

Chapter 7

Denmark: Strong Focus on Talent Development

7.1 Education System

Education seems almost to have attained the status of a national religion in this country. The Danes cannot provide enough of it or get enough of it. (NCEE 2006, p. 2)

The Danes are prepared to spend a lot of money on an extensive education system. In 2010, Denmark used 8.8 % of GDP on education – together with Norway the most of all OECD countries (OECD 2013, p. 218). As a result, Denmark has a well-educated population. But another result is that Danish students traditionally enter the labor market at a relatively high age (Undervisningsministeriet 2010, p. 91). The average age of students *starting* a university bachelor was 24.9 years in 2008, while the average age to *finish* a bachelor was 29.5 years.¹ The Danish government wants young people to start their working careers earlier, they achieve this (among other things) by putting more focus on talent development. Focus on this issue has increased greatly in the last decade, although it is not evenly distributed across the educational levels (Box 7.1).

The average age of students *starting* a university bachelor was 24.9 years

The basic structure of the Danish education system is quite simple (see Fig. 7.1). At the age of six, children go to school and start with a compulsory preschool class year.² Afterwards, the integrated primary and lower secondary school (*grundskole*) lasts 10 years. Nine years are compulsory and the tenth grade is optional

¹Ibid. In Denmark it is quite common to take a ‘break’ between upper secondary and higher education. On average, a student completing a master’s degree has used 4.3 years of extra time (see also Sirius Programma 2012).

²This is known as 0th grade.

Box 7.1: Denmark – The Basics

- 5.6 million inhabitants
- Capital: Copenhagen
- Constitutional monarchy
- 5 regions, 98 municipalities
- Social-democratic coalition in power

(Undervisningsministeriet 2010, p. 6³). Most children go to a municipality-run school, known as *folkeskole*.⁴ There is a national exam at the end of grade nine of *grundskole*, and another one at the end of grade ten. It is not compulsory to participate in a ‘leaving examination’ as it is locally known, but nearly everyone does because exam results show a successful completion of the compulsory school period (Box 7.2).

Box 7.2: Education in Denmark

- Free at all levels
- Ten years compulsory from age six
- Integrated primary and lower secondary school in *grundskole*
- Four types of upper secondary school
- Four types of higher education institutions
- Higher education admission based on grades
- Ministry of Education responsible for primary and secondary education; ministry of Higher Education and Science responsible for higher education

At the end of *grundskole*, pupils are around 16 years old. Most of them then move on to one of the four types of upper secondary education,⁵ which usually lasts

³About half of the children elect to take 10th grade, while others mostly go on to upper secondary education after 9th grade.

⁴Apart from the municipal *folkeskole*, pupils can also attend private and/or independent basic schools, generally called *friskole*. These schools generally offer all grades. For the grades 8–10, pupils can also choose private ‘continuation schools’, often boarding schools. In the year 2008, there were 704,000 pupils in basic school. Of these, 82 % attended a municipal basic school, and 14 % the private basic schools, while 4 % attended a ‘continuation school’ (Undervisningsministeriet 2010, p. 6).

⁵The four levels of upper secondary education are: Gymnasium (STX) offering 3 years of general education which can be entered after 9 years of basic school; HHX (Higher Commercial Examination Programme), 3 years after grade 9, focus on economic subjects; HTX (Higher Technical Examination Programme), 3 years after grade 9, focus on technical subjects and finally

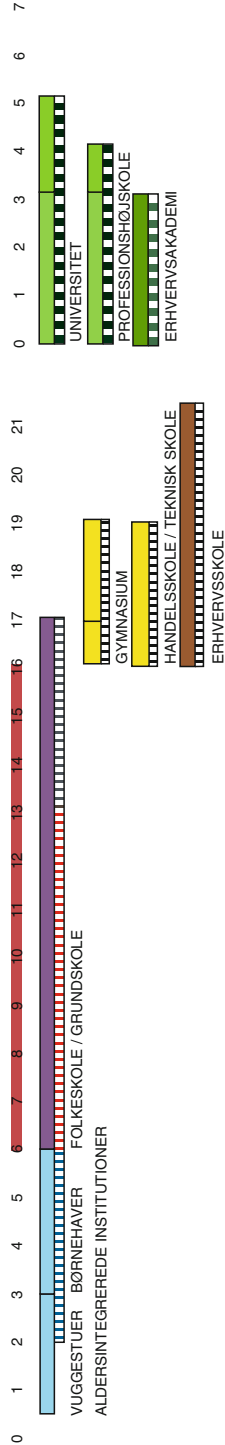


Fig. 7.1 Structure of the Danish education system (Eurydice 2014) see Fig. 3.1b for standardized legend

3 years. At the end of the last year, pupils take examinations in Danish and other subjects studied at the highest level.⁶ Students who pass these exams successfully possess the basic qualifications to go on to higher education.

