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Principles and general objectives of education

During the second half of the 2000s the government initiated extensive educational reforms aimed at ensuring continued growth and prosperity. The reforms shall ensure improved quality and cohesion in education and training, from preschool to higher education and in adult education and continuing training. The aim is to create a world-class education system and have everyone participate in lifelong learning. It shall help develop Denmark as a leading knowledge society in a globalized world.

Excellent development and learning opportunities for children, young people and adults shall strengthen personal development, employment and active participation in society of the individual. Everyone shall be challenged in a learning process that develops inventiveness and pleasure in being able to improve oneself continuously. This is crucial for raising the level of education and strengthening competitiveness and cohesion in Danish society.

The overall aim of the Globalization Strategy (*Progress, renewal and development: Strategy for Denmark in the global economy*) published in 2006 is to make Denmark a leading knowledge society with strong competitiveness and strong cohesion. Education, lifelong skills upgrading, research and innovation at the highest international level are crucial for achieving this aim. The Strategy focuses in particular on training and lifelong skills upgrading. A high level of educational attainment and good opportunities for lifelong learning are among the most important preconditions for strong competitiveness and for everyone to be able to actively participate in the labour market and in society. A coherent education system from preschool to higher education must provide the opportunity for everyone to acquire excellent basic skills, a qualifying education and a solid foundation for lifelong learning. The education system must be inclusive and there must be equal opportunities and room for all. The education system shall foster talent and be more accommodating to weak learners. The education system shall also contribute to promoting a culture of learning which promotes creativity, independence and responsibility. The quality of education shall be enhanced at all levels so that it fulfils current and future needs for competences and new knowledge in enterprises, in the labour market and in society. All forms of education and learning should be based on and build on the knowledge, skills and competences of individuals. A global perspective must be included in all education programmes contributing to strengthening internationalization and cooperation. (MOE, April 2007).

Laws and other basic regulations concerning education

Through decentralization and increased local autonomy, the decision-making process is now largely left to the institutions in cooperation with the local community. At the same time, the system of close control has been replaced by target and framework management, whereby the overall targets and requirements are laid down at central level and the implementation is under the responsibility of the local authorities and the



individual schools. The 1989 Act on the *Folkeskole* (comprehensive school) decentralized a great number of decisions to the new school boards where the parents are represented. The Act also provided the parents with a free choice of school within their local community.

Legal provisions relating to nurseries and kindergartens are included in the Act on Day-care, After-school and Club Facilities for Children and Young People, **Day-Care Facilities Act No. 501** of 6 June 2007. The purposes of this Act are to: promote the welfare, development and learning of children and young people through day-care, after-school and club facilities and other socio-pedagogic after-school facilities; provide families with flexibility and options as regards various types of facilities and subsidies; ensure that pedagogical measures are an integral part of both the local authority's overall, general offer to children and young people and the preventive and supportive activities aimed at children and young people requiring special support; and create coherence and continuity between facilities and make transitions between facilities coherent and age-appropriately challenging for the children. Provisions concerning the preschool class are included in the Act on the *Folkeskole*.

The Act on the *Folkeskole* No. 55 was passed on 17 January 1995. In 2003, a new Act came into effect introducing several amendments. The main purpose was to strengthen pupils' subject knowledge and skills without affecting their personal development. It also made compulsory the common objectives for each subject (previously they were considered as guidelines). Changes in the legislation in 2006 entailed more focus on summative assessments of students; the final examinations in the *folkeskole* were made obligatory; a new grading scale was implemented; and mandatory national tests were also introduced. The new **Act on the Folkeskole No. 1049** of 28 August 2007 last amended in 2010, lays down the framework of the comprehensive primary and lower secondary school system, from the preschool class to the tenth (voluntary) year. The Act indicates that the *folkeskole* is a municipal matter and that it shall be the responsibility of the municipal council to ensure all children in the municipality free education in the comprehensive school. The municipal council shall lay down the targets and framework of the activities of the schools in accordance with the provisions of the Act. The Act contains provisions regarding the appointment of teachers, pupils' enrolment in and admission to the school, administration of the municipal school system, expenditures, complaints, etc.

General upper secondary education is regulated by the Act relating to education at STX level (Upper Secondary Schools Act) last amended by **Act No. 577** of 9 June 2006, which also refer to the higher preparatory examination (or HF programme), the higher commercial examination (or HHX programme), and the higher technical examination (or HTX programme). (MOE, April 2007).

In the second half of the 2000s, vocational education and training (VET) was regulated by the Act on Vocational Education and Training No. 561 of 6 June 2007, the Regulation on Vocational Education and Training No. 1518 of 13 December 2007, and the Act on Institutions providing VET No. 136 of 1 March 2006. (NEA, 2008). In addition, all VET programmes are subject to specific regulations and by a set of guidelines introduced in 2001 with the aim of simplifying the system and the process of change in individual programmes. The Act on Open Education of December 1993 started to regulate vocationally- and professionally-oriented part-time courses and



single-subject studies for adults at vocational colleges and higher education institutions. The new **Act on Vocational Education and Training No. 510** of 19 May 2010 has revised the previous Act of 2007. This Act covers the entire initial VET (IVET) system, providing among others overall objectives as well as more specific frameworks concerning access, the form and content of programmes, the appointment of advisory committees, the role of enterprises offering apprenticeship placements, and students' legal rights. Vocational colleges are regulated by the new **Act on Institutions for Vocational Education and Training No. 951** of 2 October 2009. Among other provisions, this Act concerns frameworks for the authorization of vocational colleges, their governing boards, state subsidies, budgetary and accounting practices, monitoring and notification duties, intra-institutional cooperation and consultancy. The **Statutory Order regarding Vocational Education and Training No. 901** of 9 July 2010 translates this legislative framework into a more concrete set of rules. There are also statutory orders also for each of the 12 access routes to IVET and for a number of more specific areas. National guidelines apply to the 23 basic subjects, which can form part of an IVET programme, as well as concerning apprenticeship contracts. In addition to these laws, statutory orders and guidelines, there are several more specific laws, concerning for example the awarding of a bonus to students upon completion of an IVET programme. There are also a number of general laws which apply to the educational system as a whole and which thereby also apply to IVET, such as those concerning guidance or occupational health. Each of the 110 specializations (following the basic courses/access routes) is governed by an agreement compiled and issued by the national trade committees, comprised of representatives of the social partners. (CEDEFOP, 2010).

With regard to university higher education, the Act of 1992 increased the autonomy of the universities and other higher education institutions with university status, and better defined the framework of the decision-making process. The University Act No. 403 of 28 May 2003 enhanced the institutional autonomy and provided for the introduction of external boards. The current legislative framework for the study programmes at universities is the **Act on Universities No. 1368** of 7 December 2007 which contains general provision regarding the general structure of programmes. This Act is supplemented by a number of ministerial orders such as: the **Ministerial Order on University Admission No. 52** of 28 February 2009, which lays down the overall conditions for admission to bachelor's and master's degree programmes; the **Ministerial Order No. 338** of 6 May 2004 on bachelor's and master's (*candidatus*) programmes at universities, which describes the overall objectives of these programmes; and the **Ministerial Order on University Examinations and Grading No. 857** of 1 July 2010 which lays down the overall conditions for university tests and examinations at bachelor's and master's level and other part-time programmes for adults covered by the University Act. The **Ministerial Order No. 250** of 15 March 2007 introduced a seven-point grading scale for student assessment in university education. The **Ministerial Order No. 18** of 14 January 2008 includes provisions relating to doctoral degree programmes, supplemented by other provisions formulated by the individual faculties in each of their respective areas. (Eurydice, 2009/10).

Short- and medium-cycle non-university education programmes are regulated by the **Act No. 207** of 31 March 2008 on vocational academy and professional bachelor's degree programmes. For institutions placed under the Ministry of



Education, this Act provides the medium-cycle non-university higher education programmes with a common framework. The purpose of the new legislation has been to improve the possibilities of developing the quality of the existing programmes and to develop new programmes in order to respond to the changing needs of the employment market. (*Ibid.*).

Provisions concerning the Danish Evaluation Institute (EVA), established in 1999, are contained in the **Consolidation Act No. 1073** of 15 September 2010. The Danish Evaluation Institute is an independent government institution whose purpose is to help assure and develop the quality of teaching, education and learning. The **Act No. 294** of 27 March 2007 provides for the establishment of the Accreditation Agency for Higher Education (ACE). The Ministerial Order (Ministry of Science, Technology and Innovation) of 14 December 2009 defines the responsibilities of the Accreditation Council of the Agency, the criteria for the relevance and quality of university study programmes, and the procedures for approval of university study programmes.

The **Act on Tertiary Artistic Education Institutions No. 889** of 21 September 2000 applies to self-governing and state institutions providing training in the arts (including fine and visual arts, architecture, music, theatre, and design) and operating under the auspices of the Ministry of Culture.

The **Act on Private Schools** of 1991 introduced a new public grant system for private schools. In 1992, a new Act was passed including the private general upper secondary schools (gymnasia) within the same public grant system as the private comprehensive schools. Private independent schools are currently regulated by the **Act No. 891** of 8 July 2007 and subsequent amendments. Private independent schools provide an alternative to the municipal *folkeskole*. These schools are often founded and managed by a group of parents.

Folk high schools, continuation schools, home economics and textile design schools (private independent boarding schools), are regulated by the **Act No. 822** of 10 June 2006 and subsequent amendments.

Continuing education for adults (AVU courses) is regulated by the **Act on General Adult Education No. 311** of 30 April 2008. According to the Act, the aim of general adult education is to make it possible for adults to improve or supplement their general knowledge and skills and to strengthen their prerequisites for active participation in a democratic society. Adult vocational training programmes (i.e. short vocational training programmes mainly for low skilled and skilled workers on the labour market) are regulated by the Act on Adult Vocational Training Programmes of 2003 further revised by the **Act No. 190** of 18 March 2008. According to the Act, the aim of the training programmes is, among others, to maintain, develop and improve participants' vocational qualifications and competences in accordance with the needs of the labour market. The further education system is regulated by the **Act on Vocationally-oriented Basic and Advanced Education for Adults**. The further education system comprises basic education for adults (GVU) and further education for adults taken at three advanced levels of education, e.g. advanced adult education (VVU), comparable to short-cycle higher education; diploma level, comparable to a medium-cycle higher education; and master level, comparable to a long-cycle higher education level. (Eurydice, 2009/10).



According to the **Constitution**, all children of compulsory education age have a right to free education in the comprehensive school (*folkeskole*). Parents or persons with legal custody of children, who themselves see to it that the children receive instruction which meets the general teaching requirements set for in the *folkeskole*, are not obliged to enrol their children in the *folkeskole*. It must be noted that, in Denmark, it is education, and not school attendance, that is compulsory. Compulsory education means an obligation to participate in the educational activities organized by the *folkeskole*, or in activities that are comparable to those required in the comprehensive school.

Until recent years, education was compulsory from 7 to 16 years of age (seven years of compulsory education were first introduced in 1814, and then extended to nine years in 1971). From the school year 2009/10, the preschool class has been included as part of the compulsory education, which now comprises ten years (age group 6–16). (MOE, 2008; Eurydice, 2009/10).

Administration and management of the education system

The **Ministry of Children and Education** (previously the Ministry of Education) is responsible for general education policies and for ensuring that educational programmes are consistent with existing policies. In 2001 the overall responsibility for universities was transferred to the newly created **Ministry of Science, Technology and Innovation**. The Ministry of Children and Education remains responsible for non-university, tertiary-level education, while higher education institutions providing training in the arts are under the authority of the **Ministry of Culture**. Day-care facilities (i.e. nurseries, kindergartens) are under the responsibility of the **Ministry of Social Affairs and Integration**.

