran Church (the *Folkekirke*) is the official church.

The main employment sectors are the public and personal services sector (35.3%), wholesale & retail, hotels and restaurants (18.9%), the industrial sector (17.3%), the financial sector (11.1%), transport, post and telecommunications (6.6%), building and construction (6.1%), agriculture, fishing and quarrying (4.1%) and energy and water supply (0.6%) – (1998).

In 1998, the unemployment rate was 6.6%.

1.2 Basis of the education system: principles - legislation

The Danish Constitution states that all children of compulsory education age have a right to free education in the *Folkeskole*.

A leading principle of the Danish education system has always been freedom of choice of education. Whilst the State provides educational opportunities for all, people are free to choose alternative kinds of education, whether it be for ideological, political, educational or religious reasons.

There have been a number of reforms of the various components of the education system in the past 20 years. The reforms of the *Folkeskole* (primary and lower secondary school) dating back to the beginning of the 1990s included the introduction of school boards (*skolebestyrelser*) with a majority of parent members, differentiated teaching, experiments with early foreign language teaching etc. Around the same time, there was a reform of the *Gymnasium* (general upper secondary school), whereby the former division of the two lines of study into three branches was replaced by a more flexible system. Now, each of the lines of study has a core curriculum of obligatory subjects and a number of optional subjects which can be taken at two levels. Also the vocational education and training system has been significantly reformed, on the one hand by the 1989 Act, under which

the previous approx. 300 programmes were reduced to 80. A new reform, which will come into effect on 1 January 2001, aims to reduce the number of access routes into technical vocational education and training to 6 compared to the 80 that exist today. Higher education has, among other things, seen a major reform of the administration of the universities as well as the establishment of a new study structure.

The main target of all these reforms has been to create better coherence and transparency in the education system and to devolve more decision-making power to the educational institutions.

The more important areas of education are regulated by law. Generally, the Parliament (*Folketing*) formulates the aims of the various types of education, but there is a considerable variation in the degree to which the legislature regulates the individual types of education.

In legislative and administrative terms, the central bodies and institutions play a very significant role. Most of the important fields of Danish education and training and related issues are regulated by laws adopted by the *Folketing* (Parliament). These laws set the overall targets and define a general framework for the different types and levels of education and training.

Through the annual appropriation act (*Finansloven*), the Parliament determines how state funds are to be distributed between the various types of education.

1.3 Distribution of responsibilities for the organisation and administration of the education and training system

Central level

Within the framework of legislation, the main responsibility for education lies with the Ministry of Education. It controls and directs the education system in a number of ways. Also other ministries have educational responsibilities: the Ministry of Social Affairs is responsible for pre-primary education (nurseries, kindergartens etc. until the pre-primary class); higher education institutions offering aesthetic study programmes: music, creative art, architecture etc. are under the responsibility of

the Ministry of Culture, whereas labour market training and maritime education are under the responsibility of the Ministry of Labour and the Ministry of Business and Industry, respectively.

Responsibility for education and training in Denmark is shared between central state authorities, the counties, the municipalities, private bodies and individuals, and the boards and heads of the individual education and training institutions. The division of responsibility differs according to the type of education or training institution and the level of education and training.

Pre-primary institutions are under the responsibility of the Ministry of Social Affairs and are run by the municipalities or independent or private bodies. Municipalities (*kommuner*) are responsible for schools providing primary and lower secondary education (the *Folkeskole*); around 10% are private schools, which are run by their own respective boards of governors. Counties are generally responsible for the majority of the Gymnasiums (general upper secondary schools) and institutions offering courses leading to the *højere forberedelseseksamen* (higher preparatory examination - HF). County and municipal councils run the schools in conjunction with the school board of the individual school.

The Ministry of Education cooperates with the social partners with regard to vocational education and training. The vocational colleges are organised as independent, self-governing institutions (technical colleges, business colleges and agricultural colleges). The Ministry of Labour is responsible for short labour market courses (adult vocational training).

The majority of the non-university level higher education institutions are organised as independent, self-governing institutions, but they are all funded by the State. The vast majority of universities and other institutions of higher education are run by the State. The Ministry of Cultural Affairs is responsible for higher education offered by the Royal School of Fine Arts, the schools of architecture, the academies of music and the schools of librarianship.

The Ministry of Education controls and directs the education and training system through a variety of instruments and measures:

- by issuing acts, orders and circulars, which lay down the targets and framework for the education and training system and are binding on the education/training institutions;
- by issuing guidelines, which have to be considered without being binding;

- by settling certain educational disputes;
- by general supervision and other means, such as the approval of curricula in certain sectors of the system, the general control of final examinations and the appointment of external examiners;
- by allocating public funds on an annual basis to the various types of education and training institutions (within the framework fixed by the legislation).

At *Folkeskole* level, the Ministry of Education lays down regulations pertaining to the overall aims of the teaching in each subject and topic and issues guidelines for the distribution of lessons and establishes rules for the examinations, which are binding for all schools. The written examination papers are also issued from central level.

The central administration of the *Gymnasium* and HF-courses is more extensive and detailed than that of the *Folkeskole*. The Ministry of Education is responsible for the supervision of teaching and examinations. It issues regulations on the aims and content of the curriculum and examinations, sets the written examination questions and approves new subjects.

Vocational education and training programmes (technical and business colleges) are administered in close co-operation between the Ministry of Education and the social partners. With the reform, that came into effect in 1991, the detailed regulatory management that had previously been exercised by the Ministry was replaced by target and framework management exercised by the Ministry of Education and the social partners with greater influence given to advisory bodies and detailed decisions decentralised to school level. The Ministry approves new types of training and prepares regulations concerning training already offered at the recommendation of the Council for Vocational Education, an advisory body. The Minister has competence to make binding rulings, but is required to consider the Council's recommendations. The social partners play an important role within the area of vocational education and training. New legislation and changes or innovations within the area are made in close co-operation with the social partners. They are responsible for modernising training schemes and for the practical work experience parts of the programmes. The structure and content of programmes, the allocation of time between school instruction and practical training, and assessment are decided by the Ministry of Education and the social partners within approximately 80 sector-

based trade committees. The important role of the social partners ensures that labour market approval of the education and training programmes is guaranteed all over the country by both sides of industry.

Higher education is also administered at central level. Universities and other research-based higher education institutions are subject to the same Parliamentary Act, which empowers the Minister to lay down regulations on admission, the content of programmes and the awarding of degrees. Corresponding framework regulations are found in the acts pertaining to the engineering colleges, the colleges of education and other non-university higher education institutions.

The university sector institutions have a high degree of autonomy with regard to the content and organisation of programmes; other higher education institutions have less.

County and municipal level

The counties and municipalities have publicly elected councils.

The municipal council (*kommunalbestyrelse*) has the overall responsibility for the supervision and administration of the municipal schools (pre-primary institutions and the *Folkeskole*). The municipal council decides on the aims and the framework of the activities of the schools and is responsible for the setting up, operation and closing down of schools, the number of schools and their size, the appointment, promotion and dismissal of examiners, head teachers and teaching staff in schools, and the approval of the curricula (including the number of lessons) as proposed by the school boards (*skolebestyrelser*). The municipalities (or the individual schools) decide themselves whether they want to follow the centrally drawn up curriculum guidelines for the individual subjects or draw up their own curricula, which are binding on the teachers. But in so doing they have to comply with the Ministry's order pertaining to the general content of the teaching in the individual subjects.

The county council (*amtsråd*) is responsible for the setting up, operation and closing down of *Gymnasiums* and HF-courses and decides on the appointment of *headteachers*, the appointment and dismissal of teachers and other staff, as well as on student and class numbers. It may delegate its powers regarding for example the number of lessons, classes and students and the optional subjects to be offered to the school board (*skolebestyrelse*).

Institutional level

The day-to-day management of all public and private education and training institutions is in the hands of one person, usually a public servant, in co-operation with a governing body or board. A number of collegiate bodies are established at most institutions, and these take part in their management to a varying degree.

A board (with a majority of parents) must be elected in pre-primary institutions, which influences the running of the institution and the use of its budget. The headteacher has administrative and educational responsibility and takes account of the decisions of the board. Each *Folkeskole* must elect a school board (*skolebestyrelse*) consisting of five or seven parents' representatives, two staff representatives and two pupils' representatives. The school board carries out its activities within the aims and framework laid down by the municipal council and furthermore supervises the activities of the school. It lays down the principles for the activities of the school including the organisation of the teaching, the number of lessons, the optional subjects to be offered, the allocation of pupils to classes, the distribution of the workload of teachers and co-operation between schools and parents. It draws up draft proposals for the curricula to be submitted to the municipal council. The school board also approves the school's budget and teaching materials. The head teacher of the school has administrative and educational responsibility vis-à-vis the school board and the municipal council. In addition, a pedagogical council (*pædagogisk råd*) composed of all the teaching staff must be set up at each school to advise the head teacher. At schools with five or more form levels, the pupils set up a pupils' council (*elevråd*).

The board (*bestyrelse*) of the individual Gymnasium or HF-course is elected according to rules laid down by the individual county council. It must comprise representatives of the county council, the municipal councils of the local area of the school/course, parents and the students and staff of the school/course (the latter must not form the majority). On the recommendation of the *headteacher*, the board decides on the capacity of the school (maximum number of students in each class), the subjects offered and the holiday plan. It also decides on the budget of the school/course within the framework laid down by the county council. The *headteacher* of the school/course is in charge of the day-to-day management and is responsible for the activities of the school/course vis-à-vis

the county council and for teaching and examinations vis-à-vis the Minister of Education. Each Gymnasium and HF-course must also set up a pedagogical council (*pædagogisk råd*) to advise the *headteacher*. This consists of the *headteacher* and all the teachers of the school/course. In addition, a students' council (*elevråd*) must be set up, whose members are elected by and from among the students of the school/course.

For the *Folkeskole* and the Gymnasium or HF-course, there are no state-authorised textbooks or teaching materials. The overall responsibility for which books and materials a school is to use lies with the school board of the individual school; the individual teacher chooses what he/she wants to use. All teachers are free to use the teaching methods of their own choice. The only central rules applying to the choice of teaching materials and methods are that the teaching:

- (for the *Folkeskole*) must live up to the aims of the *Folkeskole* and be varied so that it corresponds to the needs and prerequisites of the individual pupil;

- (for the Gymnasium or HF-course) must comply with the provisions laid down in the curriculum regulations issued by the Ministry.

The vocational colleges (*erhvervsskoler*) are self-governing and – in most cases administered by an appointed board (*bestyrelse*) – an exception being the agricultural colleges, whose boards are elected by a school circle (*skolekreds*). Since the reform at the beginning of the 1990s, detailed planning and execution has been decentralised to the school level. *Headteachers* and school boards have decision-making powers and the local education committees (*uddannelsesudvalg*) play a role in the development of the interaction between school and practical training in the work experience-based/ 'sandwich' course-type vocational programmes. The *headteacher* and the board decide which programmes to offer, administer government grants and are responsible for examinations, teachers, school buildings and organisation.

Colleges offering medium-cycle higher education may be state-run, self-governing or chartered institutions but are all run by an appointed board (*bestyrelse*) and a rector (*rektor*). The individual colleges have various governing bodies – the engineering colleges for instance have an institution council (*institutionsråd*), a subject council (*fagråd*) and staff-student study committees (*studienævn*) - which make recommendations and take

decisions relating to the appointment and dismissal of staff, the organisation of teaching, the curricula and examinations and the distribution of funding.