A secondary education diploma does not guarantee a place in higher education. Admission depends on the number of ‘student seats’ available. For every study program at a higher education institution, a maximum number of students is set. For some studies this number is decided centrally by the ministry,⁷ for others it is set by the institution. Admittance is coordinated nationally through the agency *Optagelse*.⁸ They process all applications and the students with the best Grade Point Average (GPA) get placed first. A cut-off mark (the minimum GPA needed to get in) is set for each study program in each institution. This can differ greatly, for many studies all applicants find seats or are ‘taken up’ (as it is called locally), while for popular studies the cut-off mark may be close to the maximum possible GPA. Students can get some idea of their competitiveness for a certain study by looking at the published cut-off marks of previous years (Ministeriet for Forskning, Innovation og Videregående Uddannelser [Denmark] 2013).⁹ For some studies additional criteria are also set by the HEIs, such as prerequisite subjects, minimum marks in these subjects, or work experience (Nuffic 2013, p. 8).

Higher education in Denmark is free, although students have to pay for books and teaching materials. Students may apply for government support grants, known as *Statens Uddannelsesstøtte* (SU). These grants are quite generous, compared to most other countries.¹⁰ In 2011, around 4.7 % of Denmark’s population was in tertiary education, which is slightly above EU average.¹¹

The Danish higher education system has developed rapidly in the last decade. The Bologna Process has been combined with extensive reform of the whole tertiary education sector (Danish Ministry of Science, Innovation and Higher Education 2012; Nuffic 2013). The higher education landscape now consists of four types of institutions (Danske Universiteter 2013a, b; see Box 7.3). The Danish research universities generally have a good reputation and feature quite

HF (Higher Preparatory Examination). This is a 2-year program that can be entered after completing 10 years of basic school.

⁶Subjects can be followed at three levels: A, B and C. The level here corresponds to the number of hours of education received in the subject. A-level refers to the highest number of hours.

⁷Courses with centrally decided numbers of seats include the medical, veterinary, dentistry, and nursing schools (Undervisningsministeriet 2010, p. 16).

⁸Optagelse is a joint service by the ministries for Education and Science, Innovation and Higher Education. It literally means ‘taking up’.

⁹A complete overview of the number of students seats and cut-off marks for all higher education study programs in Denmark is published each year by the ministry on its website, so that students can get an idea of their chances in applying for a certain place. This publication is known as *Hovedtal*.

¹⁰All students receive the same *Statens Uddannelsesstøtte* (SU). For students living on their own, aged 20 and older, this constitutes a monthly income of just over 5,800 DKK, around 780 euros (amounts for 2014).

¹¹ See Fig. 2.1 in Chap. 2 for a comparison of all countries in this book.

prominently on international rankings.¹² At the research university level, it is not common to quit studying after receiving a bachelor diploma. Most students continue in a master program.¹³

Box 7.3: Danish Higher Education Landscape

8 Research universities (5 general and 3 specialized);

8 University Colleges (*Professionshøjskole*), mainly offering professionally oriented bachelor programs;

13 Specialized universities in arts, music, architecture, etc.;

8 Academies of Professional Higher Education (*Erhvervsakademi*) – short-cycle higher education that will lead to special diploma not equivalent to bachelor

7.2 Culture and Policy Towards Excellence

The Danish culture traditionally focuses on equivalence, as shown in the Law of Jante which is relevant to all Nordic countries but is based on a description of a small Danish town.¹⁴

Specifically for Denmark, the ideas of nineteenth century philosopher NFS Grundtvig are still influential in shaping the line of thinking in basic education and the general pedagogical culture. In his time, education in Denmark was reserved for the elite. Grundtvig opposed this and established a number of folk high schools, focusing on freedom, practical skills and equality. Danes embraced these ideas enthusiastically, and education has remained very important ever since. In twentieth century Denmark, social-democratic values found their way into the education system. The system, based on inclusiveness, did not provide special opportunities for talented students.

¹²Copenhagen University is the best scoring university on the Shanghai Ranking at place 42, but it only scores place 150 on the Times Higher Education World University Rankings 2013–2014. Here, the Technical University of Denmark scores highest at place 117. Aarhus University also features in the top 150 of both lists.

¹³In 2012, 84.5 % of research university bachelor graduates who had completed the first cycle programme (bachelor) continued in a second cycle program (master) and 11 % of second cycle graduates eventually enter into a third cycle program (Ph.D.) (European Higher Education Authority 2012, p. 5–6). This can be explained partly by tradition: before the introduction of the bachelor/master structure, the lowest level of research university diploma in Denmark was equivalent to a master diploma.