The **Council for the Evaluation and Quality Development of Primary and Lower Secondary Education** was set up by the then Ministry of Education in 2006 with the aim of strengthening the evaluation and the development of quality in the *folkeskole*. The **National Agency for Quality and Supervision** (also established in 2006 as the Agency for Evaluation and Quality Development of Primary and Lower Secondary Education) is responsible for implementing national tests in the *folkeskole* and supervising the municipalities, which are obligated to produce yearly quality reports. Every year the Council must submit a report to the Ministry of Children and Education. The report is to contain a summary of the activities of the Council along with suggestions to improve the quality of the *folkeskole*. The Agency specifically has as its task to follow, assess and advise the Ministry of Children and Education on the academic level and the pedagogical development in the *folkeskole* along with the pupils' learning outcomes. (Eurydice, 2011).

The **Danish Evaluation Institute** (EVA), established in 1999, is an independent government institution under the auspices of the Ministry of Children and Education whose purpose is to help assure and develop the quality of teaching, education and learning. The Institute conducts evaluations of teaching and learning at all levels of the education system, from early childhood education (since 2008) to primary and secondary education, higher education, and adult education and training. The evaluations cover public educational establishments and private providers of education in receipt of state subsidy. These evaluations always include a self-



evaluation in which the individual educational institution describes what it sees as its own strengths and weaknesses. EVA also develops and innovates evaluation techniques and methods and compiles national and international experience with educational evaluation and quality development and thereby functions as a centre of expertise in this area. The Institute can initiate evaluations on its own initiative as well as at the request of the Ministry of Education, other ministries, advisory boards, local authorities and education institutions. Requested evaluations are conducted as revenue-generating activities. EVA is not allowed to perform any form of ranking of the evaluated educational activities and institutions. The Institute also prepares the accreditation reports for higher education study programmes within the fields covered by the Ministry of Education and the Ministry of Culture.

The **Accreditation Agency for Higher Education (ACE)** was established in 2007 as an independent institution under the auspices of the Ministry of Science, Technology and Innovation. According to the Act of 2007, the Agency shall ensure and document the quality and relevance of higher education study programmes by performing an assessment (accreditation) on the basis of criteria laid down centrally regarding the quality of existing and new study programmes. In addition, the Agency shall collect national and international experience of relevance to accreditation. The Accreditation Council of the Agency is the specific unit which makes the decisions regarding accreditation of all higher education study programmes. Decisions are made on the basis of accreditation reports, the criteria for the relevance and quality of university study programmes, and the procedures for approval of university study programmes.

Since the beginning of the 1990s, the Ministry of Education has regulated initial vocational education and training (IVET) provision through a system of targeted framework governance based on providing taximeter grants per student. The Ministry lays down the overall objectives for IVET programmes and provides the legislative framework within which the stakeholders (i.e. the social partners, the colleges, and the enterprises) are able to adapt curricula and methodologies to labour market needs and students. The national **Advisory Council on Initial Vocational Education and Training** advises the Minister of Education on principal matters concerning IVET. The **national trade committees** consisting of representatives from both sides of industry constitute the backbone of the IVET system. They are responsible for the following matters relating to the individual IVET course: objectives; duration; contents; final examination standards; and issuing final certification. Trade committees decide the regulatory framework for individual courses, they decide which trade is to provide the core of the training and the ratio between classroom teaching (approximately one third) and practical work in an enterprise (approximately two thirds). The committees also approve enterprises as qualified training establishments and rule on conflicts which may develop between apprentices and the enterprise providing practical training. The trade committees and their secretariats are financed by the participating organizations. There are also **local training committees** advising the colleges on local adaptation of IVET. (CEDEFOP, 2010).

Concerning adult education and training, the national **Advisory Council for Adult and Further Education and Training** provides advice to the Minister of Education on all matters concerning adult education and training. National trade-

specific **further education and training committees** are responsible for drawing up the joint competence descriptions. Local further education and training committees advise the colleges and the labour market training centres on local adaptation of continuing vocational education and training. The governing boards of colleges and training centres are responsible for appointing local further education and training committees, which must consist of an equal number of representatives from employee and employer organizations. The college or training centre determines whether to appoint one or several separate committees for different fields. (*Ibid.*).

In recent years, overall target and framework management has replaced state control of every detail, where more decisions regarding details are left to the individual educational institutions and the users of the education system. The central point in this reform of the education system has been that innovation and quality are best created through decentralization of competence and responsibility to the institutions thus fostering competition between them. (Eurydice, 2009/10). Following a general agreement reached in 2004, a structural administrative reform has been implemented starting from January 2007. Five new **regions**, each with its own elected county council and council chairman, replaced the former 14 counties and several municipalities were merged, bringing their total number to 98 (from a former total of 274). Each municipality has its own elected council and mayor. Due to the implementation of the reform, education institutions formerly funded by the counties were converted to self-governing institutions funded by the state. This applies to institutions providing general upper secondary education, social and health programmes, as well as adult education centres.

The **municipalities** are responsible for running the public schools and ensuring that all children receive free education in the *folkeskole* or get education that corresponds to this. Further, the municipal district council defines the goals and scope for the school activities and supervises the schools.

The municipal responsibility for the *folkeskole* is regulated and managed by objectives set at national level. The Act on the *Folkeskole* and regulations issued by the Ministry establish the scope and objectives for the execution of the municipal responsibility. Included are also a number of basic framework conditions such as common objectives for the individual subjects and courses, as well as requirements concerning school-leaving examinations, minimum hours of teaching and teacher qualifications. Decisions on recruitment of teachers are taken by the municipal district council, after consulting the school board. Within this overall framework, the municipal district council establishes its own objectives and scope for the schools. The municipal district council can thereby determine local guidelines and launch special initiatives for local schools. (MOE, April 2011). Municipalities also have to establish and run youth schools for the 14-18-year-olds residents in the municipality. It is the aim of the youth school to give young people a possibility of consolidating and improving their knowledge and qualify themselves for social life. Most of the pupils also attend the upper levels of the *folkeskole*, a gymnasium or a vocational school in the day-time and attend classes at the youth school in the late afternoon or in the evening in subjects which are not offered at their day school. (Eurydice, 2009/10).

The administration of preschool institutions is the responsibility of the head of the institution and an **elected board**. A board must be set up in all municipal and



private day-care institutions. The majority of the board members are elected from among the parents, and two members are elected by and from the staff employed in the institutions. The board lays down the general principles for the day-care institution and for the use of the budget available in due observance of the objectives and framework defined by the municipal council. The administration of the *folkeskole* follows the same pattern. A **pedagogic council** advises the head teacher (principal) on educational issues. The **school board** conducts its activities in compliance with the objectives and scope stipulated by the municipal council. It elaborates the criteria for the activities of the school, including such matters as: the organization of the teaching, the number of lessons of the classes at each form level, the offer of optional subjects, special education at the school, and the distribution of pupils in the classes; the cooperation between school and home; information for parents about their children's progress at school; distribution of the workload among the teachers; and joint arrangements for the pupils during school hours, school camps, work experience, etc., and the organization of school-based leisure-time activities. At all schools with a fifth year or higher levels, the pupils may form a **pupils' council**.

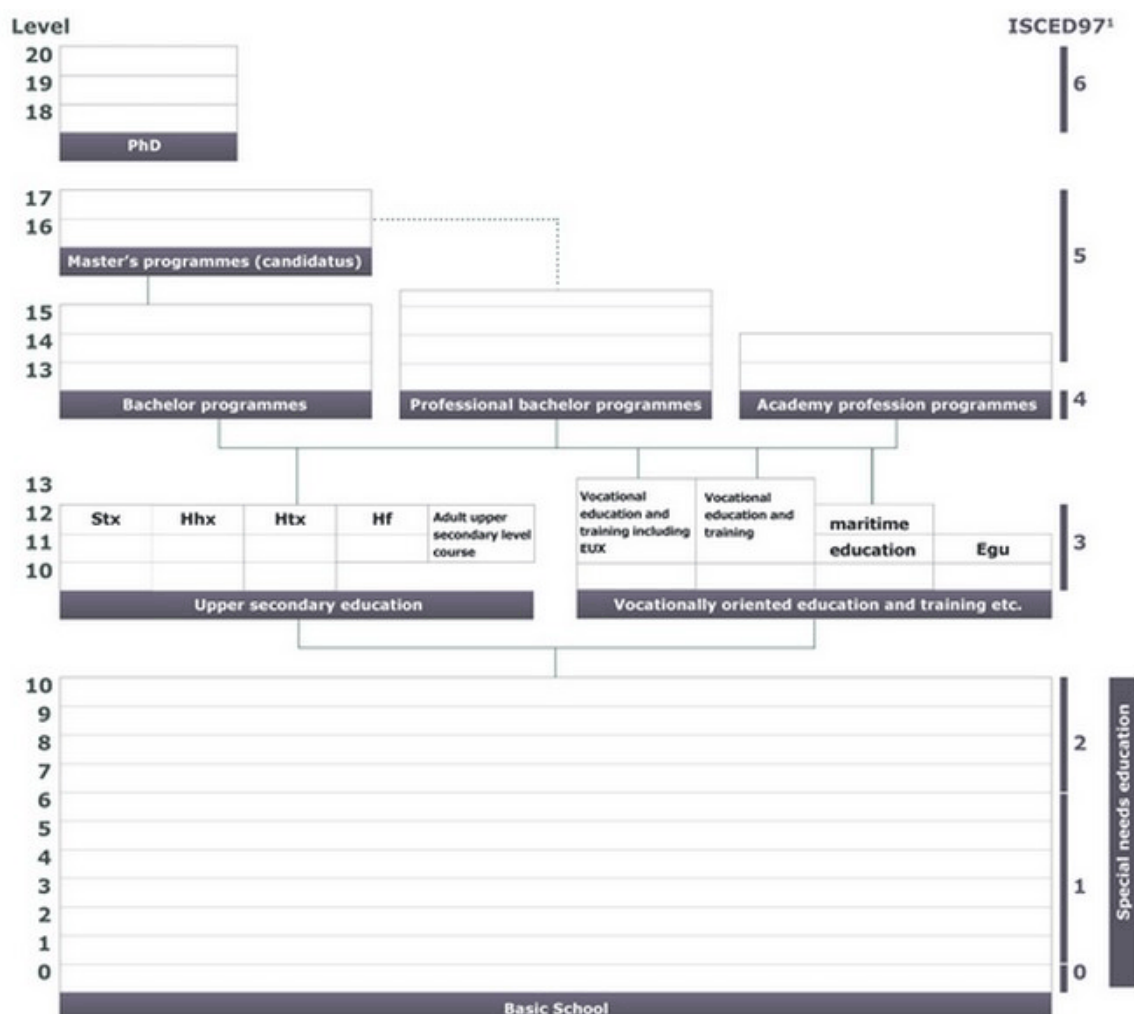
The administration at the general upper secondary level is ensured by the principal, an elected board, the pedagogic council (in all gymnasia and HF courses) and the teachers' assembly. It is the task of the **teachers' assembly** to deal with the level of attainment of the students and counsel the students and their parents on the advancement to the next class. It also coordinates teaching and learning activities and determines the students' workload. The teachers' assembly is convened when the head teacher finds it necessary, often in connection with the award of term marks in the third year of the gymnasium. A **students' council** is set up in all gymnasia. It is elected by and from all the students of the school and defines its own statutes.