The rector (*rektor*) has the formal responsibility for a university-level higher education institution and is responsible for its day-to-day running. The institutions are divided into faculties, departments/institutes etc., and a certain number of mainly elected collegiate bodies take part in their administration. The Senate (*Konsistorium*), which is the highest collegiate body of the institution, safeguards the interests of the institution in matters relating to education and research. It establishes guidelines for long-term planning and development and approves the budget. The faculty council (*fakultetsrådet*) establishes guidelines for long-term planning and approves the budget of the faculty. The departmental executive committee (*institutedelsen*) establishes general guidelines for the activities and development of the department and approves its budget. The staff-student study committee (*studienævnet*), which represents a specific study programme or cluster of programmes, approves teaching plans, including the assignment of teaching resources, and draws up proposals for curricula.

1.4 Inspection/supervision/guidance

There is no inspectorate as such in Denmark. Municipal and county authorities are responsible for supervising schools. Each private school has attached to it an inspector chosen by the parents or appointed by the municipality.

Some municipalities have educational support centres with local advisers, book collections and course activities. A similar system exists in all the counties. In addition, the State has a corps of subject advisers. There is one state adviser for each subject of the *Folkeskole*, and the upper secondary programmes also have subject advisers. These advisers cover the whole country. Within the field of vocational education and training, there are state advisers for the different vocational subject-areas and main vocational areas. There is no such system for the universities.

One aspect among others which characterises a Danish subject adviser is that he or she has two jobs, one in the Ministry and one at a school.

They are required to continue to teach for a certain amount of their working time. This gives them a solid first-hand knowledge of the daily teaching and the problems which may occur in the day-to-day life of a school. Their adviser function consists of formulation of content and aims of the teaching, supervision, dissemination of information, advice and development, and they spend a significant part of their working time on the administration of examinations. They may finally also initiate major or minor studies of the teaching in the individual subjects, which may lead to the organisation of in-service training activities. They play a central role in connection with complaints about a teacher's way of teaching, and finally they participate in institutional visits in connection with quality development and evaluations of institutions.

1.5 Financing

The State subsidises all municipal and county institutions and the vast majority of private education and training institutions. The *Folketing* decides how public funds are to be distributed between the various types of education through the annual Appropriations Act (*Finanslov*). The Parliament, with the assistance of the Office of the Auditor General, exercises control of the use of the funds.

Educational institutions run by private bodies receive considerable direct state funding, up to 85% of the individual institution's operational budget. The municipal and county schools are 100% state-funded but do not receive state funding directly. The money is not earmarked by the State. The municipal councils are financially responsible for municipal schools, including the budgetary scope of each school. The school board approves the budget as proposed by the *headteacher*.

The county councils are financially responsible for all educational activities in county institutions (Gymnasiums and HF-courses), including the allocation of grants and the financial framework of each school. It is the county council which fixes the appropriations to be granted for the operation and construction of schools/course establishments and which decides whether students should pay for certain teaching materials themselves (most are free of charge). The school/course board decides on the distribution of the budget of the school/course.

The levels of education financed by the State are funded according to the so-called 'taximeter system' (*taxametersystem*), which is based on the principle that 'the money follows the student'.

The vocational colleges (*erhvervsskoler*) receive the vast majority of their funding from the State. Within an annual framework, the Ministry of Education allocates grants for the administration and management of the colleges as well as for the operation of buildings. The operational grant is made up of a basic grant which is laid down in the annual appropriations acts and a grant allocated on the basis of the number of students per year enrolled in the individual college as well as a rate per student per year. The latter is laid down in the annual appropriations act for large groups of programmes. The Ministry furthermore allocates grants for the college's acquisition and maintenance of premises, buildings and areas on the basis of the number of students enrolled in the school per year as above.

As far as the higher education institutions are concerned, the State allocates grants to the institutions' teaching activities, research activities and other tasks vested in the institution, including administration and buildings. The institution disposes freely of grants, appropriations and income. The grants for the teaching activities are fixed on the basis of rates laid down in the annual appropriations acts and the number of active students per year. In addition to this, the institutions are able to secure extra income through offering special courses and selling know-how.

1.6 Advisory and consultative bodies

According to the Act on the *Folkeskole*, there is to be a *Folkeskole* council (*Folkeskolerådet*). It acts as an adviser to the Minister in all questions relating to the *Folkeskole* and may in this context recommend the initiation of development work and research projects in relation to the *Folkeskole*.

The Council for Vocational Education (*Erhvervsuddannelsesrådet*) is the Ministry's advisory body for questions concerning training

policies and the overall objectives and structure of the vocational education and training system. In order to ensure coherence of policy across the broad range of higher education, five consultative bodies have been established to advise the Minister of Education: the National Advisory Board for the Humanities (*Humanistisk Uddannelsesråd*), the National Advisory Board for Health Education (*Sundhedsuddannelsesrådet*), the National Advisory Board for Natural Sciences (*Naturvidenskabeligt Uddannelsesråd*), the National Advisory Board for Technology (*Teknisk Uddannelsesråd*), and the National Advisory Board for Social Sciences (*Samfundsuddannelsesrådet*). Each board consists of 10 members appointed by the Minister.

1.7 Private schools

Private primary and secondary schools can be set up by any private organisation or group, denominational or non-denominational, as long as they meet certain official criteria. Education must be of a standard comparable to that in public schools, and there must be a certain minimum number of students.

The private and free elementary schools are allocated a grant for operational expenditure per pupil; in principle, this matches the public expenditure per pupil in municipal schools minus school fees paid by parents.

1.8 Statistics

(1998/99)

Number of schools	443
Number of pupils	72,916
Number of teachers, etc	6,595*
Teacher/pupil ratio	9.9
Pupils per class average	17.2

2. PRE-PRIMARY EDUCATION

The right to pre-primary education was explicitly emphasised in the Social Assistance Act of 1976, which demanded that the municipalities create the necessary structures with a view to meeting the needs of families. In 1987, the State delegated the responsibility for the financial administration of the pre-primary institutions to the municipalities. New pre-primary education measures are in the pipeline. Since 1990, it has been possible for associations, parents or businesses to set up institutions subsidised by the municipalities as an alternative to the municipal day care offer.

The municipality lays down the targets and framework of the work of the day care offers for children as an integrated part both of its global offer for children and of the preventive and supportive effort vis-à-vis children, including children with reduced physical or mental functional abilities or with other needs of support.

It is the general objective to create (in co-operation with parents) a framework which is favourable to the development, well-being and independence of children. Measures must ensure children a normal day which at the same time gives them security and challenges, and in which close links with adults can develop.

According to the Act on the *Folkeskole*, it is the aim of the pre-primary class to familiarise children with the daily routines of school life.

The general aims of pre-primary education are to:

- provide care to children and support the individual child's acquisition and development of social and general skills with a view to strengthening the individual child's all-round development and self-esteem and contribute to giving children a good and secure childhood and adolescence.
- provide opportunities of experiences and activities which contribute to stimulating the imagination, creativity and linguistic development of the child as well as to giving the child room to play and learn and room for physical development, interaction and possibility of exploring the surroundings.

- provide children with a possibility of participation in decision-making and of joint responsibility and thus contribute to developing children's independence and skills to participate in engaging communities.
- to give children an understanding of cultural values and of the interaction with nature

Pre-primary education in Denmark is non-compulsory and, apart from the pre-primary class, is detached from the mainstream education system. There are several different types of institutions catering consecutively or alternatively for the 0 to 6/7 year-old age range:

These institutions are all coeducational. The entrance requirement is age-related.

In Denmark, pre-primary education is primarily offered in the following institutions:

- nurseries (*vuggestuer*) for children between 6 months and 3 years of age. Size: 30-60 children;
- kindergartens (*børnehaver*) for children between 3 and 6/7 years of age. Size: 40-80 children;
- integrated institutions (*integreerede institutioner*) for groups with a wider age-group distribution than the two other types. Size: 40/60 - 150 children;
- municipal child-care facilities (*kommunal dagpleje*) established by private individuals taking in a few children. Size: 5-10 children.
- pre-primary classes (*børnehaveklasser*) established at basic schools and catering for children from the age of 5/6. Average size: 18.7 children.

Attendance at pre-primary institutions is optional. In the first three types, certain categories of children, such as those from socially disadvantaged families or families where both parents work, are given priority. The attendance rate varies between 35% for the younger children in nurseries and kindergartens and 90% for the 5- to 6-year-olds attending pre-primary classes.

2.1 Organisation

The administration of the first three types of institutions comes under the Ministry of Social Affairs. Some are established and run by the municipalities, others are independent or private institutions. Privately managed institutions can be placed at the disposal of the municipal authorities which then pay their operating costs. Around two-thirds of institutions are municipal and one-third are private or independent. They are state-subsidised, but parents pay part of the costs (up to 35% according to their income).

The administration of pre-primary classes comes under the Ministry of Education. Premises for these classes are made available in municipal and private schools. Since the beginning of the 1980s, all municipalities have been required to establish such classes. Parents do not pay fees in municipal pre-primary classes. They pay a small fee in private pre-primary classes.

Most institutions managed by the municipality are open from 6.00 or 7.00 a.m. to around 5.00 p.m. Children may attend full-time or part-time.

A pre-primary class must not exceed 22 pupils without being divided or provided with extra assistance. The average size of a child care institution is 40-60 children. There are generally two adult staff members for 10-12 children (between the ages of 6 months and 2 years) or for 20 children (between the ages of 3 and 6 years).

2.2 Curriculum/assessment

Neither kindergartens nor integrated institutions offer actual 'teaching'. According to the Social Service Act, the pre-primary facilities are to form part of the total offer of general and preventive measures for children.() Since 1985, there has been 'teaching' in pre-primary classes, which is defined as 'playing and other activities promoting the child's development'. It is also possible to devote some time to teaching subjects such as Danish and mathematics.

The teaching in the pre-primary classes shall as far as possible be given in the form of play and other developing activities (e.g. they are trained to sit, concentrate, remember, retell, and make drawings of what they have experienced. They are furthermore trained in social processes: to

listen to each other and tell stories; in movements and rhythmic; and they are prepared for learning through play). In the teaching, it is endeavoured to familiarise the children with the daily routines of school life and to acclimatise them to school. Pre-primary classes have three or four 'lessons' a day, five days a week.

Since 1986, it has been possible to teach pre-primary children together with children in the first two classes of the comprehensive *Folkeskole* for a certain number of lessons per week. Pre-primary classes physically belong to the individual *Folkeskole* but have their own premises.

No curriculum guidelines are drawn up for the activities of the pre-primary classes. In principle, the staff of kindergartens have a free choice of programme, methods and materials; however, the municipalities can draw up programmes and define the broad principles of the activities.

There are no formalised rules regarding observation and monitoring. But many educators (early childhood teachers) pre-primary, are interested in working with interaction-based observation. It is common that the institutions hold parent consultations, where the staff of the institutions have talks with the individual children's parents about how their children are progressing in the institution, how they are kept occupied, their strong and weak points etc. and about their social relations to the other children.

2.3 Teachers

The staff of all pre-primary institutions and pre-primary classes include qualified teachers and assistants. The latter may have followed short teacher training courses.

As of 1 January 1992, all pre-primary teachers follow the same educator (*pædagog*) training course (*pædagoguddannelsen*). It is provided in non-university educator training colleges (*pædagogseminarier*) and lasts for 3½ years, of which 15 months are set aside for practical training.