¹⁴See chapter Nordic countries.

In the twenty-first century, the concepts of excellence and talent have become more accepted. Several reasons for this development can be identified. First, Denmark has an ageing population and therefore it is important to get young people to enter the labor market at an earlier age. A second development involves Denmark's increasing awareness of its global position. In 2006, the government adopted a strategy to 'make Denmark a leading knowledge society with strong competitiveness and strong cohesion' (IBE 2012). The basic structure of the education system was not changed and its aim was still inclusiveness, but for the first time the government explicitly stated the system should also 'foster talent'.

Third, in 2001, a new government came in, without the social-democrats. The new coalition was more open to discussion about talent and in 2005, the ministry of Education officially called talent development a priority (Folketinget 2008). The ministry also hosted TalentCamp05, where 48 participants gathered for 48 h to generate proposals on how talent could be promoted in the educational system in Denmark. Some ideas were immediately put into practice, such as the Academy for Talented Youth and the ScienceTalenter program.¹⁵ In the aftermath, experts from the Netherlands and Germany were brought to Denmark to discuss 'good practices'. In 2006, the government established a Globalisation Fund. An amount of around 3.4 million euros was set aside for the development of elite programs and modules for excellent students in the master phase of their education (see Hermann et al. 2011, p. 28).¹⁶ At that time, the first excellence programs at university level started.

Two years later, the minister of Education established an official working group on talent. This *talentarbejdsgruppe* prepared an extensive report (Hermann et al. 2011), published in April 2011. Several recommendations were made for talent development at all levels of education. Publication of the report put the subject high on the political agenda. In the same year, the government made honors education an official goal and proposed to make special honors degrees possible (Regeringen 2011, p. 11).¹⁷ Another proposal had already created talent and elite classes in primary and secondary education (Regeringen 2010) (Box 7.4).¹⁸

¹⁵ Following TalentCamp05, 26 projects were supported from the ministry's 'talent pool' of ten million kroner (approximately 1.4 million euros).

¹⁶ The amount available was 25 million Danish kroner. Selection rounds resulted in 8 full elite master programs (120 ECTS), 20 elite modules of 30 ECTS and 4 special elite modules of 30–70 ECTS focusing on cooperation between universities and the private sector (Sirius Programma 2012). At the same time, universities also established Elite programs themselves.

¹⁷ 'Establishment of elite programs designed to give the most talented students the opportunity to replace courses in their ordinary bachelor-master with particularly demanding and challenging modules. Students can follow individual educational elements at the elite level, which are integrated with and/or support ordinary undergraduate and graduate modules, and lead to a special honours degree'. The Netherlands and especially Utrecht were named as an example for Denmark.

¹⁸ This was worked out in the proposal 'Professionalism and Freedom' (Regeringen 2010). Elite classes (*eliteidrætsklasser*) are specifically meant for sports talents. Talent classes can be formed on the following principles: 'Basic school [folkeskole] will help to spot, develop and challenge students with special talents. The goal of having good conditions for particularly talented young people is to elevate the overall level in the school. (...) Talent classes should be open to anyone who wants it. It is not exclusionary' (Regeringen 2010, p. 29, own translation).

Box 7.4: Key Players in Excellence

The following institutions are the most important players in the field of talent and excellence in education:

- The ministries of Education and of Higher Education and Science
- Members of the government's *talentarbejdsgruppe*, a working group on talent that produced a landmark 2011 report. The group was disbanded but former members are still considered experts
- The Nordic Talent Network – Nordic network for improving education for talented students
- Gifted Children – nationwide organization for (parents of) gifted children
- ScienceTalenter – nationwide organization to promote excellence in science among young people
- Academy for Talented Youth – nationwide program for talented 16–19 year-olds

In late 2011, the government changed again. A new center-left minority coalition formed, which put less focus on talent and excellence programs. Still, the agenda of talent development did receive support. According to former head of the *talentarbejdsgruppe* Stefan Hermann, support continued because ideas were not controversial; ‘most of the recommendations were generally speaking good things to do if you want to improve the quality of education’. However, Hermann remains critical about the distribution of talent development programs. ‘I think the culture has changed and there is much greater stress on these issues, but it is unequally distributed. It is very easy for a wealthy traditionally very strong university to develop such programs, but for a university college where you do not have a long tradition or consensus it is difficult’.¹⁹

Following the slow change of culture described above, there has also been an increase in provisions for talented or gifted children at primary and secondary school level. There are now special schools for gifted children, called Mentiqa schools.²⁰ Other initiatives include individual competitions such as national Olympiads and the Young Scientists²¹ program.