The principal and a board are responsible for the administration of vocational education and training institutions. The principal has to ensure that the courses are carried through in accordance with the legislation in force; that the education and training conditions are satisfactory; that the budget approved by the board is observed; and that the activities of the vocational college as such are in accordance with the decisions and guidelines of the board.

Private schools are recognized and receive public financing regardless of the ideological, religious, political or ethnic motivation behind their establishment. The Ministry of Children and Education confers on private schools the right to use the final examinations of the *folkeskole* and it thereby exercises a certain extent of quality control. However, in principle it is not up to any governmental authority but to the parents of each private school to check that its performance is aligned to the demands set for the municipal schools. There are also independent, self-governing boarding schools (*efterskole* or continuation school) offering general education to young people between 14 and 18 years of age. The school designs its curriculum according to the ideas and wishes of the principal, the school board, the teachers and the parents. Most of these schools prepare the pupils for the same final examinations as the *folkeskole*. (Eurydice, 2009/10).

Structure and organization of the education system

Denmark: structure of the education system



Source: Website of the Ministry of Children and Education, June 2012.

Pre-school education

Early childhood education and care for children aged 6 months to school age is provided in day-care facilities. Attendance is voluntary but the local authorities have to ensure the necessary number of places for the children in their areas, referred to as guaranteed day-care availability. Day-care facilities are under the authority of the Ministry of Social Affairs and Integration and can be set up in various ways, e.g. local-authority child-minding, local-authority day-care centres, independent day-care centres, private child-minding or an approved private day-care centre. Local-authority day-care centres include crèches, nursery schools and age-integrated institutions. Generally day nurseries are for children up to age 3 and kindergartens for children aged 3 to school age. The preschool class for the 6-year-olds has been integrated into the comprehensive school in 2009 and is compulsory.



Primary and lower secondary education (comprehensive school)

The comprehensive school (*folkeskole*) covers the entire period of compulsory education and is not divided into a primary and lower secondary stage. The comprehensive school consists of a preschool class for the 6-year-olds, the nine-year compulsory programme and a voluntary tenth year. Since August 2009, the preschool class has become part of the *folkeskole* and therefore is compulsory. The first six years are normally for children in the age group 7-12, while years 7 to 9(10) are normally for pupils aged 13-16(17). Compulsory education is also provided by private independent schools, e.g. self-governing institutions ran by parent-elected boards. At the end of year 9 pupils sit the compulsory school-leaving examinations in seven subjects, of which five are common for all pupils. Successful pupils receive the school-leaving certificate. Pupils can also take a voluntary school-leaving examination at the end of year 10 in several subjects. In year 9 (and also year 10) pupils have also to complete and present a mandatory interdisciplinary project assignment. Pupils have also to sit a range of obligatory national tests during their compulsory education intended to assess the level of acquisition of knowledge and skills. These tests cover the following subject: Danish, with a focus on reading in years 2, 4, 6 and 8; mathematics in years 3 and 6; English in year 7; and geography, biology and physics/chemistry in year 8. Tests in Danish as second language are voluntary. The tests started to be officially implemented in March 2010 after a long period of development and piloting since 2006.

Secondary education

Post-compulsory (upper) secondary education comprises: general upper secondary education provided in the gymnasium (or STX programme), the higher preparatory examination (or HF programme), the higher commercial examination (or HHX programme), and the higher technical examination (or HTX programme) The gymnasium offers a three-year programme leading to the upper secondary school-leaving examinations, which qualifies for admission to higher education. The full-time HF programme lasts two years and is for students who have completed the voluntary tenth year of the comprehensive school. Both the HHX and the HTX programmes are of three years' duration and also qualify for admission to higher education. The STX and HF programmes consist of a broad range of subjects in the fields of the humanities, natural science and social science. The HHX programme focuses on business and socio-economic disciplines in combination with foreign languages and other general subjects. The HTX programme has its focus on technological and scientific subjects in combination with general subjects. Initial vocational education and training (IVET) qualifies primarily for access to the labour market and also for continued education. It comprises training programmes in the commercial, technical, social welfare and health, agricultural and maritime fields. IVET consists of twelve basic courses which can provide access to 110 more specialized main courses offered in different colleges. Alternative pathways which begin with a period of training within an enterprise require an apprenticeship contract prior to admission. The typical duration of IVET is three to four years, alternating between school-based and workplace training. At the end of the programmes trainees have to pass a practical and theoretical examination for the award of the journeyman certificate. In addition, basic vocational training (EGU) is offered to unemployed young people aged less than 30 years who have not completed another form of



education or training. Training is full-time and primarily practical and generally lasts two years, combining school-based and workplace training.

Higher education

Higher education is provided by higher professional education institutions (vocational colleges/academies of higher professional education and colleges) and academic institutions, i.e. multidisciplinary research universities and specialized institutions in areas such as music, art, architecture and related fields. The main requirement for access to higher education is one of the general upper secondary school leaving examinations (e.g. STX, HF, HHX and HTX); several three- and four-year VET programmes can also provide access to professionally-oriented higher education programmes. Access may also depend on other requirements such as a specific subject combination in upper secondary school or a certain grade point average. Vocational colleges offer two-year programmes on a full-time basis, equivalent to 120 European Transfer Credit System (ECTS) credits, leading to an academy profession degree (diploma) mainly in business, IT and technical studies (the duration is two and a half years in the case of the professional diploma of computer specialist). Colleges offer programmes leading to a professional bachelor's degree normally requiring between three to four and a half years of full-time studies (equivalent to 180–270 ECTS credits), including a period of practical training, in fields such as engineering (210 ECTS), technical engineering (240), education (240 ECTS), social work (210 ECTS), and health care (210 ECTS). University programmes are generally structured into three cycles in line with the Bologna scheme. Bachelor's degree programmes normally last three years (equivalent to 180 ECTS credits; 180-210 ECTS credits in the case of business administration); master's degree (or *candidatus*) programmes usually take two years to complete (120 ECTS) after a bachelor's degree and require the submission of a thesis; most doctoral degree programmes last three years (180 ECTS), including six months of courses in research skills and the public defence of a dissertation. Long first-cycle programmes are offered in the fields of pharmacy (five to six years of full-time studies), law (five years), architecture (five and a half to six years), and medicine, dentistry and veterinary medicine (five and a half to six and a half years). A diploma in music takes four years to complete or five years in the case of instrumental music.

In the past, the Act on the *Folkeskole* indicated that the school year shall normally comprise 200 school days. The latest versions of the Act do not indicate the number of days in a school year. Until June 2006, the educational activities took place between 9 August and 19 June. During 2005–2006 the whole organization of the school year was changed. The end of the summer holiday was moved one week ahead, which means that the summer holiday now starts one week later (24 June) and the new school year starts in the second week of August. The Ministry of Children and Education decides on the minimum number of lessons (of 60 minutes' duration) for the preschool class and years 1-9, ranging from 600 lessons per year in the preschool class to 990 in year 8, 930 in year 9, and 840 lessons in the voluntary tenth year. The requirements are stated either for the three subject clusters or as a total number of lessons over several years (e.g. years 1-3). The Ministry also decides on the minimum number of lessons in Danish and mathematics for years 1–3 as well as the number of history lessons for years 4–6. The Ministry issues recommendations on the minimum number of lessons for every subject, but the schools have the right to



prioritize the lessons according to their specific needs or circumstances. The organization of school time, length of the school day (number of lessons) and school year (number of school days), is decided by the municipalities and the local school, according to school autonomy. In the case of the gymnasium (STX) and the HHX programme, students have to complete a minimum of 2,470 hours over three years; for the HTX programme, the minimum is set at 2,630 hours. In the HF programme, students have to complete a minimum of 1,625 hours over two years. The academic year is divided into two terms (September-December and January/February to May/June). (Eurydice, 2009/10).

The educational process

The curriculum sets out the aims, content and duration of educational programmes and individual subjects. It also includes provisions concerning assessment, examinations and the required number of written assignments in basic education and general and vocational upper secondary education. The establishment of a set of common rules ensures uniformity as well as a minimum standard and quality levels. Over the last decade, however, requirements relating to content have tended to be less detailed. Institutions have been given greater scope to organize the programmes of study and the teaching-learning process, and employ the staff and methods deemed most suitable.

The Danish Parliament takes the decisions governing the overall aims of education, and the Minister of Children and Education sets the targets for each subject. It is up to the municipalities and schools to decide how these targets can be attained. While the Ministry issues curriculum guidelines for the individual subjects, these are mostly seen as recommendations and as such are not mandatory for local school administrators; schools are permitted to draw up their own curricula as long as they meet the targets set by the Ministry. However, most schools use the guidelines when they design their curricula. Thus, all municipal schools have common aims and provisions for the subjects that are to be taught and for the organization of the school system. It is the responsibility of the individual municipality to decide how the schools are to actually function within that framework.

The teaching and learning process in years 1-9 is organized around three subject clusters (i.e. subjects in humanities, practical/creative subjects and science subjects) supplemented with elective subjects in years 8 and 9. In addition, the following topics are a compulsory part of the comprehensive school programme: road safety; health and sexual education and family studies; and educational, vocational and labour market orientation. The objective of each individual subject is determined in the mandatory national Common Objectives (introduced in 2003 and revised in 2009), which include the purpose of the subject, the guiding curriculum for all courses and subjects, the objectives to be met (i.e. end objectives) by the end of year 9 and also progressively through key stages of compulsory education (year-level objectives, although for some subjects there are only end objectives). Common Objectives are not provided for every year, meaning that teachers need to translate the content of year-level objectives into an instructional plan over several different years. The Common Objectives set the national educational goals and values by specifying the knowledge and skills that the students are expected to acquire and develop. In 2006, it was further specified that the continuous assessment of pupil performance should reflect the year-



level and end objectives of the subjects. The Common Objectives are intended to provide a framework for the curriculum. The absence of a national curriculum reflects the traditional belief that qualified teachers should own their curricula and syllabi. The legislation states that municipalities should specify and supervise learning targets and frameworks for pedagogical activities. Furthermore, individual student plans are compulsory working tools for teachers to document their evaluation of each student's learning outcomes in all subjects, including a summary of each student's test and evaluation results (national test results are not included, only notes on how these will be followed up). Teachers are obliged to write individual student plans at least once a year for all pupils in years 1 to 7. The plans are combined with student learning plans in years 8 and 9.

The national tests assess students' academic achievement in select subject areas across years 2 to 8, and align the test content with prioritized year-level Common Objectives. The tests started to be officially implemented in March 2010 after a long period of development and piloting since 2006. The tests provide teachers with an effective and free diagnostic tool with rapid feedback on how well their students understand a discrete area of the Common Objectives in a given subject and year. Such information is to be complemented by regular teacher assessment. The tests are computer-based and adaptive, meaning that they are continuously adapted to the individual pupil. If a pupil answers a question incorrectly, he/she is given an easier question; if the answer is correct, the pupil is given a more difficult question. In this way, it is assured that the tests provide a precise picture of each pupil's academic level. No two pupils receive the exact same test. It is therefore not possible to make internal comparative evaluations of the tests within a specific class. Information concerning test results for individual pupils, groups of pupils, teams, classes, schools, municipalities and regions, etc., is to be kept confidential, with the exception of the reporting on the national level. (MOE, April 2011; OECD, 2011).

In general, the Common Objectives provide core content standards that articulate the knowledge and skills that 'teaching should lead towards', but appear to lack performance standards that describe concrete learning goals that students should meet. (OECD, 2011).