2.4 Statistics

Number of pupils enrolled in pre-primary facilities by age (1999):

0-2-year-olds	110,603
3-5-year-olds	191,655
Pre-primary class (6+ -year-olds)	67,059

Rate of school attendance by age (1999):

0-2-year-olds	55%
3-6-year-olds	90%
6+ -year-olds	98.0%

Number of teachers (1999)

Nurseries	7,706
Kindergartens	23,712
Integrated institutions	24,852
Pre-primary classes	3,500 (approx.)

Number of institutions by type:

Nurseries	577 institution (1999)
Kindergartens	2,584 institutions (1999)
Integrated institutions	1,745 institutions (1999)
Pre-primary classes	3,054 classes* (1995/96)

* There is no information as to the number of schools offering pre-primary classes.

Average number of pupils per group/class:

Nurseries	10-11 children per group
Kindergartens	20-22 children per group
Integrated institutions	16-18 children per group
Pre-primary classes	19.7 pupils (1997/98)

3. COMPULSORY EDUCATION AND TRAINING (BASIC SCHOOL)

According to the Act on the *Folkeskole*, there are 9 years of full-time compulsory education (*undervisningspligt*) in Denmark - for children between the ages of 7 and 16 years. This education mainly takes place in municipal schools (90%); it is also provided in private schools (10%). Following the 9th year of the *Folkeskole*, pupils can opt to stay on in the 10th year. The Danish education system does not differentiate between primary and lower secondary education.

Primary and lower secondary education

Education, not schooling, is compulsory. Parents have a choice between the municipal school (the *Folkeskole*) and a private elementary school and, in principle, educating the child at home. This is the result of historical conflicts between parents, State and Church. After the Reformation in 1536, teaching was primarily the Church's task. For reasons both ideological and practical, the State's interest in children's education grew in the 18th century, and legislation was passed in 1739 providing for the establishment of schools in country parishes for

all children from the age of 5 or 6. Nevertheless, the creation of the general elementary school is normally not reckoned to have taken place until 1814, when the principle of compulsory education from the age of 6 or 7 to 14 was introduced. Until 1958, different rules governed the *Folkeskole* in village and town schools. From the end of the 18th century, there were separate private schools for boys and girls in towns. After the middle of the 19th century, small, private 'free schools' (*friskoler*) arose in rural areas. Rooted in the demands for freedom in church and school advanced by N.F.S. Grundtvig and Christen Kold, the right to provide for a child's education without first having to have the approval of the authorities was established by law in 1855 and given constitutional force in 1915. From 1899, the free schools received State subsidies. Educational freedom has since also been utilised by other educational interests and has led to the establishment of Catholic schools, German minority schools in *Nord Schleswig* after 1920, progressive free schools in the 1960s and onwards, Steiner schools, schools

for immigrants etc. Until 1933, the school was under Church supervision, and until 1975 it was obliged to promote a Christian view of life. Since then, it has only been linked to the demand for comprehensiveness and democracy.

Education in the *Folkeskole* is available to all children, it is co-educational and is provided free of charge (this also applies to books and other teaching materials). Compulsory education commences on 1 August of the calendar year of a child's 7th birthday. A child may at the parents' request start earlier or later. Approximately 90% of all Danish children attend the *Folkeskole*. Fees, usually a relatively modest amount, are charged at private schools.

The *Folkeskole* caters for the 7-16/17-year-olds. The individual school comprises either a pre-primary class and the 1st to 7th years or a pre-primary class and the 1st to 10th years. The 9th year is the last year of compulsory education; the 10th year is optional. Compulsory education cannot be met fully in the first, and pupils have to move school after the 7th year. However, both are organised in the same way. Private schools must comprise at least the 1st to 7th years. The smallest school had 4, the largest 879, and the average school 314 pupils in 1998/99.

According to the Act on the *Folkeskole*, the general aims of the school are as follows:

- to further the pupils' acquisition of knowledge, skills, working methods and ways of expressing themselves and thus contribute to the all-round personal development of the individual pupil.
- to create such opportunities for experience, industry and absorption that the pupils develop awareness, imagination and an urge to learn, so that they acquire confidence in their own possibilities and a background for forming independent judgements and for taking personal action.
- to familiarise the pupils with Danish culture and contribute to their understanding of other cultures and of man's interaction with nature; and
- to prepare pupils for active participation, joint responsibility, rights and duties in a society based on freedom and democracy. The teaching of the school and its daily life must therefore build on intellectual freedom, equality and democracy.

Two other types of schools cater for 14- to 18-year-olds after completion of seven years in the *Folkeskole*: public or private youth schools under the responsibility of the municipal

authority; and private boarding schools (*efferskoler*), approved and supervised by the Ministry of Education.

3.1 Organisation of the school

The school year begins around 15 August and ends around 20 June, and there are 200 school days per year. Teaching takes place five days a week, Monday to Friday, usually from 8.00 a.m. until 2.00 or 3.00 p.m., with a short lunch break (around half-an-hour).

The number of weekly lessons is fixed according to the age of the children and may vary between 20 weekly lessons for the youngest children and 28 for the final classes of the *Folkeskole*. One lesson lasts 45 minutes. Class time varies from five to eight hours per day, depending on the age of the child.

Pupils are grouped by age. In principle, *Folkeskole* education is comprehensive, and pupils remain together as a class throughout their entire school career.

A different teacher teaches each subject. The team of teachers may change each year, but generally follows the same class for several years. As far as organisation allows, at least one main teacher remains with the same group of pupils for their entire school career.

The schools and teachers are free to choose the textbooks themselves.

3.2 Curriculum

With regard to the planning of curricula and teaching methods, the individual school and local authorities have a high degree of autonomy. Although Parliament (*Folketing*) lays down the general aims of the *Folkeskole* and the Minister of Education sets out the objectives for the individual subjects, it is up to the local education authorities and the individual schools to decide how these aims and objectives are to be achieved.

According to the Act in force, the curriculum includes: compulsory subjects which the individual school must offer; compulsory subjects which the individual school may offer; non-compulsory subjects which the individual

school must offer; and non-compulsory subjects which the individual school may offer.

During the first two years, Danish, arithmetic/mathematics, science, physical education and sport, Christian studies, creative art, and music constitute a common compulsory curriculum.

Danish is compulsory in the 1st to 9th forms, English in the 4th to 9th forms, Christian studies from the 1st to 6th forms and 8th to 9th forms, social studies in the 9th form, history in the 3rd to 8th forms, PE and sport in the 1st to 9th forms, music in the 1st to 6th forms, art from 1st to 5th forms, mathematics from the 1st to 9th forms, science from the 1st to 6th forms, geography and biology in the 7th and 8th forms, and physics/chemistry in the 7th to 9th forms. Textile design, woodwork and home economics are compulsory for one year or more between the 4th and 7th forms according to local decisions. The pupils must be offered German or French from the 7th to 9th forms. The pupils may choose from among a wide range of optional subjects in the 8th to 9th forms.

During the entire course of schooling, the instruction offered in the *Folkeskole* must include the following obligatory topics, which, however, do not appear as separate subjects in the timetable: traffic safety; health and sex education and family knowledge; and educational, vocational and labour market orientation. The latter includes such activities as information and discussions on career options, study visits and short work placements in firms, presentations by representatives of the world of work, visits to training centres and other types of schools, etc. These activities are carried out in close co-operation with the local community. The individual school has an educational counsellor who acts as a counsellor to the teachers, advises pupils and parents and takes up contacts with businesses and educational institutions.

From the 8th form onwards, there are also a number of practical (optional) subjects (word processing, technology, electronic data processing, media, art, photography, drama, film knowledge, music, textile design, wood/metalwork, home economics, engine knowledge, vocational studies etc.), which schools may offer as optional subjects.

Apart from the optional subjects, the same subjects are taught at the same level to all pupils. Although for the most of the time the class is taught together, there must be variation in teaching and working methods. This is a

prerequisite, if the pupils are to be able to work in their own individual ways. Groupwork and interdisciplinary project work – also cutting across classes – is customary. This provides pupils with challenges, confidence in their own abilities, and it develops their imagination and desire to learn. They also learn to co-operate and to respect each other's differences. Both subject-specific and interdisciplinary teaching require close co-operation between teachers on the organisation of the teaching of the class. It is also necessary for the teachers to be able to discuss the individual pupils' needs and capabilities. At the upper form levels, some of the teaching may be taken outside the school, taking place, for instance, at technical or business colleges or in companies.

3.3 Assessment/certification/guidance

The assessment system also reflects the liberal philosophy of the *Folkeskole*. According to the present act from 1995, the pupil and the teacher must work together on assessing the benefit of the teaching and in setting new objectives for the work of each pupil and of the class. The school is in regular contact with parents to inform them of their children's progress and personal development. The pupils are marked according to the 13-point marking scale in the leaving examination subjects in the 8th to 10th form levels. And written assessment of effort and attainment in subjects other than examination subjects may be given, if the pupil so wishes and may also be indicated in the leaving certificate.

Pupils move up from one class to the next automatically. When they leave school, all pupils receive a leaving certificate indicating the subjects taken, the latest marks for the year's work and the examination results, if any.

Participation in the leaving examinations is optional for pupils, who may take an examination in any or all of the subjects offered, namely Danish (oral and written), mathematics (oral and written), English (oral), German/French (oral) and physics/chemistry (oral). After the 10th form, the advanced leaving examination can be taken in Danish (oral and written), mathematics (oral and written), English (oral and written), German/French (oral and written) and physics/chemistry (oral). Marks are

again given from 0 to 13, but there is no minimum pass mark.

Written examinations are standardised; they are drawn up and marked by external examiners appointed by the Ministry of Education. Oral examinations are administered by the subject teacher in the presence of a teacher from another school.

The Leaving Examination is taken by 90-95% of 16-year-olds.

Following the 9th year of the *Folkeskole*, those pupils who do not opt to stay on in the 10th year can either go on to general upper secondary education or to initial vocational training (see below). Pupils who stay on in the 10th year can go on to general upper secondary education or initial vocational training after that year or they can go on to the higher preparatory examination course (HF). A few per cent leave the education system altogether after the 9th or 10th year.

All pupils, who have received the relevant teaching and passed the prescribed examinations, can continue in an upper secondary programme more or less of their own choice.

Access is however not totally free to the general upper secondary programmes. If a school finds that the pupil and his or her parents do not take the guidance provided serious, and that there is a risk that the pupil cannot meet the requirements of the general upper secondary programmes, the pupil may be recommended to sit for an admission test to one of the general upper secondary programmes.

The guidance in the *Folkeskole* is increased at the same time with a view to contributing to a better distribution of the pupils between the different upper secondary programmes.

For pupils, who have difficulties in finding out what they want to do upon completion of compulsory schooling, there is the voluntary 10th form, and there is also a possibility of completing the last forms of the *Folkeskole* at a continuation school (*efterskole*); or to attend a youth school (*ungdomsskole*).

During the entire course of schooling, the instruction offered at the *Folkeskole* must include the topic of educational, vocational and labour market orientation. The latter includes such activities as information and discussions on career options, study visits and short work placements in firms, presentations by representatives of the world of work, visits to training centres and other types of schools, etc. These activities are carried out in close co-operation with the local community. The

individual school has an educational counsellor who acts as a counsellor to the teachers, advises pupils and parents and takes up contacts with business and educational institutions.