¹⁹ See full interview Stefan Hermann in Appendix 4.

²⁰ Mentiqa schools are especially aimed at gifted students who do not feel understood, respected or challenged enough in the school environment. There are Mentiqa schools in Odense, northern Jutland and Copenhagen (Atheneskolen). On the website of Gifted Children, an overview of schools offering special programs for talented students throughout Denmark can be found.

²¹ *Unge Forskere*, see ungeforskere.danishsciencefactory.dk.

Two programs are especially focused on linking talented youth to higher education:

- Academy for Talented Youth (*Akademiet for Talentfulde Unge*). ATU is a 2-year co-curricular program for talented youth in Danish upper secondary schools. It intends to challenge students by holding workshops, teaching them and inviting them to visit companies.²²
- *ScienceTalenter* program for talented students age 12–20. They have camps and special educational opportunities for science talents.²³

There are also special talent programs at upper secondary schools themselves (see for example Niels Brock Gymnasium 2014²⁴) and ‘linking’ programs run by the universities (see for example University of Copenhagen 2014²⁵).

7.3 New Developments

Talent development is now firmly established on the agenda of both the Danish government and the HEIs, although focus is stronger at the universities than at the university colleges. Three developments can influence the near future of talent support and excellence programs in Denmark.

First, the PISA report presented unsatisfactory results for the government, especially the fact that relatively few Danish students perform excellent (OECD 2011, p. 26–27).²⁶ Stefan Hermann commented in the media and said that Danish culture had produced this result. Changing it would be a long-term issue, he said: ‘It is about making Danish educational culture far more ambitious – not just for the middle group but also for the most talented’ (Jessen and Gunge 2013, own translation) (Box 7.5).

²² See interview coordinator Nynne Afzelius in Appendix 4.

²³ See interview with coordinator Uffe Sveegaard in Appendix 4.

²⁴ The Niels Brock Gymnasium in Copenhagen for example works together with Copenhagen University and others to offer Master class courses to talented pupils.

²⁵ For example, the University of Copenhagen runs the Junior Researchers project. Pupils at upper secondary level can take part in this 1-year project, where they immerse in a certain subject and make a proposal for a research project. All pupils involved have a 2-day meeting at the university. In four categories, 12 proposals are selected and presented at a final seminar. The two education ministers present the winners in each category, who receive money to carry out their proposal.

²⁶ In PISA 2009, only 4.7 % scored in the top two levels of the reading test, compared to a 7.6 % OECD average (OECD 2011, p. 26). The OECD researchers concluded that ‘put simply, there are too few Danish students demonstrating competence on the more challenging tasks and problems in the international tests’ (OECD 2011, p. 27).

Box 7.5: Local Terminology

'Talent' is the preferred term in Denmark, 'honors' is rarely used.

Local terms used to refer to (programs for) talented and gifted students include:

- *talentcenter* (talent centre)
- *dygtige elever* (skilled, clever pupils)
- *børn med særlige forudsætninger* (literally: children with special qualifications/requirements)
- *højtbegave* (highly gifted)
- *eliteuddannelse* (elite education)
- *eliteforløb* (elite programs)

Second, there are important legal developments. In January 2014, the government proposed a number of rule changes, giving talents more legal room (Ministry of Higher Education and Science 2014). The bill includes four initiatives:

- the introduction of distinction in diplomas, enabling institutions to award honors degrees;
- recognition of extracurricular (or co-curricular) activities in diplomas;
- removal of the maximum number of ECTS a student can obtain in a diploma, enabling talented students to take more courses; and
- more possibilities for 'early start'. Secondary and vocational students should have the option to take higher education subjects. They should also receive merit for their efforts, and if they already meet the necessary requirements, could later receive admittance to that particular or related program.²⁷

The law has been passed in June 2014 (Folketinget 2014) and has come into effect in the academic year 2014–2015.

Finally, the formation of a network is important. The Nordic Talent Network creates a platform for more effective lobbying and might form a discussion partner for government.

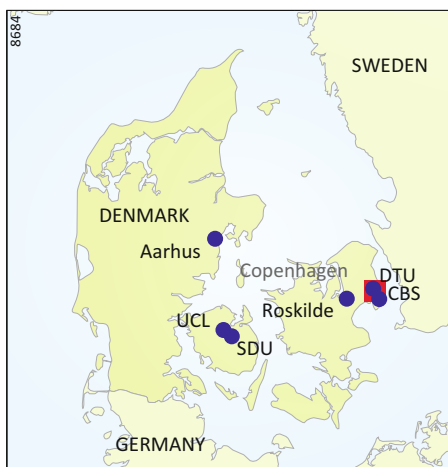
While there is no indication that talent support efforts will be nationally coordinated in the near future, existing programs at the different HEIs generally flourish. Development of more programs could therefore spontaneously initiate from the institutional side.