Pre-primary education

Early childhood education and care for children aged 6 months to school age is provided in day-care facilities. Attendance is voluntary but the local authorities have to ensure the necessary number of places for the children in their areas, referred to as guaranteed day-care availability. Day-care facilities are under the authority of the Ministry of Social Affairs and Integration and can be set up in various ways, e.g. local-authority child-minding, local-authority day-care centres, independent day-care centres, private child-minding or an approved private day-care centre. Local-authority day-care centres include crèches, nursery schools and age-integrated institutions. Generally day nurseries are for children up to age 3 and kindergartens for children aged 3 to school age. The preschool class for the 6-year-olds has been integrated into the comprehensive school in 2009 and is compulsory.

According to the Day-care Facilities Act of 2007, children in day-care facilities shall have a physical, mental and aesthetical child environment that

promotes their welfare, health, development and learning. Day-care facilities shall cooperate with parents to provide care for the children and support the comprehensive development and self-esteem of the individual child and contribute to the proper and safe upbringing of children. Day-care facilities shall promote children's learning and development of competencies through experiences, play and educationally planned activities that give children room for contemplation, exploration and experience. Day-care facilities shall give children co-determination, co-responsibility and an understanding of democracy. As part of this objective, day-care facilities shall contribute to developing children's independence, skills in entering into committing social relations and solidarity with and integration in the Danish society. In cooperation with parents, day-care facilities shall ensure a good transition to school by developing and supporting basic competencies and the desire to learn. In cooperation with schools, day-care facilities shall create a cohesive transition to school and after-school facilities. (Section 7 of the Act).

Section 8 of the Act stipulates that all day-care facilities shall prepare a written pedagogical curriculum for children aged 0-2 years and for children aged 3 to school age. The pedagogical curriculum shall provide room for play, learning and development of children. The curriculum shall describe the objective of the day-care facility in respect of children's learning within the following themes: comprehensive personal development; social competencies; language development; body and motion; nature and natural phenomena; cultural values and artistic expressions. The curriculum shall describe relevant pedagogical approaches and activities applied to reach the objectives and how to evaluate the curriculum. It shall also specify relevant pedagogical approaches, activities and any objectives set and initiated in respect of children with special needs. For child-minding, the pedagogical curriculum is prepared for all child-minding homes or districts under the local-authority child-minding scheme.

Since August 2007 all local councils must offer all 3-year-olds a language assessment and follow-up, as required. The language assessments are to serve as an extra support tool in the pedagogic work with children's linguistic development.

Many day-care institutions are integrated which means that they consist of two sections, i.e. a nursery and a kindergarten. A child-minder is a private person who takes care of 4-5 children in his/her own home. Nurseries, kindergartens, other day-care institutions and preschool classes are financed by the local authorities from block grants allocated by the state. Parents pay a monthly fee for a place in a day-care institution whether it is nursery, child-minder or kindergarten. The fee is scaled according to the income of the household of the child. Normally, day-care institutions operate from 6:30-7:00 a.m. to around 17:00 p.m. Monday to Friday during the whole year. Some special day-care institutions are open all day and night. Education in the day-care institutions is organized for the children to experience that they are a part of a broader social community. The pedagogues are free to choose content, working methods, didactical material etc., but they must be within the framework of the main themes stipulated in the Day-care Facilities Act. The teaching takes the form of play and other developing activities. The integration of children with special needs in mainstream schools is a central principle. The aim is to offer disabled children or children with particular difficulties a childhood as normal as possible. The children receive more attention, frequently by attaching additional staff to the institution.



Sometimes disabled children are together in a separate group. Pedagogues also have the possibility of consulting specialists. (Eurydice, 2009/10).

The programme of the preschool class (now integrated into the compulsory school) is intended to lay the foundation for the school's educational programme as a whole and create cohesiveness in the transition between a child's daily life at home or in a day-care centre and their school careers as well as between the preschool class and the following school years. The teaching and learning process is not divided by subject and focus on the following compulsory themes which act as a foundation for the teaching programme as a whole: language and methods of expression; the natural world and scientific phenomena; creativity, movement and coordination; social skills; and togetherness and cooperation. Binding descriptions of the contents and objectives connected to each of these themes have been formulated. Moreover, it has been determined that play is to make up a central element of the teaching, with emphasis being placed on the value of playing and learning through playing and play-related activities. (Eurydice, CEDEFOP & ETF, 2009/10). In the preschool class the minimum recommended number of lessons (of 60 minutes' duration) is 600 lessons a year.

According to national data, in 2004 there were 498 nurseries catering to 17,720 children, 2,415 kindergartens with 11,358 children enrolled and 1,865 integrated institutions with a total enrolment of 123,893 children. There were 65,380 children enrolled in the preschool class. The total number of staff (full-time equivalents) in kindergartens was 20,594. More than 99% of all children attended the preschool class, including 93% of all 6-year-olds. (MOE, 2007).

Statistics Denmark reports that the proportion of children in public organized child-care institutions has grown from 30% in 1985 to 62% in 2010. About 97% of all children aged 3-5 (kindergarten age) were looked after by day carers and day-care institutions. In the case of the 0-2-year-olds the percentage was 67%. In 2010 there were: 305 nurseries with 4,724 staff (full-time equivalent) looking after 11,756 children; 1,750 kindergartens with 17,491 staff (full-time equivalent) looking after 82,094 children; and 2,460 age-integrated institutions (age group 0-5) with 36,404 staff (full-time equivalent) looking after 170,157 children. In 2009, a total of 65,162 children were enrolled in the preschool class, of whom 31,467 were girls. (Statistics Denmark, 2011).

Primary and lower secondary education (comprehensive school)

As mentioned, the comprehensive school (*folkeskole*) covers the entire period of compulsory education and is not divided into a primary and lower secondary stage. The comprehensive school consists of a preschool class ('year 0') for the 6-year-olds, the nine-year compulsory programme and a voluntary tenth year. Since August 2009, the preschool class has become part of the *folkeskole* and therefore is compulsory. The first six years are normally for children in the age group 7-12, while years 7 to 9(10) are normally for pupils aged 13-16(17). Compulsory education is also provided by private independent schools, e.g. self-governing institutions ran by parent-elected boards.



At the end of year 9 pupils sit the compulsory school-leaving examinations in seven subjects, of which five are common for all pupils. Successful pupils receive the school-leaving certificate. Pupils can also take a voluntary school-leaving examination at the end of year 10 in several subjects. In year 9 (and also year 10) pupils have also to complete and present a mandatory interdisciplinary project assignment.

Pupils have also to sit ten obligatory national tests during their compulsory education intended to assess the level of acquisition of knowledge and skills. These tests cover the following subject: Danish, with a focus on reading in years 2, 4, 6 and 8; mathematics in years 3 and 6; English in year 7; and geography, biology and physics/chemistry in year 8. Tests in Danish as second language are voluntary. The tests started to be officially implemented in March 2010 after a long period of development and piloting since 2006.

According to the Act on the *Folkeskole* of 2007, the comprehensive school shall, in cooperation with the parents, provide pupils with the knowledge and skills which will prepare them for further education and training and instil in them the desire to learn more; familiarize them with Danish culture and history; give them an understanding of other countries and cultures; contribute to their understanding of the interrelationship between human beings and the environment; and promote the well-rounded development of the individual pupil. The *folkeskole* shall develop the working methods and create a framework that provides opportunities for experience, in-depth study and allows for initiative so that pupils develop awareness and imagination and a confidence in their own possibilities and backgrounds such that they are able to commit themselves and are willing to take action. The *folkeskole* shall prepare the pupils for participation, joint responsibility and understanding of rights and duties in a free and democratic society. The daily activities of the school must therefore be conducted in a spirit of intellectual freedom, equality and democracy. (Eurydice, CEDEFOP & ETF, 2009/10).

As mentioned, the compulsory subjects are organized into three subject clusters/areas: (i) humanities, including Danish, English (in years 3-9), Christian studies, history (in years 3-9), and social studies (in years 8 and 9); (ii) practical/creative subjects, including physical education, music (in years 1-6), visual arts (in years 1-5), and design, wood and metalwork, home economics in one or more years between years 4-7; and (iii) science subjects, including mathematics, natural sciences/technology (in years 1-6), geography (in years 7-9), biology (in years 7-9), and physics/chemistry (in years 7-9). In addition, the following topics are a compulsory: road safety; health and sexual education and family studies; and educational, vocational and labour market orientation. A second foreign language (German or French, required for admission to the gymnasium) has to be offered as an elective subject in years 7-9. Danish as a second language is provided when necessary to non-Danish speaking children in preschool class and in years 1-9. Schools also have to offer pupils in years 8 and 9 a range of elective subjects. The curriculum guidelines specify that Information Technology (IT) must be integrated into all the subjects at all year levels. This means a full integration of IT into the compulsory subjects, three optional IT-related subjects, and requirements regarding an extension of the IT-equipment of the schools. The pupils shall be given the possibility of acquiring basic IT skills and knowledge. The subject Christian studies is taught



through the Evangelical Lutheran Christianity of the Danish national Church. At the higher levels, the instruction shall also comprise foreign religions and other philosophies of life. If requested, a child shall be exempted from participation in classes of Christian studies when the person who has custody of the child submits a written declaration to the head teacher of the school to the effect that he/she will personally assume the responsibility of the child's religious instruction. (Sections 5 and 6 of the Act on the *Folkeskole*).

Pupils having completed year 9 may decide to pursue additional qualifications in the voluntary tenth year. The tenth year can be organized as a whole year programme (i.e. a minimum of 840 hours) or a shorter term programme. The programme consists of a compulsory and an elective part. The compulsory subjects are Danish, English and mathematics comprising half of the total time of the whole year programme (i.e. 420 hours). All pupils must participate in a compulsory programme of bridge building towards a post-compulsory education or combinations of bridge building and unpaid apprenticeship with a perspective of further education. The bridge building programme covers two weeks for tenth year classes which last more than 20 weeks. It is also possible for a pupil to participate in up to four additional weeks of bridge building in connection with vocationally-oriented programmes or in combination with one of these and unpaid apprenticeship with a perspective of further education. The tenth year also consists of a number of elective subjects that can be chosen by the pupil. The programme is based upon the individual pupil's education plan which is prepared during year 9. This plan forms the foundation for organizing the education programme so it meets the needs of the individual pupil. (Section 19 of the Act on the *Folkeskole*).

The guidelines concerning the weekly distribution of lessons in years 1-9 are shown in the table below:

Denmark. Primary and lower secondary education (*folkeskole*): guidelines for the distribution of lessons

Subject	Minimum number of recommended lessons per year								
	1	2	3	4	5	6	7	8	9
Danish language	330	300	270	180	180	180	180	180	180
English language	–	–	60	60	90	90	90	90	90
German/French language	–	–	–	–	–	–	90	120	120
Christian studies	60	30	30	30	30	60	–	30	30
Social studies	–	–	–	–	–	–	–	60	60
History	–	–	30	60	30	60	60	60	30
Physical education & sports	30	60	60	90	90	90	60	60	60
Music	30	60	60	60	30	30	–	–	–
Art	30	60	60	60	30	–	–	–	–
Handicraft, woodwork, home economics	–	–	–	60	120	120	90	–	–
Mathematics	150	150	150	120	120	120	120	120	120
Nature studies/technology	30	30	60	60	60	60	–	–	–
Geography	–	–	–	–	–	–	30	60	30
Biology	–	–	–	–	–	–	60	60	30
Physics/chemistry	–	–	–	–	–	–	60	60	90
Non-teaching social time	30	22.5	22.5	22.5	22.5	30	30	30	30
Min. number of lessons	2,150			2,230			2,520		

Source: Eurydice, 2009/10. Each lesson consists of 60 minutes. The duration of teaching periods in schools is normally 45 minutes. A typical school year comprises 40 weeks.