3.4 Teachers

In order to be employed as teacher in the Danish *Folkeskole*, a candidate must hold a diploma from one of the colleges of education (*seminarier*). Since 1993, all new teachers in the *Folkeskole* have been employed on a group contract basis (i.e. they are no longer civil servants). They are assigned to the teaching of one or more given subjects.

Folkeskole teachers are trained for four years. Until 1998, they were trained to teach all form levels and, in principle, all subjects, and they received training in all subjects, but specialised in two. The training included a total of 16 weeks' teaching practice. A new act with effect from July 1998 stipulates that future teachers are to specialise in four main subjects, and that teaching practice will be of 24 weeks' duration. In principle, teachers are not obliged to follow in-service training, this being a local decision.

3.5 Statistics

1998/99

<i>Folkeskole</i> (including pre-primary classes and 10th year)	
Pupils	541,202
Teachers	45,847
Schools	1,715

The teacher/pupil ratio is 1:10.5 and the average number of pupils per class is 18.9.

Private schools	
Pupils	72,916
Teachers	6,595 (estimate)
Schools	443

Around 50% of children continue with the non-compulsory 10th year. Of those who leave the basic school after the 9th year, 53% move on to general upper secondary education and 41% go on to vocational upper secondary education. 36% of those moving on to general upper

secondary education opt for the Gymnasium and HF, and 14% opt for HHX and HTX.

4. POST-COMPULSORY SECONDARY EDUCATION

Post-compulsory secondary education (general upper secondary education) can be divided into:

The general upper secondary education of the Gymnasium leading to the *studentereksamen* (upper secondary school leaving examination),

The general upper secondary education of the *Højere Forberedelseskursus/HF-kursus* (Higher Preparatory Examination courses) leading to the *højere forberedelseksamen* (higher preparatory examination - HF),

The vocationally oriented general upper secondary education of the *handelssgymnasium/handelsskole* (business college) leading to the *højere handelseksamen* (the higher commercial examination - HHX), and

The vocationally oriented general upper secondary education of the *tekniske gymnasium/teknisk skole* (technical college) leading to the *højere teknisk eksamen* (the higher technical examination – HTX).

The general aim of all these courses is to prepare for admission to higher education. The Gymnasiums are separate, independent institutions. The HF-programme is mainly offered by independent HF-institutions or is attached to a Gymnasium or in a few cases a college of education. The HHX- and HTX-courses are offered at business colleges and technical colleges, respectively, which also offer initial vocational training and short-cycle higher education. The school boards of the individual types of institutions have representatives from the local community. In the case of the latter two, the social partners are also represented.

It is characteristic of all these programmes, that they cater for the 16/17-19-year-olds, that they are coeducational, that attendance is compulsory, and that the education is free of charge (although a small fee is paid by participants in the single-subject HF-courses.)

There are approx. 140 institutions offering the Gymnasium-programme. The smallest Gymnasium has 76 students, the biggest 760 (2000).

There are approx. 90 institutions offering full-time courses leading to the HF-examination. The smallest HF-course has 31 students, the biggest 392 students (1998).

4A Non-vocationally-oriented general upper secondary education

Gymnasium

The Gymnasium has its origin in the cathedral and monastery schools established by the Catholic Church in the early Middle Ages, and 7 of the schools established in the 12th and 13 centuries still exist today. The medieval schools had - broadly speaking - only one purpose: to educate the servants of the Catholic Church.

This educational base was maintained nearly unchanged until 1809, when the old 'Clergyman's School' was transformed in accordance with the spirit of the time into a humanistic 'Civil Servant's School'

In 1871, the scientific and technical development of the 19th century led to a division of the education into a languages and a mathematics/science line. A division which still is the backbone of the structure of the Gymnasium today. In 1903, Latin and Greek were replaced by English, German and French as the main subjects of the languages line. A

According to the latest reform, the division of each of the two lines into three branches has however been replaced by a more flexible system, where each of the lines has a core curriculum of compulsory subjects and a number of optional subjects which can be taken at two levels.

4A.1 Organisation of the school

Gymnasiums are separate institutions which (with a few exceptions) offer education at post-compulsory level only. The schools provide a 3-year programme, normally for students between 16 and 19 years of age, leading to the *Studentereksamen* (upper secondary school leaving examination) which qualifies students for university entrance. They are intended for academically able students aiming to enter higher education.

The vast majority of *Gymnasiums* are run and funded by the counties. However, there are a number of private *Gymnasiums*, which are attended by approximately 4% of students. Education at the public *Gymnasiums* is free of charge; a small fee is paid at the private *Gymnasiums*. The Act on the *Gymnasium* etc. lays down that the county council (*amtsrådet*) shall allocate grants for the transport between home and school of students enrolled in youth education.

The *Gymnasium* lends textbooks to students. Other teaching materials may be purchased.

An alternative to the *Gymnasium* is the adult upper secondary level course (*studenterkursus*) which is a 2-year course for students who have completed the 10th year of the *Folkeskole*, in day and evening classes. There are the same lines, levels and subjects as in the *Gymnasium*.

Students are admitted to a *Gymnasium* of their own choice (usually the one closest to their home), provided they have completed the 9th year. Provided the school has enough capacity, applicants must be admitted to the (public) school of their first choice. If the school does not have the capacity, some applicants will be transferred to the school of their second choice. *Gymnasiums* are coeducational.

The school year lasts 199 days, extending from around 15 August to that time in May when examinations start. It is not divided into terms, but there are holidays in October, at Christmas and at Easter, and from mid-June to mid-August. Schools are open 5 days per week from 8.00 a.m. to 4.00 p.m., with a short lunch break, and the individual lesson is of 45 minutes' duration.

Students are grouped according to age and their chosen line of studies and subjects. A different teacher teaches each subject. The team of teachers may change each year, but generally follows the same class for several years.

There are no prescribed textbooks. The school/teacher chooses freely. The subject regulations issued by the Ministry only indicate that the classes are to work with different types of materials, and that EDP (electronic data processing) must form part of the instruction.

4A.2 Curriculum

The structure of the (national) curriculum of the *Gymnasium* was changed by the Reform Act affecting students starting in August 1988. However, teaching is still provided in two lines of studies - the languages line and the mathematics line - as it has been since the 1903 Education Act. In 1997/98, 52.7% of the girls and 24.9% of the boys (totalling 41.6%) chose the language line.

The two lines have a common core of compulsory subjects as well as subjects that are distinctive to each line. Some of the optional subjects are available at two levels: intermediate level and high level. A core of basic subjects must be offered at all schools; optional subjects may vary from school to school. At least two of the subjects studied by a student must be at the high level, and all students must write a major written assignment.

The core curriculum in both lines includes Danish, English, history and civics, biology, music, geography, visual arts, religious education, classical studies and physical education. Compulsory subjects in the languages line are: continuation language (French or German), beginner language (French, German, Italian, Japanese, Spanish or Russian), science and Latin. Compulsory subjects in the mathematics line are: mathematics, physics, continuation language (French or German) or beginner language (German, French, Spanish, Italian, Japanese, or Russian) and chemistry.

The optional subjects at high level include a beginner language, biology, English, a continuation language, physics, Greek, chemistry, Latin, mathematics for the mathematics line, mathematics for the languages line, music and social studies.

The optional subjects at intermediate level include astronomy, visual arts, biology, computer studies, design, drama, business economics, film and TV studies, philosophy, physics, geography, Greek, physical education,

chemistry, Latin, mathematics, psychology, social studies and technology.

The Department for General Upper Secondary Education issues general curriculum regulations for all subjects/levels which must be taught, but individual teachers and classes jointly decide on the details (e.g. texts, special studies).

Class instruction is provided the individual subjects. There is project work in certain subjects, which will often be done in groups (groupwork). There are also excursions, periods of practical experience, interdisciplinary project days, assemblies and study groups. Instruction must constitute a whole and therefore must be organised so that the subjects complement each other. Instruction in each class must be co-ordinated to ensure coherence between subjects and a reasonable distribution of the students' workload.

All institutions offering general upper secondary education have a number of educational guidance counsellors appointed locally among teachers who have received special training. A third of their working time is devoted to counselling, career guidance as well as general pastoral care.

At *Gymnasium*, periods of practical experience in a business, institution or other organisation may be included for some subjects and in connection with educational and vocational guidance. The connection between theory and practice is created through thorough preparation and follow-up work. The form and content of such periods of practical experience must ensure that students function in roles other than student roles and that they carry out meaningful and, as far as possible, realistic tasks of a practical nature.

4A.3 Assessment/certification/guidance

The *studentereksamen* comprises examinations in all compulsory subjects, except for physical education, music and visual arts as well as in all optional subjects. All students must sit for 10 end-of-year external examinations. Students sit an examination at the end of the year in which the teaching of a subject ends. At the end of the 3rd year, all students sit a written examination in Danish and in the high level optional subjects. After the 2nd year, all students in the languages

line sit a written examination in English, and students in the mathematics line who have chosen the 2-year mathematics course sit a written examination in mathematics.

For one week of the 3rd year, each student is exempt from lessons to write a major assignment in Danish, history or one of the subjects chosen at high level. The assignment is assessed by the subject teacher and an external examiner appointed by the Ministry. The mark for the major written assignment in the third year counts towards the overall examination result.

The Department of General Upper Secondary Education take written papers and have them marked by two external examiners appointed by the Ministry. Each year, the Ministry decides on the subjects in which students must sit an oral examination. The Department draws up a complete timetable for each school and allocates an external examiner for each subject/class. The mark is decided by the subject teacher and the external examiner.

Students' performance is graded on a 13-point marking scale. Students who pass the *Studentereksamen* receive a certificate (*Bevis for Studentereksamen*) stating the examination marks, the marks for the year's work and the examination average. Students are assessed individually.

General proficiency or term marks are given in subjects for which marks for the year's work are given at the *Studentereksamen*. Term marks must be given twice in the course of the school year and, in the case of subjects, which continue in the following school, year also at the end of the school year. These marks are accompanied by a short statement from the subject teacher on the students' ability and work in the subject.

The headteacher decides on the organisation and extent of oral end-of year examinations after the 1st and 2nd year or any other work of the classes after the end of the teaching and until the summer holidays. A maximum of two oral end-of-year examinations may be replaced by other evaluation forms. In connection with the award of term marks, both in the course and at the end of the school year, the performance of the students is discussed at a teacher assembly meeting with a view to guidance of the individual student.

The headteacher informs the parents, if continuous evaluation gives rise to concern about a student's performance so that the school and parents can co-operate to solve the student's problems. The school and the parents also have contact through parents' meetings and through written announcements of general

proficiency marks, marks for the year's work, testimonies, if any and possible advice from the teachers' assembly. Parents' meetings are held at least once a year and teachers and students participate. At these meetings, parents are informed of the results of the continuous evaluation.

On completion of the *Gymnasium*, students may embark on one of the higher education programmes.

4B Vocationally-oriented general upper secondary education

Higher Preparatory Examination Programme (HF): The HF-programme was introduced in 1967. Originally, the idea was to create a 2-year programme aimed specifically at prospective candidates for teacher training in connection with a reform of the teacher training itself. There was, however, concern that this concept would result in an educational 'cul-de-sac', and the course design was therefore changed into an alternative route to higher education.

The HF is a 2-year programme, and the final examination qualifies students for entrance to higher education.