²⁷ See Ministry of Higher Education and Science 2014 for a press release on the proposal. It is supported by government and some opposition parties.

7.4 Honors Programs per Higher Education Institution

Six HEIs in Denmark offer honors programs. All HEIs with programs are shown on Map 7.1. Most programs are found at research universities and, in particular, at the specialized universities Copenhagen Business School (CBS) and Technical University of Denmark (DTU). DTU is the only HEI to offer an honors program across all master programs. Other programs are specific to one study program or department.

The development of honors programs has been influenced by the policy on ‘Elite Master programs’. From 2006 to 2012, Elite Master programs at research university level were established under a nationwide government-supported program. The policy was aimed at institutions, which could turn an existing master program into an Elite Master by offering extra opportunities to students and providing higher-level teaching. Government subsidy ran until 2012 and was discontinued under the new government. Since then, some universities have continued the Elite Masters, while others stopped.²⁸



Map 7.1 Danish higher education institutions with honors programs, 2014

²⁸For example, Aalborg University was the first Danish university to offer elite programs at the master level in 2006 (Andersen n.d.). Students could either take a full master’s degree or just a single semester on the elite programme. These Elite Master programs are no longer specially recognized as such. Another example is the University of Copenhagen: they included the Copenhagen Masters of Excellence Program (COME) in its strategic goals for the period 2006–2012. Its goal was to establish 15–20 Elite Master programs. In 2009, eight programs were launched. However, when the subsidy was revoked, the program was discontinued.

Table 7.1 Honors programs at universities and university colleges in Denmark

Higher education institution	Webpage	No. of students, 2013 ^a	Honors education offer
<i>General universities</i>			
University of Copenhagen	www.ku.dk	38,181	No
Aarhus University	www.au.dk	34,107	Yes
University of Southern Denmark (SDU)	www.sdu.dk	20,378	Yes
Aalborg University	www.aau.dk	17,255	No
Roskilde University	www.ruc.dk	7,813	Yes
<i>Specialized universities</i>			
Copenhagen Business School (CBS)	www.cbs.dk	16,499	Yes
Technical University of Denmark (DTU)	www.dtu.dk	5,897	Yes
IT-University of Copenhagen	www.itu.dk	1,874	No
<i>University colleges (professionshøjskole)</i>			
VIA	www.viauc.dk	19,206	No
Metropolitan	www.phmetropol.dk	10,395	No
UCC	www.ucc.dk	9,743	No
Northern Denmark	www.ucn.dk	8,622	No
Zealand	www.ucsj.dk	7,793	No
Lillebaelt (UCL)	www.ucl.dk	6,816	Yes
South Denmark	www.ucsyd.dk	6,124	No
School of Media and Journalism	www.dmjx.dk	2,034	No
Total		212,737	

^aSource: Statistics Denmark 2014

To compile this table, first the websites of all higher education institutions were searched with keywords. Then they were all approached by e-mail. All institutions replied

Some university colleges offer extra opportunities to their students, such as summer schools (in which no regular credits can be obtained),²⁹ special English-language programs³⁰ or new forms of education that integrate different subjects.³¹ Sometimes university colleges specifically target ‘talents’ in marketing efforts for a certain study program. However, most of these programs do not have special admission criteria to identify the talented and motivated students and are therefore not included in Table 7.1.

²⁹For example, there is a summer school for motivated students at Metropolitan University College in Copenhagen. Summer schools in most European countries refer to extra programs in which students participate voluntarily and for which no regular study credits can be scored. Sometimes, special certificates are awarded to successful participants. Often, teaching staff also participates voluntarily.

³⁰At Zealand University College, a special study program in International teacher education was developed. This is branded as a ‘talent line’ in marketing materials and taught 100 % in English, but the admission procedure is the same as for the ordinary teacher education program.

³¹At UCC University College, in 2013 a special science profile “Advanced science teacher education” (ASTE) was started, where students will get an education covering all science subjects (math, biology, physics, chemistry and geography).

One example not fitting our definition of an honors program, but worth mentioning is the new ‘3+5 program’ at the University of Copenhagen, which started in September 2014. Participants integrate their MSc and Ph.D. into one five-year scholarship-supported program.³²

In Table 7.1, findings for all universities and university colleges are summarized.