The Act on the *Folkeskole* outlines the concept of differentiated teaching, which means that the teaching to a greater extent shall be adapted to the individual pupil. In years 1-9/10 the teaching and learning process can be organized in groups within the individual class or between different classes where this is practical and pedagogically justified. At all year levels, the pupils must be taught together for the major part of the school day.

If the pupil's educational needs can not be fulfilled within differentiated teaching and teams, the pupil shall be given special education or special educational support. Special education can be organized in different ways. In most cases, the pupil remains in a mainstream school class and receives special education in one or more subjects as a supplement to the general teaching. A pupil may receive special education that substitutes the pupil's participation in the regular education in one or more subjects. A pupil may alternatively be taught in a special class either within a mainstream school or within a special school. And finally a combination is possible in which the pupil is a member of either a mainstream school class or a special class, but receives education in both types of classes. Special classes exist for pupils with intellectual disabilities, dyslexia, visual handicap, hearing problems, and for students with a physical handicap. In 2007, approximately 3.8% of children received this sort of special education in the public sector. In the private schools the percentage was 0.63%. The provisions of the Act on the *Folkeskole* (regarding aims, curricula, evaluations, tests, school-leaving exams, etc.) apply to all pupils. Accordingly, pupils with special needs are, in principle, met with the same expectations as any other pupil.



Special needs education includes differential teaching, counselling, technical aid and personal assistance. (MOE, 2008).

Pupils are assessed through written individual appraisal plans, national tests at different year levels, and examinations upon completion of year 9 and 10 (examinations at the end of the tenth year are voluntary). Generally pupils progress automatically from one class to the next and repeating a year is very rare. The pupil appraisal plan is to be produced once a year and has to deal with all the subjects in which the pupil receives instruction. The traditional approach has mainly been concentrated on the use of formative assessment, understood as internal school assessments and ongoing assessment of pupil learning outcomes. The changes in the legislation in 2006 entailed more focus on summative assessments. The final examinations were made obligatory, and mandatory national tests have been introduced. In 2006 the continuous assessment of student learning outcomes was combined with the national Common Objectives and a national requirement for individual pupil plans was introduced. In 2009, the regulation on pupil plans was changed with a view to integrate the demand for pupil plans and education plans in years 8 and 9. Besides the final exams, all pupils should be given a continuous assessment mark by the teacher at least twice a year in years 8 and 9 as well as an opinion in the subject physical education. Marks are given according to a 7-point marking scale indicating the performance of the pupil (a mark 4 indicates a fair performance; 7 indicates a good performance; 10 is for a very good performance; and 12 indicates an excellent performance). Furthermore, pupils in year 9 must draft a mandatory project assignment, which is assessed with a written remark and a mark. (MOE, 2011; Eurydice, 2009/10).

The national tests were introduced in 2006 as a consequence of the PISA results somewhat below the expectations and the OECD report on the *folkeskole* (the commissioned review of the *folkeskole* was carried out in 2003). The purpose has been to meet a need for systematic and objective evaluations, which should entail better performance of the pupils. The tests assess the performance and the progress in the different profile areas, which are designed to look as much as possible like the main areas of the Common Objectives. The test results for individual pupils, classes, schools, municipalities and regions are confidential. However, calculations on average performance are aggregated to the national level (national performance profile), where each municipality can view their performance compared to the national average. (MOE, 2011). The tests started to be officially implemented in March 2010 after having been piloted since 2006.

At the end of year 9 pupils sit the compulsory school-leaving examinations in seven subjects. Five of the subjects are compulsory for all pupils: written and oral examinations in Danish; a written examination in mathematics; and oral examinations in English and science/chemistry. Moreover, each pupil must take two examinations that are drawn at random, one from the humanities cluster and one from the science cluster (geography or biology). Pupils can also sit additional examinations on a voluntary basis. Pupils' performance is assessed using the 7-point marking scale. In addition to the results from the final exams, the leaving certificate must contain information about the pupil's participation in the teaching, the most recent ongoing assessment mark, and the opinion in the subject physical education.



Upon completion of the tenth year, pupils may sit examinations in one or more of the following subjects: Danish, mathematics, English, German/French and science/chemistry. Additionally, pupils can choose to sit one or more of the ninth year examinations in Danish, mathematics, English or science/chemistry, or choose a combination of ninth and tenth year examinations. (Eurydice, CEDEFOP & ETF, 2009/10).

In 2003 there were 1,707 comprehensive schools, of which 469 were privately-owned. According to provisional 2003 data, there were 704,238 pupils enrolled, of whom 547,285 in the preschool class up to year 7 and 156,953 in years 8-10. (Ministry of Education, 2005).

Statistics Denmark reports that in 2009 there were 1,899 public (municipal) and 519 private/independent comprehensive schools, and 261 continuation schools (normally covering years 8-10). The total enrolment was 592,742 pupils in public schools (of whom 287,535 were girls), 96,244 pupils in private/independent schools (of whom 48,800 were girls), and 26,855 pupils in continuation schools (of whom 13,449 were girls). Of all students leaving the comprehensive school in 2008/09, about 80% had continued their studies after a period of three months. Some 56% of the students had chosen to attend general upper secondary education (STX, HF, HHX or HTX), while 23% opted for vocational education and training. The educational patterns of young immigrants are different from those of the population as a whole. Fewer immigrants attend upper secondary education, higher preparatory education, or higher commercial education and higher technical education, while more only attend the comprehensive school. These differences are, however, less significant when compared to 2000 levels. It is estimated that children that began preschool in 2008 will proceed through an average of 17 years of full-time education during their lifetime. (Statistics Denmark, 2011).

The Ministry of Children and Education reports that there were 1,408 municipal schools, 527 private/independent schools and 266 continuation schools in 2011. There were also an additional 322 schools with primary and lower secondary education (i.e. municipal youth schools, youth boarding schools and special schools for children, special needs day schools and community homes). Another 95 institutions (i.e. household and needlecraft schools as well as production schools) were also operating within primary and lower secondary education. In 2010, the total enrolment in the compulsory part (preschool class and years 1-9) was 674,528 pupils, of whom 328,872 were girls. An additional 39,121 pupils were in year 10 and other modalities (including year 11 and maritime preparatory course). (Ministry of Children and Education, 2012).

Upper secondary education

Post-compulsory (upper) secondary education comprises: general upper secondary education provided in the gymnasium (or STX programme), the higher preparatory examination (or HF programme), the higher commercial examination (or HHX programme), and the higher technical examination (or HTX programme) The gymnasium offers a three-year programme leading to the upper secondary school-leaving examinations, which qualifies for admission to higher education. The full-time HF programme lasts two years and is for students who have completed the



voluntary tenth year of the comprehensive school. Both the HHX and the HTX programmes are of three years' duration and also qualify for admission to higher education. The STX and HF programmes consist of a broad range of subjects in the fields of the humanities, natural science and social science. The HHX programme focuses on business and socio-economic disciplines in combination with foreign languages and other general subjects. The HTX programme has its focus on technological and scientific subjects in combination with general subjects. Attendance at public-sector schools is free of charge; some small fees can be applied for materials.

Initial vocational education and training (IVET) qualifies primarily for access to the labour market and also for continued education. It comprises training programmes in the commercial, technical, social welfare and health, agricultural and maritime fields. Since 2008/09 IVET consists of twelve basic courses which can provide access to 110 more specialized main courses offered in different colleges. Alternative pathways which begin with a period of training within an enterprise require an apprenticeship contract prior to admission. The typical duration of IVET is three to four years, alternating between school-based and workplace training, but it may vary between one and a half to five and a half years. (Ministry of Children and Education, 2012). At the end of the programmes trainees have to pass a practical and theoretical examination for the award of the journeyman certificate. In addition, basic vocational training (EGU) is offered to unemployed young people aged less than 30 years who have not completed another form of education or training. Training is full-time and primarily practical and generally lasts two years, combining school-based and workplace training.

The four upper secondary programmes share the same common objectives, i.e. to prepare young people for higher education and ensure that they acquire general education, knowledge and competencies by means of the subjects they study and in the interaction between them. The focus of the STX programme is on general education and general study preparation. The academic standard is closely linked to aspects of the academic subjects, and the students are to achieve general education and study competence in the humanities, natural science and social science. The focus of the HF programme is both theoretical and practical. It aims to develop the students' capacity for in-depth study and their understanding of the connections between the subjects and to promote the individual students' responsibility for his/her own and joint results. The students are expected to attain analytical and critical skills, achieve insight into natural science, social science and humanities, and develop their linguistic competences. The HHX and HTX programmes have a more pronounced vocational perspective. The focus of the HHX programme is on business economics and socioeconomics combined with foreign languages and other general subjects. In the HTX programme the focus is on technology and natural sciences combined with other general subjects. The programmes are to develop the students' capacity for in-depth studies and their understanding of theoretical knowledge as tools for analyzing concrete issues.

Academically-oriented general upper secondary education is provided by gymnasia. Most of the institutions offering the full-time two-year HF programme are attached to gymnasia; some institutions are attached to colleges of education and adult education centres. The HHX programme is offered at business colleges, while the



HTX programme is provided by technical colleges. In 2007 the gymnasia and the institutions offering the HF programme, which were formerly organized within the framework of 14 counties, were converted into self-governing institutions funded by the state. Business and technical colleges were already self-governing institutions. (Eurydice, 2009/10).

The Act on education for young people with special needs was passed in June 2007. This Act addresses primarily young persons who are mentally handicapped or persons with special needs, who are not able to complete the mainstream education programme for young people. The main purpose for the young person is to attain personal, social and—to the extent possible—vocational competence in order to be an active and independent citizen in adulthood. This provision is a legal claim and is offered after the compulsory *folkeskole*. It consists of three years of training and can be attended until age 25. The young person has to complete the training within five years. (MOE, 2008).

Production schools are independent institutions with statutes approved by the local authority that provides the school's basic grant. The local labour market organizations (social partners) must be represented in the school board, and the board can include representatives of the municipality (or municipalities) providing the basic grant. The target group is young people under the age of 25 who are not motivated or not qualified for enrolling in an ordinary youth education programme or who have dropped out of or not completed a youth education programme. Production schools may only admit a participant with a state grant when the Youth Guidance Centre has assessed and identified that the young person belongs to the target group of the production schools. Under normal circumstances, the individual student is entitled to a maximum of one year at a production school. (*Ibid.*).

Until 2005, the gymnasium was divided into a languages stream and a mathematics stream, each with three main fields of study. The programme comprised compulsory subjects for all students in the stream chosen and a number of optional subjects at two levels: an advanced and an intermediate level. The compulsory subjects in both streams were: biology, classical studies, religious education, Danish, English, geography, history, music, visual arts, and physical education and sport. At least two of the subjects were to be taken at the advanced level.

A major reform of upper secondary education (i.e. STX, HF, HHX and HTX programmes) was implemented in 2005. The reform was based on the following principles: the enhancement of students' knowledge, proficiency and skills; consolidating students' skills in order to better prepare them for higher education; boosting cooperation between teachers in different subjects; updating cultural and general educational concepts (common reference framework); and flexibility, including interconnections between the different programmes. Concerning the three-year programmes, an important structural change consisted in the introduction of a six-month basic programme common for all students, followed by two and a half years of specialised studies. In addition, an increased focus on natural sciences and new forms of testing and examination has been introduced. In the case of the two-year HF programme students follow an introductory period lasting approximately four weeks and then they choose electives among those offered by the school.