The formal requirement for admission to the HF-programme is 10 years' school attendance and the Advanced Leaving Examination of the *Folkeskole* in Danish and two of these subjects: mathematics, English and German. The student must also be considered able to follow the instruction satisfactorily and complete the course within the normal period of time by his or her previous school. Otherwise, he or she must have completed basic school at least one year in advance and, on the basis of personal and subject-specific qualifications decided by the headteacher of the receiving institution, be considered able to follow the instruction satisfactorily and complete the course within the normal period of time.

The HHX- and HTX-programmes: In addition to the vocational education and training programmes, technical and business colleges also provide programmes leading to the higher technical examination (*Højere Teknisk Eksamen* - HTX) and the higher commercial examination (*Højere Handelseksamen* - HHX), respectively.

The HHX-programme was established in 1888 on a private initiative at the Niels Brock Business College in Copenhagen with a structure and a range of commercial and general subjects, which in the main can be found in the programme today. In 1972, the HHX was given the status of a university entrance examination in connection with a revision of the content and the introduction of more rigorous admission requirements. In 1995, the HHX-course was changed to an integral 3-year programme similar to that of the *Gymnasium*.

The HTX-programme was established on an experimental basis in 1982. The reason was a desire to contribute to a broader supply of education and training possibilities following the then one-year EFG-basic course (*EFG-basisuddannelse*) and a wish to create a new and relevant route into higher education in the technical area, as fewer and fewer skilled workers continued at the engineering colleges. In 1988, the programme was evaluated and made permanent, and it was placed on an equal footing with the other three university entrance examinations. In 1995, the HTX-course was changed to an integral 3-year programme similar to that of the *Gymnasium*.

Both programmes are entirely school-based and concluded with an examination, which qualifies students both for employment in trade and industry and for admission to higher education. Since the reform in 1995, the duration of both programmes is 3 years.

Although the HHX programmes at the business colleges and the HTX programmes at the technical colleges have several points in common with the other two general upper secondary programmes, they have clearly retained their special profile and are still to some extent aimed at employment in the private sector. The programmes provide access to higher education programmes at universities, business schools and engineering colleges etc.

The social partners exert influence on the HHX- and HTX-programmes; the Council for Vocational Education has appointed separate committees for the HHX and the HTX to advise the Minister of Education on the content and objectives of these programmes.

Admission to the HHX- and HTX-programmes has been changed so that students who are considered able can be admitted directly from the *Folkeskole*. It is possible to change over from the EUD (*erhvervsuddannelser*) to the HTX- and HHX-programmes and vice versa - if the school considers the student to be able to follow the instruction satisfactorily.

4B.1 Organisation of the school

The HF-programme is taught either at an independent HF-institution, at a *Gymnasium* or in a few cases at a college of education as a full two-year course or at a separate institution (adult education centre) on a single-subject basis over several years.

The timetable depends on the subjects chosen by the individual student. Teaching extends from mid-August to that time in May when examinations start, with holidays in October, at Christmas and at Easter and from the end of June to mid-August.

For more information, see 4A.1

4B.2 Curriculum

HF courses: The HF course is composed of a nucleus of common core subjects and three elective subjects which can be freely combined. The common core subjects are: Danish, religious education, history, biology, geography, mathematics, English, French (cont.), German (cont.), social studies, music, physics/chemistry, visual arts and physical education/sport. The optional subjects are: visual arts, biology, computer science, design, drama, English, business economics, film and TV studies, philosophy, French (begin.), French (cont.) physics, geography, physical education and sport, Italian, chemistry, mathematics, music, classical studies, psychology, Russian, social studies, Spanish technical studies, German (beg.), German (cont.), Japanese and Latin. Apart from beginner's languages, the teaching in the optional subjects only takes place in the second year.

The HF subjects are of a level comparable to the *Gymnasium* subjects, but differ somewhat in content. A number of optional subjects are however identical in both types of education. Some of the HF-subjects may be chosen at two levels, and in some subjects there is a possibility of taking the examination at a level corresponding to the high level of the equivalent *Gymnasium*-subject. The following subjects can be taken at high level: biology, English, French, physics, Italian, chemistry, mathematics, music,

Russian, social studies, Spanish, German and Japanese.

The Ministry of Education issues curriculum regulations which lay down the overall aims and content of teaching.

Teaching in each individual class is coordinated with a view to ensuring coherence between subjects and a reasonable distribution of the workload of students. It may be possible to establish workshop instruction with a view to enabling students to work independently or with guidance by a teacher outside normal class/team teaching hours. Lessons may be used for individual or group guidance in subject-specific disciplines, as well as for the strengthening of oral and written skills as well as technical and literary reading skills. Lessons may also be used for introductory courses and workshops.

HHX- and HTX-programmes: In the HHX-programmes, students learn to work in areas with a direct application to business administration and management. Compulsory subjects include: Danish, foreign languages, accountancy, finance, commercial law, data processing, mathematics and economics.

Compulsory subjects in the HTX-programme include: Danish, foreign languages, technology and natural sciences. In addition to its theoretical content, this programme also includes industrial workshop and laboratory practice.

Approximately two-thirds of the programme consists of compulsory subjects, and one-third of optional subjects.

4B.3 Assessment/certification/guidance

HF-courses: A complete higher preparatory examination consists of a cluster of common core subjects, three optional subjects and a major written assignment. Students may choose to take the optional subjects at either intermediate level or high level. An important difference in between this type of examination and that of the *Gymnasium* is that a complete higher preparatory examination requires an oral and/or a written examination in each subject studied.

In addition to written papers and reports, which are handed in on a regular basis in a number of subjects, and a written assignment in Danish

and in history in the first year, the student must write a major assignment on a chosen subject. This is written over one week during which there are no lessons. It is assessed by the teacher and an appointed examiner, and the mark given counts towards the overall examination result.

Students' performance is graded on a 13-point marking scale. Successful students receive a certificate (*Bevis for Højere Forberedelses-eksamen*) indicating their marks for the common core and optional subjects, their mark for the major written assignment and an average mark. For each HF course, there are one or more educational guidance officers who give students educational and vocational guidance. The aim is to give the students information about the higher education system and the labour market. Although the HF-examination qualifies for admission to all higher education programmes, most HF graduates go on to short- or medium-cycle higher education.

HHX- and HTX-programmes: The programmes lead to a final examination.

Each year, the Ministry of Education decides which examinations are to be held. Each student normally takes a minimum of 10 and a maximum of 12 examinations. Examinations can be written, oral or in the form of project work. The assessment is expressed in marks awarded according to the 13-point marking scale.

4C Teachers

In order to gain a permanent teaching post at a Gymnasium, the candidate must have a university degree in one or more of the subjects forming part of the curriculum in general upper secondary education, that is, visual arts, biology, Danish, computer science, design, drama, English, business economics, philosophy, film and media studies, French, physics, geography, Greek, history, physical education and sport, Italian, chemistry, Latin, mathematics, music, natural science, classical studies, religious education, Russian, social studies, Spanish, technical studies, creative art and German. They must also have undergone professional postgraduate teacher training for teachers of the *Gymnasium* and HF (the so-called *pædagogikum*).

The number of *pædagogikum*-places and their distribution on subjects are decided by the Ministry of Education before the beginning of each fiscal year on the basis of an estimate of the need for teachers. This estimate takes its point of departure as reports received from the schools and counties. Approximately 50% of students are admitted in the spring and 50% in the autumn. Unsuccessful applicants may apply again.

The *pædagogikum* consists of two parts. The first part, which is of 5 months' duration, is taken prior to employment, and the second part, which must last approximately 2 months, is undertaken within the first two years of employment.

The first part, the practical *pædagogikum*, in each subject is undertaken over a 5-month period, normally in the same semester. The total number of teaching and observation lessons is approximately 60 for each subject. The teaching practice is done in classes or groups which the candidate is assigned to. The teachers of the practice class act as tutors to the candidate. The second part, the theoretical *pædagogikum*, consists of a general pedagogical course and a subject-specific pedagogical course. The general pedagogical course normally consists of two residential courses of 4 or 5 days' duration. During the *pædagogikum*, the candidate is employed at and paid by the institution where it takes place. On completion of the *pædagogikum*, the Ministry of Education issues a certificate stating that the candidate has passed the practical *pædagogikum* and documentation to the effect that the candidate has passed the written examination in theoretical pedagogy.

Teachers are employed on a group contract basis in accordance with an agreement between the Association of County Councils and the National Union of Upper Secondary School Teachers.

In-service training is not compulsory, but nearly all teachers participate in some form of professional development activity in the course of a school year.

Arrangements regarding teachers are similar to the above for HF-courses.

For arrangements regarding teachers of programmes offered by the vocational colleges (HTX and HHX), see below under Initial Vocational Training.

4D Statistics

1998/99 school year

Gymnasium and HF	
Students*	66.197
Teachers (FTE)*	7,679
Gymnasiums	140
HF-establishment	90

* includes *Studenterkurser*, HF and single-subject courses.

Average class size (1997/98): 24.2 for the Gymnasium and 24.2 for the HF.

Completion rate for Gymnasium and HF: 85.5% (1995).

Average age of a 3rd year student in the Gymnasium (1996): 18.9 and of a 2nd year HF student: 20.3.

Percentage who stay on in the education system: 1995: a total of 79% of the youth year group had a post-compulsory qualification, 25% had a vocational education and training qualification, 39% had a general upper secondary qualification and 15% had both. Of these 79%, 46% went on to higher education.

Most popular optional subjects 1997/98:

Gymnasium
2nd year, Intermediate level:

Mathematics line: 1) chemistry, 2) social studies, 3) physical education and sport, 4) computer science, 5) psychology

Languages line: 1) psychology, 2) social science, 3) visual arts, 4) mathematics, 5) music
2nd year, high level:

Mathematics line: 1) biology, 2) social studies, 3) chemistry, 4) music

Languages line: 1) social studies, 2) music, 3) mathematics, 4) biology, 5) Latin

3rd year, intermediate level:

Mathematics line: 1) physical education and sport, 2) psychology, 3) social studies, 4) business economics, 5) biology

Languages line: 1) psychology, 2) physical education and sport, 3) philosophy, 4) social science, 5) mathematics

3rd year, high level:

Mathematics line: 1) mathematics, 2) English, 3) biology, 4) social studies, 5) physics

Languages line: 1) English, 2) social studies, 3) German, 4) French, 5) Spanish

HF-courses

Optional subjects:

1) Psychology, 2) English, 3) mathematics, 4) physical education and sport, 5) social studies.

For statistics relating to the HHX- and HTX-programmes, see below under Initial Vocational Training (chapter 5).

5. INITIAL/VOCATIONAL TRAINING

5A Organisation

In Denmark, initial vocational training covers a wide range of education and training programmes that aim to train young people for a trade or a profession:

- vocational education and training (*erhvervsuddannelserne* - EUD), which covers commercial and technical education and training provided by business and technical colleges under the Act on Vocational Schools (1991);
- basic social and health service training (*grundlæggende social - og*

sundhedsuddannelser - SOSU) provided by the social and health service schools under the Act on Basic Social and Health Service Training (1996);

- agricultural education and training (*landbrugsuddannelser*) provided by the agricultural colleges under the Act on Agricultural Education and Training (1991); and

maritime training provided by the maritime schools under the Act on Maritime Training and Maritime Engineering (these training programmes are controlled and regulated by the Danish Maritime Authority and will not be described in the following).