7.4.1 Aarhus University

At Aarhus University, talent development is an official priority, although implementation occurs primarily at the Ph.D. level. The university has two Elite Master programs and participates in a number of international joint degree programs, including the Erasmus Mundus program. A pilot honors project is organized for undergraduate students in Physics and Astronomy. The program only started in 2013, and is still under development. The program’s goal involves making sure that ‘challenges exist also for the most talented students and that they have a good chance to further develop their skills, competences, and qualifications’. All students follow all the regular courses and the ‘talentforløb’ is a 20 % supplement, consisting of individual modules in different forms. While regular courses are taught in Danish, this program is in English (Table 7.2).

7.4.2 University of Southern Denmark

At the time of writing, the University of Southern Denmark was planning to offer a new talent program in the near future, but was waiting for the government plans to create more room for talent development to be put into law.³³ In the planned

Table 7.2 Aarhus University – Talentforløb Physics and Astronomy

<i>Organizing institution</i>	Aarhus University, Department of Physics and Astronomy
<i>Form</i>	Disciplinary program
<i>Target group</i>	Bachelor students in first year (pilot phase)
<i>Admission</i>	Signing up/application for later phase
<i>Description</i>	Students follow individual extra modules (up to six per year) in English. In later stages, they get associated with a research group
<i>Founded</i>	Summer 2013 (pilot phase)
<i>Participants</i>	Around ten students per module
<i>Website</i>	None yet

³²Personal communication from Anne Mette Schaffalitzky, central PhD coordinator at University of Copenhagen (February 2014).

³³See description of proposals under ‘new developments’ above.

Table 7.3 University of Southern Denmark – research in corporate communication

<i>Organizing institution</i>	International Business Communication Studies, Faculty of Humanities, University of Southern Denmark
<i>Form</i>	Disciplinary program
<i>Target group</i>	Master students
<i>Admission</i>	Application/selection
<i>Description</i>	Six-month module which includes special classes and doing research at a selected company, in order to familiarize the student with research put into practice
<i>Founded</i>	2010
<i>Participants</i>	50 per year
<i>Website</i>	www.sdu.dk/Uddannelse/Kandidat/IVK_elite

program, students will be able to choose some higher level courses from the second year up. There will also be a possibility for students to have an oral defense of their bachelor thesis, and to act as opponents on other students' bachelor theses. In total, this will amount to an extra 30 ECTS (Christensen 2013). Students are supposed to do the extra work on top of their regular program and not take more time for their studies. The exact details are not yet known.³⁴

The university already offers an elite module in International Business Communication. Explicit goals are to provide students work experience at selected companies, and give them insight in research at a university in order to for example continue doing research towards a Ph.D. (Syddansk Universitet 2014, own translation) (Table 7.3).

7.4.3 Roskilde University

Since 2012, Roskilde University offers 'languages profiles' to talented students in bachelor programs in humanities or social sciences. Students entering this program follow co-curricular or extracurricular activities supporting their competences in and use of relevant literature in a third language (apart from Danish and English). At the time of writing, French, Spanish and German language profiles are offered. The program occurs in the first three semesters of the bachelor phase. The profiles are seen as 'an innovative way of combining language and culture learning with the general undergraduate study. And they are a central part of Roskilde University's internationalization strategy' (Table 7.4).

³⁴ Personal communication from Martin Svensson, Head of Department, Institut for Matematik og Datalogi, Syddansk Universitet, March 2014.

Table 7.4 Roskilde University – language profile

<i>Organizing institution</i>	Roskilde University
<i>Form</i>	Disciplinary program, for all bachelor students in humanities or social sciences
<i>Target group</i>	Bachelor students
<i>Admission</i>	Application/motivation letter
<i>Description</i>	Students follow activities supporting their competences in and use of relevant literature in a third language
<i>Founded</i>	2012
<i>Participants</i>	30–40 in total
<i>Website</i>	www.ruc.dk/uddannelse/bachelor/bachelor-med-saerlig-sprogprofil/

7.4.4 Copenhagen Business School

The Copenhagen Business School (CBS or *Handelshøjskolen* in Danish) runs some highly prestigious and selective study programs that are still considered regular education, but it also has a number of programs that can be defined as honors education (See Sirius Programma 2012, p. 8–9³⁵). Selection for some study programs is very tough. The maximum GPA in Denmark is 12. In 2013, cut-off GPA for CBS' most prestigious bachelor program, the BSc in International Business, was 11.9 (CBS 2014a). Master degree programs at CBS are usually also very selective and some are advertised as 'elite' programs, such as the Elite Advanced Economics & Finance Master's degree program (CBS 2014b³⁶).