With regard to the STX programme, the basic programme of six months' duration is intended to give the students an academic insight and understanding and an introduction to the working methods of the gymnasium. This period is the basis of the students' choices of further specialization in one of the supplied fields of study. The main subjects are Danish, English, a second foreign language, history, arts, mathematics, science, a science basis course, social science and a general linguistic course. All public gymnasia must supply at least four different fields of study, where at least one is mainly humanities or languages, one is mainly in social science and one mainly in science. The specialized study programme covers two and a half years. Subjects are offered at three levels (i.e. A, B and C), where A is the highest level. At the end of the third year all students must have at least four A-level subjects, normally three B-level subjects and normally seven C-level subjects. Each student chooses a specialized study programme consisting of a package including three subjects. The typical student selects packages consisting of three A-level or two A-levels together with a third subject at B- or C-level. However, specialized study programmes can also be offered consisting of one A-level subject together with a B-level subject and a third subject at B- or C-level. The packages are drawn up and offered by the individual school, and the number of different programmes varies from school to school. Each student writes a specialized study project in the third year within two or three subjects of their choice. All students also receive instruction in electronic data processing. The compulsory subjects are the following: Danish, English, a second foreign language, physics, history, physical education and sport, an artistic subject, mathematics, classical studies, religion, and social science. Concerning biology, chemistry and geography, two subjects at least a C-level must be part of the fields of study. With regard to biology, physics, chemistry and geography, one subject must be completed at least at B-level, except for students who have four foreign languages. The supply of optional subjects varies depending on the institutions size and the teachers' academic qualifications. In the course of a week during the third year (between mid-November and mid-March), each student has to prepare a specialized study project. The assignment is to be elaborated in a topic of the student's own choice within two or three of the subjects taught in the third year. Overall, students complete a minimum of 2,470 hours over the three-year programme. (Eurydice, 2009/10).

The two-year HF programme is comprised of common core subjects, groups of subjects and elective subjects which can be freely combined. The programme is organized as single subjects, in groups of subjects and in a number of interdisciplinary and single subject projects. As in the case of the gymnasium, subjects are offered at three levels (i.e. A, B and C). The programme also includes a major written assignment and a written examination project, which is to be completed in the second year. All students also receive instruction in electronic data processing. Core subjects include: Danish, English, physical education and sport, mathematics and one subject to be chosen among dance, design, drama, media and music. The cultural and social science group includes history, religion and social science. The science subject group includes biology, geography and chemistry. The institution must provide a range of optional subjects at least at B- and C-level. All students also receive instruction in electronic data processing. Overall, students complete a minimum of 1,625 hours over the two-year programme.

The HHX and HTX programmes follow the same general structure as the STX. A study field course consist of compulsory subjects and study field subjects



along with optional subjects and a timeframe for cooperation and coherence among the subjects. Subjects are offered at three levels. Each student chooses a specialized study programme consisting of a package with three subjects. The typical HHX/HTX student selects packages consisting of three A-level or two A-levels together with a third subject at B- or C-level. However, specialized study programmes can also be offered consisting of one A-level subject together with a B-level subject and a third subject at B- or C-level. The packages are drawn up and offered by the individual college, and the number of different programmes varies from college to college. In the case of the HHX programme, the introductory period comprises: Danish, English, mathematics, a second language and multi-subject coursework consisting of commercial, socioeconomic and culturally-oriented themes. The specialized study programme consists of compulsory subjects and a range of optional subjects. Compulsory subjects include: marketing, Danish, English, business legislation, a second foreign language, international economics, mathematics, social science, contemporary history, and business economics. Overall, students complete a minimum of 2,470 hours over the three-year programme. Concerning the HTX programme, the introductory period comprises: Danish, English, mathematics, a second language and multi-subject coursework consisting of technology, social science and scientifically-oriented themes. The specialized study programme consists of compulsory subjects and a range of optional subjects. Compulsory subjects include: biology, Danish, English, physics, chemistry, communication/IT, mathematics, social science, technical science, technology, and history of technology. Overall, students complete a minimum of 2,630 hours over the three-year programme. (*Ibid.*).

Initial vocational education and training (IVET) programmes consist of a basic course, which is the introductory part of the programme, and a main course, which makes up the remainder of the programme. The introductory part last no longer than two years, and is a general introduction aimed to give young people personal, social and technical qualification. Basic courses are school-based and completed with the award of a certificate required for admission to the main course. For technical study programmes the basic course encompasses 20 to 60 weeks, while the basic course for the commercial programme lasts two years. The main course consists of both school-based education and practical training and requires that the student concludes a training agreement with a business enterprise or is admitted to the school-based practical training scheme. The main course begins with a practical training period. Following the 2001 reform, the introductory parts of IVET programmes were merged into a limited number of flexible common access routes. In 2008/09 the former seven access routes were replaced by 12 new access routes (study directions). Each of the access routes leads the participant to some 110 more specialized VET programmes. There are four main VET areas: commercial and technical training programmes; social welfare and health training programmes; agricultural training programmes; and maritime training programmes (under the jurisdiction of the Danish Maritime Authority). All programmes include an area of specialization (there are 308 'specialties') qualifying for entry to a specific area of the labour market. In addition to these specialized subjects, students are taught area subjects, i.e. broad professionally-oriented subjects, and basic subjects, i.e. more general subjects such as mathematics or Danish. These basic subjects are also vocationally oriented, with content varying between the different programmes. Students are assessed within all of these areas along the way through a variety of oral and written examinations, and both theoretical and practical project work. There are both subject-specific examinations (e.g. English



or mathematics) and broader assessments considering the student's abilities to combine skills, competences and knowledge acquired from the programme as a whole. The basic course is completed through project work and an assessment with an external examiner. The final examination varies from programme to programme. In some cases (most common) it will comprise a combination of a college-based examination and a journeyman's test, in others only the journeyman's test conducted by the trade committees. In almost all cases, external examiners from the specific trade are involved in the assessment. (CEDEFOP, 2010).

In STX, HHX and HTX programmes the aim of the continuous evaluation is to guide the student and the teacher with a view to the further planning of the instruction. The evaluation of the individual student's achievement in the subjects includes: marks for the year's work, examination marks, term marks and testimonials. Marks for the year's work which appear on the student's examination certificate are given at the end of the school year in which instruction in the subject concerned is concluded. Marks for the year's work are given by the subject teacher and reflect the subject teacher's appraisal of the student's level of attainment at the end of the year. Term marks are given in those subjects in which marks for the year's work are given. Term marks are given twice during the school year and in the case of subjects which are to be continued in the following year, also at the end of the school year. These marks may be accompanied by a written testimonial as to the student's aptitude for, and work with, the subject concerned. If the mark given is under 02 (i.e. a performance meeting only the minimum requirements according to the 7-point marking scale), it must be accompanied by a testimonial and the same applies if the mark is two marks or more lower than that given at the previous evaluation. A total of ten examinations must be taken in order to pass the complete examination, of which up to three may be taken after the first and second years. After the third year, all students take a written examination in Danish and in the subjects chosen at the higher level. The number of oral examinations varies for the individual student in accordance with the number of subjects chosen at the higher level.

Written examination questions are produced by the Ministry of Education's Department of Upper Secondary Education. For each subject, there is an examination committee consisting of hand-picked teachers and the Department's subject advisers for the subject in question. Oral examinations are held in subjects selected (at random) by the Department of Upper Secondary Education for each individual school. Students are given a mark (according to the 7-point marking scale) for the year's work as well as for their achievement in the examinations. The average of the two sets of marks is then the student's examination result. The minimum pass mark is 02. Written examination papers are marked by two external examiners. At oral examinations, the teacher and one external examiner together decide on the mark to be given. The external examiner has the last word. Students who have passed the final examination receive a certificate which contains the following information: all marks for the year's work; examination marks, including marks for the year's work in subjects in which there has been no examination; the two average figures; and the examination results.

A complete HF examination requires an examination in the compulsory subjects Danish, English and mathematics along with one of the following subjects: Dance, design, dramatics, media and music. It also requires a joint oral examination in the culture and social science subject group and a joint oral examination in the natural

science subject group. Furthermore, it also requires an examination in two to four optional subjects.

Statistics Denmark reports that in 2009 there were 169 general upper secondary schools (gymnasia); a total of 126,112 students were in general upper secondary education (of whom 68,564 were girls) and 129,304 students were in vocational education and training (of whom 56,497 were girls). About 16% of students who graduated from general upper secondary education in 2008/09 continued their education immediately after completing the programme. The proportion of graduates who continued their education immediately after graduating from vocational general upper secondary education was 32%. Since 1999, the number of students attending vocational education and training has increased by 3.2%. (Statistics Denmark, 2011).

The Ministry of Children and Education reports that in 2010 there were 131,505 students in general upper secondary education (of whom 70,346 were girls) and 128,238 students enrolled in initial vocational education and training (of whom 56,717 were girls). With regard to IVET students, 46,119 (including 19,519 girls) were enrolled in the basic programme, 79,467 students (including 36,374 girls) were in the specialized programme, and 2,652 (including 824 girls) were in other IVET programmes. The number of general upper secondary schools in 2011 was 149. In 2010, the overall completion rate was 86% in general upper secondary education (88% for girls, 84% for boys and 78% in the case of students of ethnic origin other than Danish). Concerning IVET, the overall completion rate was 54% (57% for girls, 52% for boys and 44% for non-Danish students); the completion rate was 72% in the basic programme (75% for girls, 71% for boys and 63% for non-Danish students), and 81% in the specialized programme (the same percentage for boys and girls and 77% for non-Danish students). (Ministry of Children and Education, 2012).

Assessing learning achievement nationwide

The Danish Evaluation Institute (EVA) was established in 1999 as an independent institution under the then Ministry of Education with the task to undertake systematic and mandatory evaluations of the teaching and learning process at all levels of the education system. The Council for the Evaluation and Quality Development of Primary and Lower Secondary Education has the competence to decide which evaluations are to be carried out by the Evaluation Institute in the *folkeskole* area. The National Agency for Quality and Supervision is responsible for implementing national tests in the *folkeskole* and supervising the municipalities, which are obligated to produce yearly quality reports. The Accreditation Agency for Higher Education contributes to ensuring the quality and relevance of higher education through the accreditation of university education programmes within the fields of competence of the Ministry of Science, Technology and Innovation. (Eurydice, 2009/10).

“Denmark has shown heightened interest in international benchmarks of student performance over recent years. Participating in the OECD’s Programme for International Student Assessment (PISA) of 15-year-old students since its inception in 2000, Denmark has recently administered tests to younger students (year 4) by the International Association for Educational Achievement’s (IEA), including the Progress in Reading Literacy Skills (PIRLS) survey and the Trends in Mathematics



and Science Skills (TIMSS). Denmark also supports international comparisons on non-cognitive outcomes, including its participation in the recent IEA International Civic and Citizenship Education Study (ICCS 2009). Additionally, Denmark has participated in international surveys on ICT use and the OECD's Teaching and Learning International Survey (TALIS). Outcome measures offered by participation in international studies have been the major indicators of performance in compulsory education in Denmark. In particular, the PISA results were very much driving educational policy deliberations in the absence of national measures." (OECD, 2011).