Apart from maritime training, all programmes are controlled and regulated by the Ministry of Education. The Ministry of Education manages the programmes within a set of targets and frameworks. This leaves the vocational colleges a relative degree of autonomy, for instance when it comes to drawing up local educational plans in co-operation with the local training committees (see below).

A characteristic feature of the Danish VET-system is that the social partners play an active role in managing vocational education and training in both centralised and decentralised bodies. Within the centralised trade committees, the social partners exert decisive influence on the occupational aspects of training, for instance decisions relating to the duration and structure of the programmes. The local training committees assist the colleges in planning the content of the programmes and adapting them to the needs of local business.

The active involvement of the social partners is to ensure a vocational training system that matches labour market requirements.

Reforms in the 1990s

Reform of vocational education and training has been one of the key features of the educational policy of the 1990s. In 1991, the vocational education and training system was changed substantially. Instead of two parallel vocational education and training systems (apprenticeship training and basic vocational education and training (EFG)), a single uniform system was established. Another central aspect of the 1991 VET-reform was an extensive decentralisation of authority to the colleges, as the role of the Ministry was reduced to laying down the overall targets and frameworks for the content and the economy and the role of the schools was extended to all detailed planning and execution. In 1991/92, social and health service training and agricultural training was reformed. The reform of the former created two completely new training programmes for social and health service helpers and social and health service assistants, respectively.

In 1996, the commercial education and training system was reformed. The structure of the programmes was changed, a single school entry route was created for all commercial programmes, and new pedagogical principles were introduced.

The next EUD-reform is already on its way. In 2001, the whole EUD-system will be changed substantially. Similar to commercial education and training, the structure of technical

education and training will be changed. Instead of the now 85 programmes to choose from among, there will be six broad entries. The main principles behind the reform are individualisation, modulisation, 'responsibility for own learning' and differentiation.

The various programmes will be described in the following. However, as EUD accounts for approximately 60% of all initial vocational training in Denmark, it will be described in more detail.

5A.1 Vocational education and training (EUD)

In Denmark, vocational education and training is provided by approximately 110 colleges distributed on an almost equal number of business and technical colleges, 5 combined colleges with both technical and commercial departments and a number of specialised colleges, e.g. a hairdresser's school, a transport school and a meat trade school. These colleges receive about 41% of a youth year group.

The programmes cater for the 16-19/20-year-olds.

There are now about 85 programmes, with more than 200 different specialisations. All programmes are organised as 'sandwich' training courses in which theoretical and practical education at a vocational college alternates with practical training in a company.

An entire training programme does not generally last longer than 4 years. The duration of the school periods cannot normally exceed 80 weeks. The more detailed structure of programmes, such as the allocation of time between school and in-company training, is determined by the trade committees. It is considered very important that there be coherence between the school periods and the in-company practical training periods.

To be admitted to a vocational education and training programme, students must have completed compulsory education. Admission does not take place on the basis of leaving certificates. There is in principle free admission to the EUD, but it is possible to restrict admission to the programmes in cases where the number of applicants exceeds the labour market's need for graduates within a given specialisation.

There are two routes into vocational education and training (EUD), namely the school-route and the practical training-route. The two admission routes meet at the start of the second school period, after which the students/trainees receive the same education and training. No matter whether the students choose the school route or start with a practical training period in a company, the duration and content of training are the same.

Students who choose the school route may start either with an introductory first school period or directly with the second school period. The first school period is voluntary and lasts between 5 and 40 weeks. At technical colleges, the average duration of the first school period is 20 weeks.

The overall aim of the first school period is to make the students more confident in their choice of education and training, and students are therefore given the possibility to try out various programmes at either a technical college or a business college. During the first school period, students receive intensive individual and collective guidance on work and training possibilities. Workshop instruction occupies a central position and is supplemented by instruction in theoretical subjects.

With the new single access route to business colleges, the students may postpone their choice of commercial programme to the end of the second school period, and consequently fewer students choose to start with the first school period. In 1997, there were 783 students (or 319 full-time equivalents) in the first school period at business colleges compared with 10,941 (or 5,222 full-time equivalents) in technical colleges.

After the first school period, students choose their training programme and continue with the second school period. In technical training, the second school period is of 20 weeks' duration. After the second school period, there are 3 to 6 school periods alternating with practical training in a company.

In commercial training, the second school period is longer (38 weeks), and the students have the possibility of prolonging the second school period so that they spend 76 weeks in school, before they begin their practical training in a company. Students have to decide on a specialisation after 38 weeks in school. This 2+2-model is the most common in commercial training. However, students may choose to begin practical training already after the second school period.

The trainees who choose to enter through the practical training route start with a practical training period of 20 weeks' duration in a company. In order to do so, the students must have a training contract with the company in question.

The school route is the most common access route in vocational education and training. Approximately 85% of all young people admitted to technical and business colleges choose this route. This figure has remained relatively stable since 1994.

Education within the educational institution: The periods at a business or technical college are not aimed solely at imparting technical and vocational competence within a narrow framework. In addition to vocational skills, the vocational education and training programmes are intended to impart general knowledge, to strengthen the students' personal development and to give them an understanding of the structure and development of society. Each school is therefore committed to offering a broad range of optional subjects, to which one-sixth of the total teaching time is allocated.

The principal objective of vocational education and training policy is the broad youth education-character of vocational training, and the training programmes should provide genuine opportunities for further training. It is considered very important that young persons who choose a trade also receive general education which, besides being important for their participation in working life, is also important for other aspects of their life.

In-company training: As already mentioned, the basic structure of vocational education and training is as 'sandwich' courses, in which practical training in a company accounts for about two-thirds of the total duration of the programme.

Practical on-the-job training takes place in one or more companies or public organisations which have been approved as suitable practical training places by the relevant trade committee for the programme concerned, and on the basis of a training contract between the trainee and the company(-ies).

The rules on practical training places make combination agreements possible, where several companies may co-operate on providing a training place. This is done to increase the supply of training places and at the same time ensure that the trainee receives the training needed to complete his or her programme. In some cases, in-company training is combined with workshop training at a college.

The students must have a training contract with a company, before they can begin their in-company training. It is the student's own responsibility to find a practical training place, however the counselling and guidance services of the colleges offer students assistance.

When the trainee has found a training place, a training contract must be concluded between the trainee and the company. The contract covers the whole of the alternating school-business programme: school periods, practical training periods and the final apprenticeship test. The training contract is always in writing, and it must be drawn up on a special form approved by the Minister. Trainees who have not yet become of age must have their parents' consent for them to enter into a training contract.

Vocational schools and companies providing practical work experience are obliged to exchange information which can benefit students' training. The trade committees must ensure that the businesses meet the requirements for the practical training period so that the trainees receive the best possible training.

5A.2 Basic Social and Health Service Training

Basic social and health service training was initiated in 1991. The aim of the training programme is to train staff in the fields of welfare, nursing and care. The programme is regulated by the Act on Basic Social and Health Service Training.

The programme is under the overall responsibility of the Ministry of Education. However, the control of the training programme is decentralised with the county as the 'owner' of the social and health service schools and a board composed of the social partners with the authority to decide on the local training structure and to approve of the principal and the budget of the schools.

Basic social and health service training is provided by 34 social and health service schools.

The basic social and health service training programme is based on a modular training system:

The first year is a 1-year introductory course, a type of bridge-building course between the

Folkeskole and vocational education primarily aimed at students who come directly from the 9th form. The introductory year qualifies the students to continue with basic social and health service training or to continue in the education system in classes with students who have completed the 10th form of the *Folkeskole*.

1-year basic training which qualifies students to work as social and health service helpers. Social and health service helpers are employed in the field of welfare, nursing and care in the primary social and health service sector.

It is possible to continue social and health service training with a 1½-year superstructure course which qualifies for work as social and health service assistants. Social and health service assistants are employed in both the primary and secondary social and health service sectors, and the course also qualifies for education at a higher level within social and health care.

All three types of training consist of practical training and school-based training in a ratio of 2:1.

5A.3 Agricultural Training

Within the agricultural sector, there are some vocational training programmes which are offered by the technical colleges as regular vocational education and training. However, the actual agricultural training does not take place at technical colleges, but at 27 agricultural colleges.

Agricultural training consists of a basic training course and a superstructure course. The duration of the basic training programme is 42 months.

Agricultural training is organised as training alternating between the workplace and the educational institution, and access to the programme is gained either through the school route or the practical training route. The admission requirements are identical to the requirements laid down for the EUD-programmes (see above).

The target group of the basic training programme is the 16-20-year-olds.

5A.4 Other initial vocational training programmes

In addition to the programmes mentioned above, there are a number of training provisions aiming at specific target groups, e.g. vocational basic training (*erhvervsgrunduddannelse* – EGU), production school courses and the youth action programme (*uddannelses- og jobkvalificerende forløb* – UJF) for unemployed people under the age of 25. Both the EGU and the production school courses aim at young people with learning disabilities or other problems which act as an impediment for continuing education and training.

To complete the picture of the Danish initial vocational training system, these three training programmes will be briefly described.

Vocational basic training - EGU

The Act on Vocational Basic Training (*erhvervsgrunduddannelse*) came into force in 1993. The aim of the programme is to offer young people with learning disabilities access to a practical training programme which qualifies for employment.

The programme is organised by the municipalities or the vocational colleges in consultation with the young person concerned, who must be allocated a tutor for the entire duration of the programme.

The EGU is a vocational training programme adapted to the needs of the individual trainee. It mainly comprises practical training in a private company or a public organisation. The programme can last between 1½ and 3 years, including 20 to 40 weeks of school education. The school education consists of modules from various schools and colleges, e.g. vocational colleges.

In relation to the school education, it must be ensured that as many parts of the training as possible can be credited by other training programmes so that the trainee has the opportunity to continue in a EUD-programme of reduced length. If the trainee demonstrates an ability and willingness to carry out a regular vocational education and training programme, he or she can be transferred to this programme.

Production schools

Production schools were established in the 1970s. The Act on Production Schools was revised in 1996. According to the act, production schools can be established at the

initiative of municipal and county authorities. The schools are set up as independent institutions with a board representing regional and local authorities and the social partners. There are 108 production schools in Denmark (1998).

The aim of the production schools is to provide combined education and production programmes which improve the chances of the participants when it comes to receiving employment or qualifying training.

The target group is young people under the age of 25 without previous vocational training, and primarily young people who need to clarify their occupational or educational choice in a practical training programme. The participants at a production school course often have learning disabilities, have dropped out of a 'regular' training programme, or have social problems.

The duration of a production school course is normally 12 months. The participants are, however, free to leave at any time, if they find a practical training place, a job or start on a regular education or training programme.

The main characteristics of the production schools are the flexibility of their curriculum and teaching methods as well as their links with market-oriented activities. Educational activities are built upon the needs arising from practical situations; there are therefore no fixed subjects, but tuition in Danish, social sciences, mathematics and contemporary studies is available in all production schools.

Agriculture, gardening, forestry, fish-farming, textiles, solar panels, carpentry and cabinet-making, and souvenirs are the most common sectors covered by the production schools. They are chosen in cooperation with local industry.

The Youth Action Scheme (UJF - Uddannelses- og Jobkvalificerende Forløb)

'Youth Action' is a new training provision under the Ministry of Education. It is targeted at young unemployed people at the age of 18 to 25 without previous vocational training. The provision was introduced in 1996. The aim of the UJF is partly to improve the participants' chances of employment, partly to motivate and qualify the participants for education and training.