Groups of selected students (undergraduate and graduate) can also enter international case competitions. The exact form varies, but in general teams compete against international schools to analyze and solve a business case.³⁷ CBS itself organizes the CBS Case Competition, which is well-known internationally. In 2013, it was won by a team from the National University of Singapore.³⁸

Within the already highly selective BSc program in International Business, two honors programs stand out: the GLOBE program and the EngAGE program. The GLOBE program focuses on international education (CBS 2014c), while the EngAGE (Engaged Applied Global Education) program aims to 'equip selected students with the necessary skills to enter the workforce in a high quality job after 3 years of university education' (CBS 2014d). This program is developed with partner

³⁵ A delegation from the Dutch Sirius program visited CBS in 2012 and described some programs in its report.

³⁶ This programme is designed for students 'who have demonstrated particular skills and interest in analytical and quantitative economics and finance'. The programme collaborates with 'some of the most prominent Danish firms in their respective industries and offers external mentors for the students'. Twenty-five students are admitted each year.

³⁷ Teams receive the business case and are then sequestered from the other students for anywhere from 24 to 60 h on-site - even longer if the research is done ahead of time off-site. They analyze the case and make a plan to resolve the issues, which is then judged by a jury.

³⁸ See www.casecompetition.com for more information.

Table 7.5 Copenhagen Business School – GLOBE program

<i>Organizing institutions</i>	Department of International Business, Copenhagen Business School, the Chinese University of Hong Kong and Kenan-Flagler Business School at the University of North Carolina (USA)
<i>Form</i>	Disciplinary international program
<i>Target group</i>	Second-year bachelor students
<i>Admission</i>	Application/selection
<i>Description</i>	Three participating institutions each select 18 students, who then form one class. In two semesters, the class follows courses at each of the participating schools
<i>Founded</i>	2006
<i>Participants</i>	18 per year
<i>Website</i>	www.cbs.dk/globe

Table 7.6 Copenhagen Business School – EngAGE program

<i>Organizing institution</i>	Department of International Business, Copenhagen Business School
<i>Form</i>	Disciplinary program with business involvement
<i>Target group</i>	Application in second semester bachelor program
<i>Admission</i>	Application/selection
<i>Description</i>	Partner companies of EngAGE work closely with one to five students and take on a mentoring role that will develop the students' business skills over three semesters and prepare them for a final semester-long internship facilitated by the company
<i>Founded</i>	2012
<i>Participants</i>	25 per year
<i>Website</i>	www.cbs.dk/en/study/bachelor/bsc-in-international-business/engage

companies in line with government policy to have Danes start their working career at an earlier age. The goal of EngAGE involves having a maximum of 10 % of students following a master program after completion of the program; instead, they are supposed to start their working career. Alternatively, they can follow a master program later in their career, sponsored by the company they then work for (Sirius Programma 2012, p. 9). In September 2014, the EngAGE program was under review and its continuation was uncertain (Tables 7.5 and 7.6).

7.4.5 Technical University of Denmark

7.4.5.1 General

The Danske Tekniske Universitet (DTU) has an extensive offer in honors education, focused on the master phase, to the extent that honors programs exist in every MSc program. Here, 'elite students have access to a particularly challenging course of studies. It is estimated that only 10 % of the MSc students will be qualified for

Honors Programmes' (DTU 2013). Participating students get a personal tutor, make an individual study plan and travel abroad. To gain admission, candidates must have completed their BSc at excellent level. They must then write a personal essay and are assessed in an interview. Students who are admitted, are evaluated at the end of each term. To remain in the program, they must keep on scoring at excellent level and complete their individual plan.

7.4.5.2 Specific Programs

At undergraduate level, the department of systems biology focuses on talent development. It has created the Eduforce program and founded/established Biotech Academy. Through Eduforce, talented university students are hired to teach talented secondary school students. It is not directly linked to the students' academic major study program, but draws on the leadership skills, teaching abilities, and peer mentoring qualities of upper-level students. University students get paid and employment commitments exist on a mouth-to-mouth basis. It is not an honors program according to our definition, but it provides clear advantages for talented students (on their CV) and for the department (having great ambassadors).

Biotech Academy is a program in which talented students develop teaching materials. This highly prestigious program is run completely by students themselves, with the department serving as facilitator. More information is in Box 7.6 (Table 7.7).

Box 7.6: 'It Has to Be Student-Driven'

Interview Lene Krøl Andersen, Head of talent development, DTU Systems Biology

What do you do in Biotech Academy?

'The idea is that students make teaching materials for high schools within the area that they are interested in. For this, they attract their own funding from companies. It is all student-driven. We at the institute offer support.'

I can imagine the students are really good ambassadors for you.

'Yes, they are. And they are also good ambassadors for themselves. The companies love them. Because they know they are trained in negotiations, in expressing themselves, selling their ideas. They really go the top. One student developed a sort of virtual laboratory. The government supported it and it is now freely available to all high school students in Denmark.'