The PISA studies have repeatedly disclosed that the performance of Danish students in the *folkeskole* is below the national ambition. The Danish students performed in PISA 2006 by average in reading literacy and in science, and above average in mathematics. Given that primary and lower secondary education is a national priority, this is far from satisfactory. The focus on system evaluation has become more pronounced in the recent years, and particularly after the publication of the first PISA results and the OECD review of the *folkeskole*. The overarching rationale for the current approach to school assessment in Denmark is that evaluation constitutes an important stepping stone for developing and improving school performance. As such, the rationale reflects the national policy priorities in the area of evaluation and assessment that were motivated by the unsatisfactory performance of the Danish *folkeskole* in the PISA studies. The political response to the PISA studies came in the form of new legislation aiming to ensure that evaluation and school assessment practices were comprehensive, effective and timely. This shift was in part motivated by the unsatisfactory results in international comparisons, but also inspired by the 2004 OECD review that emphasized a need for a stronger and more systematic approach to the ongoing assessment of school quality. The rationale is that municipalities are awarded increased local freedom in planning and maintaining the quality in their schools, while at the same time required to provide and making public adequate documentation on school performance. (MOE, April 2011).

In 2006, Denmark participated in the third PISA study, which tested 15-16-year-old students' competences in natural sciences, reading skills and mathematics. The results showed that Denmark has improved in natural sciences compared to PISA 2003. Denmark had an average of 496 points in a group of countries with an OECD average of 500 points. The Danish girls have earlier performed remarkably worse than the boys in natural sciences, but the difference between boys and girls has decreased since 2003. The social background plays a relatively important role in the students' academic performance in natural sciences, and the significant difference between native Danish students and bilingual (immigrant) students contributes to this. However, the importance of social background in relation to the academic performance in natural sciences was less significant in 2006 than in 2000. The results for reading showed that there still are many Danish students with insufficient reading skills and a few really good readers at the end of the *folkeskole*. In 2006, 16% of the students were without a functional reading competence, while the percentage in 2003 was 17%. In all countries girls read better than boys; in Denmark, however, the difference is the third smallest. In mathematics the Danish result was on the same level as the result in both PISA 2000 and 2003. The results were significantly above the OECD average. Denmark ranked 10 in 2006 (12 in 2003). The number of students with really good competences in mathematics was 14% in Denmark compared to 11% in the OECD area. The difference between boys and girls in Denmark is



approximately around the average for all the OECD countries. This difference has lessened since 2003. (MOE, 2008).

“Denmark increasingly makes use of special thematic evaluations or studies to bring more information at the system level. A notable example is the nation-wide research project in 2005 involving a special administration of the PISA test on a sample of 4,000 students with an overrepresentation of students with a migrant background (i.e. PISA Ethnic). The study aimed to further elucidate on factors associated with observed performance gaps in the PISA 2000 and 2003 surveys. Subsequently, Denmark also participated in the OECD Review of Migrant Education. For the PISA 2009 survey, Denmark chose to oversample students with a migrant background and, therefore, was able to conduct an in-depth examination of their performance and learning profiles compared to those of native Danes based on the main survey outcomes. The PISA 2009 results released in December 2010 confirmed Denmark’s average position internationally in terms of student mean performance in reading at the end of compulsory education. International evidence on student performance in primary education (year 4) is slightly more encouraging: mathematics and science results from the TIMSS 2007 assessment were above the international average. At the same time, Denmark is justifiably proud that its students lead the international pack in terms of civic knowledge. PISA 2009 confirmed that compared to other countries, there are fewer students in Denmark who are unable to perform the most basic reading tasks and the proportion of low performing students has decreased since 2000. The between-school variation of performance in Denmark remains lower than the OECD average, which indicates that the specific school a student attends has less of an impact on how the student performs in Denmark than is the case internationally.” (OECD, 2011).

“A total of 5,924 15–16-year old students from 285 schools participated in the Danish part of PISA 2009, and the survey covers both public and private schools. Data were collected from a particularly large number of schools with bilingual students to enable in-depth analyses of these students’ backgrounds and competencies. Approximately 8% of students were excluded from the Danish PISA testing due to academic, social or physical disabilities. Denmark has excluded more students than any of the other 64 participating countries. There are no clear explanations as to this high exclusion rate in Denmark. The overall results from the PISA 2009 study showed that students in Denmark obtained an average score of 495 points, which was not significantly different from the OECD average. This average position has been retained since the first PISA test in 2000. In 2009, 15% of the participating Danish students were below level 2 (i.e. without functional reading competencies), which was slightly below the OECD average of 19%. Yet, since Denmark has excluded more students than the OECD average, the actual percentage of Danish students below level 2 may be somewhat higher. As in other countries, the Danish PISA results show a strong positive relation between reading engagement and reading scores. Reading was the main cognitive domain in both PISA 2000 and PISA 2009. In both test rounds, the data revealed rather substantial differences in the academic performance between native Danish and immigrant students. In PISA 2009, 13% of the native students had reading skills below level 2, while 43 % of first-generation immigrant students and 32% of the second-generation students were below this level. This was an improvement since PISA 2000 where the proportion of poor readers constituted 17% among native Danes and 49% among immigrants. It should be kept in mind, however,



that the percentage of excluded students was 5 percentage points higher in 2009 than in 2000. It is a distinctive result from the Danish PISA Ethnic 2009 study that students with an immigrant background obtained lower cognitive results compared to native Danish students. The evidence from PISA Ethnic 2009 suggests that schools with a very large proportion of bilingual students face challenges not only related to students' relatively weak socio-economic backgrounds, but also in relation to establishing conducive learning environments." (N. Egelund & C. Pohl Nielsen in: Nordic Council of Ministers, 2012).

"Both PISA 2009 and PISA 2000 contain rather substantial differences between native and immigrant students. The differences between native and immigrant students are greatest in science (about 90 points), least in mathematics and reading (about 70 points). With regard to reading, immigrant students score 5 points higher in Information and 8 points lower in Reflection in 2009 compared to the PISA 2000 results. Overall, the results show that the gap between native and immigrant students from 2000 to 2009 has been reduced by 7 points for reading, increased by 7 points for science, while no substantial difference is seen for mathematics. All in all, the results are therefore not uplifting considering that in the previous nine-year period a major effort has focused on raising competences of immigrant students, partly in connection with teaching in Danish as a second language and partly in connection with a stronger assessment culture. However, we must bear in mind that while native students comprise a relatively homogeneous group, the group of immigrant students is far more heterogeneous, as the groups seeking asylum are constantly changing." (Egelund, 2011).

"At the end of compulsory education, there is a comparatively small proportion of Danish students demonstrating excellence as measured by the PISA tests: 4.7% of Danish students performed in the top two performance levels in the PISA reading tests, compared to 7.6% on average in the OECD countries. Further, Denmark has lost ground here: while internationally there was a small decline in the proportion of students performing in the top two reading levels between 2000 and 2009, this decline was more pronounced in Denmark. Similarly, there was a decline in the proportion of Danish students performing at the top level in the mathematics test between 2003 and 2009, but the proportion of Danish top performers in science remained stable between 2006 and 2009. In fact, put simply, there are too few Danish students demonstrating competence on the more challenging tasks and problems in the international tests (25.6% of Danish students perform in the top three reading levels, compared to 28.3% of students on average in the OECD)." (OECD, 2011).

"Since 2006, the national monitoring system for compulsory education has been considerably strengthened by the inclusion of national data on student outcomes. The publication of final examination results in years 9 and 10 alongside teacher-awarded final grades serve as the major indicators of overall quality in the *folkeskole* and are bolstered by transition statistics showing student destination three months after completing year 9. Compulsory national tests were successfully run for the first time in 2010. A 'national performance profile' was drawn up in December 2010 presenting for each of the 10 tests a breakdown of student performance in three distinct areas of the test, plus their overall performance on that test. For example, for the four Danish reading tests (in years 2, 4, 6 and 8) there are results for how Danish students performed on average in 'language understanding', 'decoding', 'text

comprehension' and an 'overall assessment' (average performance over the three areas of the test). This 'average score' will allow comparisons of Danish student performance on the ten tests over subsequent years. In addition, results are reported in five distinct performance categories. The national performance profile is designed to show how student performance evolves over the years. Municipalities have access to national test results for all schools in their jurisdiction and aggregated results for the municipality and can compare these to the national profile. Further, such results will be adjusted for student factors such as gender, ethnic background, parent's education and socio-economic status. Largely influenced by a review of the *folkeskole* commissioned by the Prime Minister in early 2010, the government proposes a reform aiming to strengthen academic performance by giving more freedom to schools in return for an increased focus on results, in particular, the publication of national test results for schools." (*Ibid.*).

Due to international developments it can be anticipated that there will be increased interest in the results of education and in creating a higher degree of transparency of education quality across borders. There will be a need for quality definitions which are understandable and acceptable across borders, and it will be necessary to develop other ways of describing quality than in terms of fitness for purpose. One of the means to obtain this higher level of transparency is through predefined criteria as the basis for evaluations; another is to focus on output measures, where it is easily identifiable whether expected targets have been met. There will be continued focus on the procedures set up by the institutions themselves to continuously check and improve the quality of their activities and structures. Consequently, there will be a need for external quality assurance to check the effectiveness and sustainability of these internal mechanisms and to undertake measures that give an input to the improvement activities initiated by the institutions through audit activities. However, that will not be sufficient due to the European, or even international, demand for comparable assessment of quality. With the increased international dimension in education, educational systems are becoming more and more complex. Therefore, there will also be a future need for broadness in the foci of evaluations and in the corresponding methodological elements applied to assess these foci. (Eurydice, 2009/10).

Teaching staff

The training of teachers takes place at the higher education institutions. Pre-primary and comprehensive school (*folkeskole*) teachers are trained at university colleges. Upper secondary school teachers are generally trained at universities. Vocational teacher training is basically a pedagogical course supplementing the technical skills and practical work experience of skilled workers who want to become teachers. Vocational teacher training takes place at the National Institute for the Educational Training of Vocational Teachers (the DEL) which has five regional departments so that teacher training can take place geographically close to the vocational colleges. The Institute for General Upper Secondary Education (DIG) at the University of Southern Denmark carries out research and runs a researcher education programme in the subject didactics and general pedagogy in relation to the general upper secondary area (i.e. gymnasium, HF, HHX and HTX programmes) and in this connection offers professional subject didactical and pedagogical in-service training for teachers and future teachers as well as management.

Pre-service teacher training programmes vary in content and duration according to the educational level considered. In order to be employed as a pre-primary teacher, candidates must have completed a Bachelor of Social Education programme, whose duration is normally three and a half years. *Folkeskole* teachers must have completed a four-year Bachelor of Education programme. In order to be considered for a teaching post in general upper secondary education, candidates must have completed a five-year (i.e. long-cycle) university degree programme within the subject-range taught at this level. In addition to what applies to teachers in vocational education and training, subject teachers in the vocational upper secondary programmes must hold a university degree at master's level (i.e. a degree from a business school or university or a degree in engineering), if possible supplemented with subject-specific knowledge acquired through employment or subject-specific in-service training. The teachers of vocational subjects must have a vocational training qualification and a minimum of five years of practical work experience within the field of the subject they teach. The teachers of general subjects must have a university degree in the subject they teach and a minimum of two years of relevant work experience.

Concerning teachers in upper secondary education, in addition to the subject-related education, there is the pedagogical education (i.e. the *paedagogikum*). According to the legislation, it is the aim of the *paedagogikum* that student teachers shall acquire the theoretical and practical educational basis that enables them to work as teachers at a gymnasium or an HF programme. The *paedagogikum* is a sandwich education, which is organized over the span of a year and requires an employment. A teacher has to complete a *paedagogikum* in all his/her subject-related courses.