The UJF-courses may contain modules from both initial vocational training programmes and general adult education. In addition to this, the courses include various elements which improve the participants' chances of employment, e.g.

elements which improve the participants' personal qualifications, and elements which motivate for further education and optional elements.

The purpose of including modules from initial vocational training programmes is to give the participants a possibility of credit transfer in case they choose to enter a regular vocational education and training programme.

The teaching is organised in a 'holistic' way so that the participants experience coherence between the school-based education and the work-based training. Approximately 1/3 of the course takes place in a company. It is furthermore a requirement that the UJF-courses are organised in a way which takes the qualifications of the participants into consideration.

The majority of the participants are in their twenties.

5B Education/training institutions

For vocational education and training, education is provided in institutions (business and technical colleges, combined colleges with both technical and commercial departments and specialised colleges) and by work placement in company (see 5.1.1).

Basic social and health service training is provided at social and health service schools (see 5.1.2), agricultural training at agricultural colleges and in the workplace (see 5.1.3). Other training takes place at vocational colleges or production schools, as well as the workplace (see 5.1.4).

5C Financing

Vocational education and training is provided free of charge for the students

Students over 18 years of age, who start a vocational education and training programme with a school period, may apply for a grant and loan from the State Education Grant and Loan Scheme Agency. The student will however receive a salary when he or she starts the practical training period.

Trainees entering through the practical training route receive pay throughout their education and training programme, which is partly subsidised by allocations from a collective employers' levy fund (the AER) intended to cover wage costs during the trainees' school periods.

Students receive their first salary as from the day on which they commence the practical work experience. Salary and conditions are regulated through collective bargaining agreements, the rules of which apply even if neither party to the contract is unionised.

5D Curriculum

Vocational education and training (EUD)

The school part of all vocational education and training programmes comprises four types of practical and theoretical subjects: basic subjects (*grundfag*), area subjects (*områdefag*), special subjects (*specialefag*) and optional subjects (*valgfag*). Basic subjects and area subjects each represent one-third of the course, whereas special subjects and optional subjects each represent one-sixth.

Whilst the schools decide which optional subjects they will offer, the trade committees have decisive influence with regard to basic subjects, area subjects and special subjects.

The basic subjects combine general and vocational aspects. They are meant to provide a broad-based vocational foundation and are therefore normally common for several areas. They are furthermore meant to support the students' personal development, give them an understanding of society and its development, and qualify them for further studies within their vocational field.

The area subjects are particular to the individual course and contribute to giving the students a general and specific vocational qualification.

The special subjects in particular contribute to giving the students a specific vocational qualification.

Optional subjects are of importance for further education and training and for admission to higher education. Electives are offered which take into account the skills needs and employment prospects in the local area of the school.

Basic social and health service training

Education in the educational institution consists of compulsory area subjects and optional single subjects preparatory for an examination, e.g. HF single-subject courses in Danish, foreign languages etc. The compulsory area subjects consist of 5 subjects, each weighting 20% of the compulsory content.

As in other vocational training programmes, it is a major objective to ensure a close interaction between school-based education and work-based training.

5E Assessment/ qualification/guidance

Vocational education and training (EUD)

The work and performance of trainees are assessed, depending on the subject, by oral or written examinations - sometimes with centrally drawn up assignments - or by continuous assessment of the class work by the teacher. Marks are given according to the 13-point marking scale or another scale approved by the Minister.

Assessment and/or examinations are carried out when the school instruction ends, and the school issues certificates if the requirements have been met. When the student has completed in-company training in accordance with the rules on practical work experience, the practical training place issues a certificate to this effect. The Ministry of Education draws up assessment plans for individual training programmes. Examinations are controlled by the Ministry of Education and the relevant trade committees jointly, with shared roles and responsibilities.

Most vocational education and training programmes are subject to a final examination. Depending on the course, which has been followed, this may take the form of a journeyman's test, an examination or a combination of the two.

All EUD-programmes lead to a skilled workers' certificate.

Educational and vocational guidance at business and technical colleges is provided by counsellors who have been appointed from among the teachers of the school.

Basic social and health service training

The work and performance of the trainees are continuously assessed. The school periods are assessed through written, oral and combined examinations. The practical training period is assessed on the basis of the trainee's performance during practical training. Furthermore, the trainee is to prepare a number of compulsory practical training assignments and pass a theoretical examination at the end of the training.

The school issues a certificate for completed training.

5F Teachers/trainers

The teacher training for teachers at vocational colleges in Denmark is basically a pedagogical course supplementing the training, technical skills and practical work experience of skilled workers who want to become teachers. Teachers of general subjects must have qualifications corresponding to those required at upper secondary education level.

Initial vocational teacher training takes place at the Danish Institute for the Educational Training of Vocational Teachers (*Danmarks Erhvervspædagogiske Læreruddannelse - DEL*) and is of a total duration of 18 weeks of full-time work. The theoretical part lasts 14 weeks and the practical part 4 weeks. The course is organised as a part-time study and normally runs for 12 months.

Teachers are recruited directly by the vocational colleges and start the pedagogical training course, when they have been employed. The pedagogical training course alternates between education in the institution and work placement, and much of the training takes place at the trainee's school as on-the-job training supervised by a tutor.

The certification is administered by the DEL.

The development of teacher qualifications is seen as a vital part of a competence building strategy in most of the schools, and vocational teachers are obliged to maintain and upgrade their qualifications, but not necessarily through formal training courses. Informal training is considered as essential as participation in courses or other kinds of formal training.

There are no formal requirements for the training of trainers providing on-the-job instruction in companies. However, the trend is

towards qualifying trainers through either short in-company training courses or coaching courses at vocational colleges. In particular larger companies and public organisations have in recent years implemented a deliberate training strategy for trainers.

5G Statistics

1998/99

Students/students	
Vocational education and training (EUD)	84,815
HHX/HTX	28,870

In 1995, there were 1,621 trainees participating in the EGU-programme.

The number of participants on production school courses has been stable during the 1990s at: approximately 4,500 full-time equivalents.

In 1996/97 4,269 young people began a UJF-course at the vocational colleges, 2/3 at a technical college and 1/3 at a business college.

6. HIGHER EDUCATION

Higher education is divided into three levels, namely short-cycle higher education (*korte videregående uddannelser*), medium-cycle higher education (*mellemlange videregående uddannelser*) and long-cycle higher education (*lange videregående uddannelser*).

In addition to the institutions described below, there are a number of institutions belonging under the Ministry of Cultural Affairs offering higher art education programmes such as music, architecture, visual arts etc.

Non-university higher education

Apart from a few exceptions, all the short-cycle higher education programmes are offered at technical colleges (*tekniske skoler*), business colleges (*handelsskoler*) and agricultural colleges (*landbrugsskoler*), respectively, i.e. at the same institutions which offer initial vocational training and vocationally oriented general upper secondary education which constitute the foundation of the short-cycle higher education programmes.

The medium-cycle non-university higher education programmes are offered by a wide range of different specialised institutions of varying size: schools of social work (*sociale højskoler*), schools of midwifery (*jordmoderskoler*), schools of occupational therapy (*ergoterapeutiskoler*), schools of hospital laboratory work (*hospitalslaborantskoler*), the Danish School of Journalism (*Danmarks Journalisthøjskole*), schools of nursing (*sygeplejerskoler*), educator training colleges (*pædagogseminarier*), colleges of education (*lærerseminarier*) etc.

University higher education

The medium- and long-cycle university programmes are conducted by the traditional universities (*universiteter*) and by a number of specialised higher education institutions with university status (*højere læreanstalter*). There are a total of 12 institutions offering this type of higher education: 5 universities of the traditional kind, which offer most of the scientific main areas, namely the universities of Copenhagen, Aarhus, Odense, Aalborg and Roskilde; 3 natural sciences-based institutions directed at

specific professions: the Technical Universities (*Danmarks Tekniske Universitet*), which specialises in engineering; the Royal Danish School of Pharmacy (*Danmarks Farmaceutiske Højskole*), which specialises in pharmacy; and the Royal Danish Veterinary and Agricultural University (*Den Kgl. Veterinær- og Landbohøjskole*), which specialises in agriculture, horticulture, veterinary science, forestry, food science); 3 business schools (*handelshøjskoler*) in Copenhagen, Aarhus and South Jutland specialising in business economics, business administration and applied languages, and finally the Royal Danish School of Educational Studies (*Danmarks Lærerhøjskole*) specialising in graduate studies and in-service training for *Folkeskole* teachers. Common to these 12 institutions is that they all carry out research and offer higher education until the highest academic level within their subject-areas. The universities in Copenhagen and Aarhus (with 27,889 and 17,181 students, respectively) are the largest followed by the Universities in Odense and Aalborg and Copenhagen Business School (with 8128, 8030 and 8028, respectively). The South Jutland Business School and the Royal Danish School of Pharmacy (with 916 and 1152 students, respectively) are among the smallest institutions (1997).

6.1 Admission requirements

The entrance qualifications for most higher education programmes are the Upper Secondary School Leaving Examination (*Studentereksamen*), the Higher Preparatory Examination (*Højere Forberedelseseksamen*), the Higher Commercial Examination (*Højere Handelseksamen*) or the Higher Technical Examination (*Højere Teknisk Eksamen*). Certain non-university institutions may, however, admit students without these qualifications; alternative requirements include 9-10 years of school attendance or a vocational training qualification followed by work experience, an entrance examination or a supplementary examination. Most higher education programmes have free intake, i.e. the institutions are free to admit as

many qualified applicants as their resources and physical framework permit. In case of limitation/selection, the supplementary admission requirements are normally based on examination results, relevant work experience, stays abroad etc.

The vast majority of the higher education institutions are connected with the Coordinated Enrolment System (*Den Koordinerede Tilmelding – KOT*). Admission to higher education is always decided by the institution concerned, as decisions on admission have been decentralised to the institutions. But the technical management is data-processed and centrally co-ordinated by the KOT Agency.

In 1997, approximately 45,300 young people were admitted to higher education through the KOT system.

In order to be admitted to one of the short-cycle higher technical education programmes, students must have completed a vocational training programme within a field that is relevant to the chosen programme. Students with a general upper secondary education qualification have to follow special entrance courses in order to be admitted.

The admission requirements for the short-cycle higher commercial education programmes are most commonly one of the upper secondary level qualifying examinations.

6.2 Fees/Financial support for students

There are no registration/tuition fees in higher education. Student support in the form of state grants and loans is provided to cover living costs and the purchase of books and other teaching materials.

In order to be eligible for student support, the student must be a Danish citizen, be at least 18 years old and be active, i.e. he or she must present him- or herself for examinations and generally meet all course requirements. Foreign nationals may under certain conditions be eligible for support. The institution and study programme must be recognised by the State. The study programme must be full-time and of a minimum duration of 3 months. The studies must not be part of paid employment.

6.3 Academic year

As a rule, the academic year is divided into two semesters: from September to December and from January/February to May/June. Students have a week's holiday in October, at Christmas and at Easter. Some programmes have two annual intakes.

6.4 Courses

Non-university higher education

Short-cycle higher technical education programmes build on to initial vocational education and training. The teaching is organised so that the general subjects (mathematics, physics, languages etc.) are closely linked to the vocational topics in such a way as to emphasise application rather than pure theory. The short-cycle higher technical education programmes are normally of 1½-2 years' duration. In most cases, courses are completed by a state-controlled examination leading to the award of a diploma.