(continued)

How does it work if you want to get in?

‘You have to be spotted by the people in Biotech Academy. They talk to professors and ask them who are the best students and then they follow them and ask them for interviews. Individuals are also asked mouth-to-mouth. But it depends on how the chairman wants to do it. It develops all the time, because the new people in the group all have new ideas.’

Is it important that the program is student-driven?

‘We have to have it student-driven. I think talent development is all about making it on your own. In the old days we pointed at the students and they got it all served. I believe that was completely wrong. They have to create their own careers and fight for it. We see that all the people that have been in Biotech Academy, really all, have good positions now. It is really through their engagement and their hard work, that their mindset is developed. Of course it also needs to be prioritized by the institute. Because a student-driven program has to have a back-up at all times. They are ambitious, but they are also very fragile sometimes. That is where we come in, checking and making sure everything is ok.’

Table 7.7 Technical University of Denmark – Biotech Academy

<i>Organizing institution</i>	Independent student organization, with department of systems biology at DTU as facilitator
<i>Form</i>	Disciplinary program
<i>Target group</i>	Talented students in general
<i>Admission</i>	No official procedure, by invitation
<i>Description</i>	Talented students develop web-based interdisciplinary education projects for (high school) children on topical issues in biotechnology research
<i>Founded</i>	2007
<i>Participants</i>	10 to 15 in total at the same time
<i>Website</i>	www.biotechacademy.dk (Danish only)

7.4.6 University College Lillebaelt

After a conference arranged by the Ministry of Education in 2008, Lillebaelt decided to start a talent program, called the Talent Palette. Students sign on to outside assignments as an individual or as a small group. The extent of the projects offered is normally about 30–40 h extra workload per semester. The number of projects available differs from year to year. A cooperation contract between student and the outside provider is signed and students then report their progress in a logbook,

Table 7.8 University College Lillebaelt – Physiotherapy Talent Palette

<i>Organizing institution</i>	University College Lillebaelt, Physiotherapy
<i>Form</i>	Disciplinary program with outside involvement
<i>Target group</i>	Bachelor students
<i>Admission</i>	Application/grades/interview
<i>Description</i>	Students can sign on to assignments from physiotherapy clinics, hospitals or from Ph.D. students, take part and receive a diploma addendum if successful
<i>Founded</i>	2008
<i>Participants</i>	Numbers differ per year, around 50 in total so far
<i>Website</i>	None

which is regularly evaluated with their teacher. Successful participants receive a description of the assignment and the outcome attached to their diploma at the end of their study (Table 7.8).³⁹

7.5 Programs Outside Formal Higher Education System

Apart from the programs described above, we came across three programs outside the formal higher education system, but worth mentioning. These are:

Centres of Excellence Sponsored by Danish industry, Centres of Excellence programs address pupils in vocational short-cycle higher education (*erhvervsakademi*), where pupils can receive a basic vocational qualification after 1.5–2.5 years of studies. Currently, two academically based centers exist. These centers support talented students from across the country in selected vocational education programs. Students receive training at the highest level and with industry-relevant equipment.⁴⁰

KaosPilot Aarhus KaosPilot is an international private design and business school in Aarhus, held in high regard. Admission involves a tough selection process, however KaosPilot is not part of the official education system and does not issue a widely accepted diploma.⁴¹

Future Entrepreneurs of Denmark Future Entrepreneurs of Denmark, open to students of all Danish universities, supports students with a passion for entrepreneurship.

³⁹ Personal communication from Anne Marie Højvang Christiansen, program leader, March 2014.

⁴⁰ Danish Industry (DI) and Industry Foundation are behind the project. They cooperate with four vocational schools: Herningholm Vocational College, Mercantec, Copenhagen Technical Academy and TEC. More info on <http://foreninger.di.dk/CoE/Pages/forside.aspx> (Danish only).

⁴¹ See Sirius Programma 2012 and www.kaospilot.dk

Around 30 students can be admitted each semester, based on a personal essay and grades. Accepted students receive five workshops per semester, dealing with various topics related to entrepreneurship. In groups, they work together to prepare for these workshops. The program is a joint initiative of student organizations at numerous Danish universities and is supported by a number of companies.⁴²

Talent development in Denmark seems to be firmly established. Legal changes that have taken effect late 2014 can facilitate the development of more honors programs. After Denmark, we focus on Norway, where development towards stimulating excellence in higher education is less apparent.

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⁴²More information on fednetwork.dk.

⁴³**Note:** Literature used to prepare this book is included on this list. Some of the entries are in local languages and have not been read completely by the researchers. Instead, they have been searched with keywords to retrieve relevant information.

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