The pre-service training programme for pre-primary teachers alternates between theoretical education at the university college and teaching practice at an institution, comprising a total of 64 weeks' practical training during the programme. The programme includes the following subjects: pedagogy (43 ECTS credits); Danish, culture and communication (28 credits); the individual, institutions and society (18 credits); the main subject (30 credits); practical training (74 credits); and specialization (a total of 35 credits). The training programme comprises a specialization. The work shall be organised in a way so that it corresponds to a ten-week working period for the student. It is the objective of the specialisation that the student: acquires insight into a delimited central area or problem of both a theoretical and a practical nature within the chosen pedagogical field; acquires skills in compiling, processing and using relevant information; and acquires skills in conveying his/her own professionally motivated opinions. Before the conclusion of the programme students must complete a bachelor's project corresponding to 12 ECTS credits. (MOE, 2008; Eurydice, 2009/10).

In March 2006, the reform of the pre-service teacher training for the *folkeskole* was adopted, effective from January 2007. The major changes introduced include: two or three main subjects instead of the existing four subjects; the general strengthening of natural sciences; more emphasis on didactic training; more strict admission requirements; and compulsory attendance during the first year. The programme includes the following subjects: pedagogical subjects (didactics, psychology and pedagogy); Christian studies, philosophy, citizenship education; the main subject; the bachelor's project (10 ECTS); and teaching practice (36 ECTS). Students are required

to choose between the following main subjects: Danish, mathematics, nature/technology or physics/chemistry. Students are then also required to choose one or two main subjects from among the humanities subjects, the science subjects and the practical/creative subjects. The two or three main subjects correspond to a total of 144 ECTS credits. (MOE, 2008).

The *paedagogikum* consists of two parts. The first part, the practical *paedagogikum* in each subject, is carried through over a five-month period, normally in the same semester. The total number of teaching and observation lessons is approximately 60 lessons in each subject. The teaching practice is carried through in a number of classes or groups which the candidate is attached to. The teachers of the practice class function as tutors to the candidate. As an element of the practical *paedagogikum*, the candidate must to an adequate extent participate in general pedagogical tasks at the school. The second part, the theoretical *paedagogikum* consists of a general pedagogical course and a subject specific pedagogical course. The general pedagogical course normally consists of two residential courses of four or five days' duration and is divided into two modules, one at the beginning and one at the end of the *paedagogikum*. It is organized with the purpose of obtaining a close interaction between the theoretical courses and the practical work of the candidate. The course alternates between theory and practical exercises. The course comprises the following topics: (i) the aims of the general upper secondary education programmes, the teaching in the gymnasium and HF including the subject range and the general qualifications, the historical development of the gymnasium and HF and the value basis of the programmes; (ii) the participants in the teaching and learning process; (iii) general didactics and methodology; (iv) pedagogy and values. The subject-specific pedagogical course is usually placed after the first module of the general pedagogical course.

The decision-making bodies for teachers' conditions of service are the relevant organizations representing the employers and teachers, involved in the collective bargaining that takes place every second year. The bodies involved in the conditions of service of *folkeskole* teachers are the National Association of Local Authorities and the Danish Union of Teachers. Rules applying to the conditions of service of teachers can be found in several Acts (including the Act on Salaried Staff, the Holiday Act, Act on child-minding leave, etc.) and in the different collective agreements between the employing authorities and the relevant professional organizations. In general, vacancies are advertised publicly in relevant fora. Pre-primary teachers are employed on a group contract basis with a civil-servant-like status. *Folkeskole* teachers are employed on a group contract basis. Gymnasium and HF teachers are normally employed on a group contract basis. Almost all HHX and HTX categories are employed on civil servant-like conditions, which in this case are quite similar to those of the group contract, and some are employed as civil servants. In vocational training almost all categories are employed on civil servant-like conditions.

As regards teachers' workload, the maximum number of working hours for teachers in nurseries, kindergartens and 24-hour institutions is 37 hours per week (or 1,924 hours a year including public holidays). The annual number of working hours for *folkeskole* teachers amounts to 1,924 hours (including holidays and days off) corresponding to 37 weekly hours on the average. Working hours include teaching (lessons), preparation time and other tasks. The preparation time is fixed

proportionally in relation to the teaching time with the factor 1:1. Concerning upper secondary school teachers, the annual number of working hours is 1,680 hours, including teaching, preparation, planning, pedagogic and pedagogic-administrative tasks. The same applies to vocational education teachers. At most higher education institutions there is a 37-hour working week. The retirement age is 65 years, but it is possible to retire at 70.

Teachers are free to participate in in-service training activities and promotion is not conditional on having taken part in in-service training. In the case of pre-primary teachers, the decision-making body in this area is the municipal in-service training committee. In-service training courses are held in many different places, e.g. teacher training colleges, the Danish University of Education and under the auspices of the professional organizations. In-service training for *folkeskole* teachers is primarily organized by the Danish University of Education and by Centres for Higher Education, specialized colleges, teacher's associations, other professional associations as well as the Ministry of Children and Education. In-service training activities are provided both at regional and at national level. The in-service training offered to *folkeskole* teachers by the Danish University of Education covers all subject areas and all activities in the *folkeskole* with the exception of physical education and handicraft. In recent years, these courses have been offered on a part-time basis. Most of the courses involve between 60 and 175 hours over approximately 30 weeks. The course schedule is organized to allow teachers to continue their professional activities. Colleges of education organize part-time in-service training courses involving between 40 and 150 hours. In the case of gymnasium and HF programme teachers there is a long tradition of in-service training being organized in cooperation between the professional organizations and the Department of General Upper Secondary Education. The Ministry has set up committees for each subject area, which, in conjunction with the professional associations, offer courses aimed at teachers responsible for these subjects. These training courses are offered at both regional and national level. (Eurydice, 2009/10).

In 2008/09, at the primary and lower secondary level there were 66,364 teachers, 4,018 preschool teachers, 5,389 head masters, 172 consultants, and 6,460 social educators. Women represented 67% of the total number of staff. (*Ibid.*).

“There are no national requirements for teacher appraisal. This is conducted on a voluntary basis and practices are defined locally, usually by the school. The main tradition is for teacher self-appraisal and also feedback from school principals. Teacher appraisal remains very much an internal school matter. According to Danish teacher reports in the Teaching and Learning International Survey (TALIS, implemented in 2007/08, covering lower secondary education and with the participation of 23 countries), appraisal by an individual or body external to the school is not a common practice. TALIS results indicate that the external appraisal of teachers takes place more frequently in private independent schools and independent boarding schools for lower secondary students than in the public schools. Some form of appraisal of and feedback to teachers seems to take place. However, according to TALIS only 14.2% of teachers of lower secondary education reported never receiving appraisal and/or feedback from the principal about their work. About 68% of teachers of lower secondary education reported receiving such appraisal and/or feedback at least once a year.” (OECD, 2011).



“According to TALIS, in 2007/08, 75.6% of Danish teachers of lower secondary education undertook some professional development in the previous 18 months.” (*Ibid.*).

References

CEDEFOP (European Centre for the Development of Vocational Training). *Denmark. Vocational Education and Training (VET) in Europe. Country Report 2010*. Prepared by ReferNet Denmark.

Danish Eurydice Unit. *The education system in Denmark 2004/05*. Prepared for Eurydice/Eurybase, 2005.

Danish National Commission for UNESCO and the Ministry of Education. *The Development of Education. National report of Denmark*. Presented at the 47th session of the International Conference on Education, Geneva, 2004.

Danish National Commission for UNESCO and the Ministry of Education. *The Development of Education. National report of Denmark*. Presented at the 46th session of the International Conference on Education, Geneva, 2001.

Danish National Commission for UNESCO and the Ministry of Education. *Development of Education 1994-1996. National report of Denmark*. Presented at the 45th session of the International Conference on Education, Geneva, 1996.

N. Egelund; C. Pohl Nielsen and B. Schindler Rangvid. *PISA Ethnic 2009. Ethnic and Danish young people's results in PISA 2009. (English summary)*. (Full report in Danish only). AFK, Copenhagen, April 2011.

EURYDICE. *National system overview on education systems in Europe: Denmark*. European Commission, 2011 edition, November 2011.

EURYDICE. *Organization of the education system in Denmark*. European Commission, 2009/10 edition.

EURYDICE. *National summary sheets on education systems in Europe and ongoing reforms: Denmark*. September 2009.

EURYDICE. *Focus on the structure of higher education in Europe 2006/07. National trends in the Bologna Process*. EURYDICE European Unit, Brussels, March 2007.

EURYDICE, CEDEFOP and ETF. *Structures of education and training systems in Europe: Denmark*. European Commission, 2009/10 edition.

Ministry of Children and Education. *Education and training in Denmark. Facts and key figures*. Copenhagen, March 2012.



Ministry of Education. *OECD review on evaluation and assessment frameworks for improving school outcomes. Country background report for Denmark*. Copenhagen, April 2011.

Ministry of Education. *The Development of Education. National report of Denmark*. Presented at the 48th session of the International Conference on Education, Geneva, 2008.

Ministry of Education. *Denmark's strategy for lifelong learning. Education and lifelong skills upgrading for all*. Report to the European Commission, April 2007.

Ministry of Education. *Improving school leadership. National background report, Denmark*. (Prepared by Pluss Leadership A/S in cooperation with Prof. J. Molin), Copenhagen, February 2007.

Ministry of Education. *Facts and figures. Education indicators Denmark 2005*. September 2005.

Ministry of Education, Department of Adult Vocational Training. *Denmark's strategy for lifelong learning: Education and lifelong skills upgrading for all. Report to the European Commission, April 2007*. Division for lifelong learning, Copenhagen, July 2007.

Ministry of Education. Statistics and Information Division. *Fact sheet: General and vocationally-oriented upper secondary education*. Copenhagen, December 2000.

National Education Authority, Ministry of Education. *The Danish vocational education and training system*. Second edition, Copenhagen, June 2008.

National Education Authority, Ministry of Education. *The Danish vocational education and training system*. Copenhagen, September 2005.

Nordic Council of Ministers. *Northern Lights on PISA 2009 – Focus on reading*. (N. Egelund editor). Copenhagen, 2012.

OECD. *OECD reviews of evaluation and assessment in education. Denmark*. (Prepared by C. Shewbridge, E. Jang, P. Matthews and P. Santiago). Paris, May 2011.

Statistics Denmark. *Statistical yearbook 2011*. Copenhagen, June 2011.

Web resources

Accreditation Institution (Accreditation Agency for Higher Education): <http://acedenmark.eu/> [In Danish and English. Last checked: June 2012.]

Danish Agency for Universities and Internationalization: <http://en.iu.dk/> [In Danish and English. Last checked: June 2012.]



Danish Evaluation Institute: <http://www.eva.dk/> [In Danish and English. Last checked: June 2012.]

Ministry of Children and Education: <http://www.uvm.dk/> [In Danish and English. Last checked: June 2012.]

Ministry of Science, Innovation and Higher Education: <http://fivu.dk/> [In Danish and English. Last checked: June 2012.]

Ministry of Social Affairs and Integration: <http://www.sm.dk/> [In Danish and English. Last checked: June 2012.]

National Centre for Business Education:
<http://www.phmetropol.dk/Forskning+og+udvikling/Ekspertmiljoer/NCE> [In Danish. Last checked: June 2012.]

National Tests Website: <https://testogprøver.dk/> [In Danish. Last checked: June 2012.]

Network for Children and Culture: <http://www.boernekultur.dk/> [In Danish and English. Last checked: June 2012.]

Universities Denmark: <http://dkuni.dk/> [In Danish and English. Last checked: June 2012.]

For more detailed and updated information consult EURYDICE, the information network on national education systems and policies in Europe:

http://eacea.ec.europa.eu/education/eurydice/index_en.php

For updated links, consult the Web page of the International Bureau of Education of UNESCO: <http://www.ibe.unesco.org/links.htm>