Short-cycle higher commercial education programmes are normally of 2 or 3 years' duration, and the new vocational academy programmes can be taken within a wide range of different specialisations.

There is a wide range of medium-cycle non-university programmes lasting 3 or 4 years, including 4-year programmes in engineering, teacher training and journalism and 3-year programmes in social work, midwifery, occupational therapy, physiotherapy and hospital laboratory work.

The short-cycle higher education programmes are mainly theoretical, whereas many of the medium-cycle higher education programmes comprise one or more periods of practical training. There is traditional classroom teaching and project work, where students may work together in small groups.

Books and educational materials are not free of charge. The students will have to purchase these for their own money.

University higher education

The university programmes normally consist of a 3-year Bachelor's degree programme followed by a 2-year programme leading to the

candidatus-degree (Master's level), including 6 months' work on a thesis, and a 3-year PhD-programme.

As a rule, Bachelor's degrees can be obtained within all of the universities' main areas (BA in theology, social sciences, humanities, BSc in natural sciences and engineering) after three years of study. A further two years of study leads to the award of a *candidatus* degree (*cand.mag.*, *cand.scient.*, *cand.theol.*, *cand.med.*, etc.).

In the humanities, there is also a special 6-year degree programme leading to the award of the *magisterkonferens* (*mag.art.*), and in the social sciences there is a special 4-year degree programme in social studies leading to the award of the *cand.phil.*-degree.

Most study programmes leading to the award of a *Candidatus* degree are prescribed to take five years, but some students take longer.

Danish university education leaves students free to exercise their own initiative. Besides attending traditional lectures, they study in small groups where they are expected to contribute actively. Part of their studies consists of independent project and research work.

Books and educational materials are not free of charge. The students will have to purchase these for their own money

6.5 Assessment/qualifications

In general, students on post-secondary courses are assessed through examinations. These take the form either of internal examinations assessed by the examiner(s), or by the examiner(s) and one or more 'external' examiners appointed from among the teachers of the institution, or of external examinations assessed by the teacher-examiner(s) and one or more external examiners appointed by the Ministry of Education.

Assessment is expressed by marks given according to a 13-point scale (10-13 correspond to 'excellent', 7-9 to 'good', 6 to 'satisfactory', 0-5 to 'poor').

Assessment of up to one-third of the course can be expressed by 'pass/fail'. The most essential parts of the course must be assessed through external examinations.

Non-university higher education

Short-cycle higher technical, commercial and agricultural programmes are i.a. offered within the following specialisations: electronics, forestry, land surveying, building, textile, graphic design, environmental technology, hospital laboratory work, export technology, commerce, market economics, computer studies etc. The short-cycle higher technical education programmes mainly aim at employment which comprises operational, planning and construction tasks. The short-cycle higher commercial education programmes aim at independent performance of commercial and administrative functions in trade and industry.

University higher education

Medium-cycle university and non-university higher education programmes: The branches of study and specialisations at this level may be: social work, midwifery, occupational therapy, physiotherapy, hospital laboratory work, nursing, journalism, film production, educator, ['Folkeskole']-teacher etc. This level of education also covers the Bachelor-programmes of the universities leading to qualifications within the social sciences, the humanities, the natural sciences etc.

The long-cycle higher education or *candidatus*-programmes of the traditional universities lead to qualifications within the social sciences, the humanities, law, music, theology, psychology, natural sciences and health sciences. In the past, the majority of the graduates from the traditional universities largely found employment in the public sector either as teachers or as employees in public administration. But today an increasing proportion of the graduates find employment in the private sector. The programmes offered by the specialised university-level institutions lead to qualifications in engineering, pharmacy, agriculture, forestry, food science, horticulture, architecture etc. A major proportion of the graduates from these programmes are employed in the private sector.

6.6 Teachers

There are no general rules applying to the entire area of higher education regarding the qualifications of the teachers. But teacher candidates must as a rule have a university degree or similar in the subject they are to

teach. For full-time positions in the university sector, candidates must have a qualification at Ph.D.-level.

There are no formal rules regarding the 'paedagogikum' teaching qualifications, but a number of institutions have introduced pedagogical courses. They consist of a practical and a theoretical part. The theoretical part of the course consists of 8 x 3 lessons. The practical part consists of the pedagogical supervision by an experienced colleague for a semester as well as two visits by an external examiner.

Almost all categories of teachers in this sector are employed on a group contract basis, as this form of employment is gaining more and more ground.

In certain areas, the predominant form is however still employment as a civil servant or on civil servant-like conditions, e.g. the educator training colleges.

Fixed-term employment is also a much used form of employment.

Danish teachers are free to participate in in-service training activities. And unlike many other EU-countries, promotion is not conditional upon having taken part in in-service training activities. There are no formal admission requirements for in-service training of teachers.

7. ADULT EDUCATION

Adult education in Denmark can be divided into non-qualifying or non-formal adult education, covering such activities as those offered under the heading of Folkeoplysning (adult liberal education), by the *folkehøjskoler* (folk high schools), the *Folkeuniversitet* (university extra-mural department), the *daghøjskoler* (non-residential folk high schools) etc. and vocationally qualifying or formal adult education. Only the latter will be dealt with below.

6.7 Statistics

Percentage of a youth year group following higher education (HE) (estimate 1996)

18-21 - year-olds	8.5%
22-25 - year-olds	23.5%
26-29 - year-olds	12.1%

Completion rate (1998)

Short-cycle higher education	73 %
Medium-cycle higher education	73 %
Medium-cycle university education	54 %
Long-cycle university education	70-77 %

Average age of student population (1995)

Short-cycle HE	27.1 years
Medium-cycle HE	27.1 years
Long-cycle HE	26.6 years

Number of students enrolled in higher education (1997)

In 1998, there were a total of 192,701 students enrolled in higher education in Denmark

Number of teachers in higher education (2000)

Approx. 12,000 teacher full-time equivalents.

Number of higher education institutions (1998)

194 HE-institutions, including business and technical colleges offering short-cycle technical and commercial higher education.

7.1 Legislative framework

Labour market training is regulated by the Act on Labour Market Training, last amended in 1995. According to the legislation, the aim of labour market training is to:

maintain, develop and improve the qualifications of the labour force in accordance with the needs of the labour market, to remedy re-adjustment and structural problems in the labour market – in the short term, and

to ensure the continuing upgrading of the qualifications of the Danish labour force – in the long term.

7.2 Administration

The National Labour Market Authority (*Arbejdsmarkedsstyrelsen*) is responsible for labour market training. The management instruments are primarily based on the principle of target and framework management, which leaves a relative degree of autonomy to the providers of labour market training.

As in initial vocational training, the social partners play an active role in continuing vocational training, or labour market training. They are represented on 51 continuing training committees responsible for e.g. the development of proposals for educational plans, the monitoring of the qualification and educational needs of the labour market, and on the Educational Council for Labour Market Training, which is an advisory body for the Ministry of Labour.

7.3 Funding

Labour market training is financed through the Activation Fund. For all courses (with the exception of TAMU) training rates are set. The training providers can have this rate (the 'taximeter' rate) paid for all the participant weeks they operate.

The participants in labour market training receive a course grant from the State corresponding to the maximum rate of unemployment benefit. In addition to this grant, which in 1997 was DKK 2,625 per course week, it is very common for employers to award a full salary to employees undergoing labour market training.

The counties meet the expenses for general education course offers for adults. The participants pay a modest registration fee.

Individual educational institutions are free to offer and receive grants for open education within all the subjects and courses they are already approved to offer.

7.4 Organisation

Continuing vocational education: In Denmark, continuing vocational training is primarily provided through the public sector labour market training system (*Arbejdsmarkedsuddannelserne* – AMU) which was established in the 1960s as a reaction to labour shortages in Danish industry. Due to the extensiveness of the AMU-system, the provision of private continuing vocational training is rather limited in Denmark – compared with other European countries.

Labour market training is provided by 24 labour market centres (AMU-centre) and vocational colleges all over the country. Private companies and other educational institutions can also be approved as providers of specific labour market courses.

Labour market training centres are independent institutions, each with their own board of governors.

Labour market training is directed both at skilled and unskilled workers over 20 years of age. Both employed and unemployed people can participate in labour market training.

Labour market training programmes can be divided into five main groupings:

Qualifying labour market training courses (*kompetencegivende AMU-kurser*). These courses constitute the central range of labour market training. They are organised as modular courses lasting from 1 to 6 weeks. The modular system includes approximately 2,200 courses within 55 trades and occupations. The courses are continuously revised by the continuing training committees so that the courses correspond to the actual needs of the labour market.

Integrated training courses (*sammenhængende uddannelsesforløb*). This range of courses includes both ordinary integrated training courses aimed primarily at employed people and targeted training courses aimed primarily at unemployed people. The courses are either centrally or locally approved. These courses may last up to 36 weeks for people in employment and 52 weeks for unemployed people.

Individual programmes (*individuel supplerende undervisning og kompetenceafklaring*). Labour market centres and vocational colleges can offer individual courses in IT, reading and writing, mathematics etc. to participants in other labour market training programmes.

Furthermore, they offer a "skills identification programme" aimed at identifying the training needs of the individual.

Company-specific courses (*virksomhedstilpassede kurser – VTP*). VTP cover the training needs of companies which cannot be met by the other labour market training courses. The courses are developed and organised in co-operation with the companies.

The training school's labour market training courses (*træningsskolens arbejdsmarkedsuddannelser – TAMU*). TAMU is directed at young people between 18 and 30 who are unable to complete a regular education and training programme due to social problems, learning disabilities etc. The participants often have a criminal past or problems with drug or alcohol abuse.

General education: It is possible for adults to improve or supplement their general qualifications by taking part in courses at basic or upper secondary school level which are adapted to the needs and prerequisites of adults.

The general adult education (*almen voksenuddannelse*) is a single-subject system leading to the leaving examinations of the *Folkeskole*, where the participants choose subjects according to their individual needs. Core subjects are Danish, mathematics, science, social studies and foreign languages.

The higher preparatory examination (*højere forberedelseseksamen*) can be taken as a full 2-year course or on a single-subject basis. The course aims at entrance to higher education.

The upper secondary school leaving examination (*studentereksamen*) can be taken by adults at a 2-year full-time course (*studenterkursus*) and is a slightly modified and more concentrated version of the Gymnasium-programme. It can also be taken on a single-subject basis. The course aims at entrance to higher education.

Qualifying part-time studies under the Act on Open Education: In principle, open education comprises all vocationally oriented courses of education from initial vocational training to long-cycle higher education programmes as well as short, condensed courses. The main principle is that adults can return to the education system to update already acquired qualifications or further educate themselves for a higher level of education. The participants can choose to follow the teaching in some subjects or modules of courses or complete an entire course of education, e.g. a diploma programme or a Master's programme. A novelty within this

framework is the offer of so-called 'credit-courses' for persons with long-term work experience within the area concerned. The work experience gives credit for the practical training of the courses. The Act on Open Education furthermore makes it possible to offer specially organised courses. These courses make it possible to combine general and vocationally oriented elements in the teaching.

The institutions can offer courses on a part-time basis and on full-time basis for up to one year. The courses can be offered both in the daytime and in the evening. One of the requirements is therefore that courses must be organised taking into account the practical issues for adult participants related to combining education and work.

7.5 Statistics

Participants (FTE) in formal qualifying adult education (1998)

General adult education	33,800
Adult vocational training (AMU)	14,100
Open education	41,809