Referencing the Danish Qualifications Framework for Lifelong Learning to the European Qualifications Framework

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2011

EVA

Contents

6 Issues arising from the EQF referencing process 58

Appendix

Annex A
Self-certification report. Verification of compatibility of the Danish National Qualifications
Framework for Higher Education with the Framework for Qualifications of the European
Higher Education Area

Preface

This report is the official Danish assertion of the Danish National Qualifications Framework for Lifelong learning (NQF) referencing to the European Qualifications Framework (EQF).

The referencing process has been conducted by a reference committee consisting of representatives of the national qualifications authorities and quality assurance agencies and two international experts. The Danish Evaluation Institute has served as a secretariat to the referencing committee.

The report has been endorsed by the coordinating committee consisting of representatives from the four ministries with the overall responsibility for the NQF referencing process: Ministry of Education, Ministry of Science, Technology and Innovation, Ministry of Culture and The Ministry of Economic and Business Affairs.

1   Summary

This report provides the analysis, documentation and conclusions of the national referencing committee regarding the referencing of the Danish National Qualifications Framework for Lifelong learning (NQF) to the European Qualifications Framework for Lifelong Learning (EQF).

This report is the official Danish assertion of the Danish National Qualifications Framework for Lifelong learning (NQF) referencing to the EQF and is the Danish response to the EQF recommendation which invites countries to refer their national qualifications levels to the EQF by 2010. The report also asserts the value of the of the Danish National Qualifications Framework for Lifelong learning (NQF) as a tool for promoting transparency with regard to the Danish qualification system and for comparing and clarifying Danish qualifications abroad. On national level the report is a reference document for Danish authorities regarding the implementation of the NQF.

The referencing process has been conducted by a reference committee consisting of representatives of national qualifications authorities and quality assurance agencies. To verify the alignment between the NQF and EQF, and to ensure the objectivity and independence of the EQF referencing process, two international experts with profound insight into European education policy have played a key role in the work of the referencing committee. In addition, stakeholder representatives have been involved in the referencing process through a consultation committee as well as a written consultation.

The Danish referencing committee has verified and documented the reference between the EQF and the NQF, and the results of this work are presented in this one comprehensive report. The report addresses each of the ten criteria and procedures agreed by the EQF Advisory Group.

It is the conclusion of the referencing committee that all ten criteria and procedures are fulfilled and that this report:
1   establishes a clear and demonstrable link between the levels in the NFQ and the level descriptors of EQF in the following manner:

EQF		NQF
Level 1		Level 1
Level 2		Level 2
Level 3		Level 3
Level 4		Level 4
Level 5		Level 5
Level 6		Level 6
Level 7		Level 7
Level 8		Level 8

and that this report:
*   demonstrates that the NFQ, and the qualifications within it, are based on the principle and objective of learning outcomes and are linked to arrangements for validation of non-formal and informal learning and to existing international credit systems

- describes and references the published criteria and procedures for the inclusion of qualifications in the NFQ
- describes the different quality assurance systems operating in the Danish lifelong education system and its qualifications; and that these are consistent with European guidelines

The report covers the entire Danish qualifications system, from compulsory education in primary school to PhD-level, which is covered by the NQF. The report does not include the referencing of higher education qualification levels and qualifications, since the referencing of Higher Education qualification levels and qualifications to the European Higher Education Area (EHEA) framework was officially and successfully completed in 2009 as part of the Bologna process. The result of this process is documented in the Self-certification report enclosed in this report as Annex A.

The report consists of a preface and six chapters. Following this summary, chapter 2 provides an introduction to the EQF and the process of referencing the NQF to the EQF. In chapter 3 the NQF is presented, including how it was developed and implemented, it's purpose, scope and structure, as well as key concepts. Chapter 4 contains a brief introduction to the Danish system of lifelong learning and its qualifications. Chapter 5 contains the response from the Danish referencing committee to each of the ten referencing criteria and procedures, while chapter 6 covers issues raised by stakeholders during the consultation process.

There are seven appendices to this report. Appendix A contains NQF levels 1-8, while Appendix B contains an overview and examples of degrees, certificates and certificates for supplementary qualifications. Appendix C is a supplement to chapter 4 and contains a more in-depth presentation of the Danish education system. Appendix D contains a list of all referenced documents. In Appendix E all participants in the NQF referencing process are listed and Appendix F include the signed statements from the national quality assurance bodies, cf. criterion 5. Finally, Appendix G contains the EQF levels 1-8.

To illustrate the semantic analysis – comparing the level descriptors in the NQF with the level descriptors in EQF – in section 5.2, criterion 2, there is used a colour code. This section should therefore be printed in colour.

In addition to this report, Annex A contains the report and appendices from the self-certification process on alignment between the Qualifications Framework for Higher Education (NQF-HE) and the overarching Qualifications Framework for the European Higher Education Area (QF-EHEA).

2 Referencing the NQF to the EQF

This chapter describes the referencing of the Danish Qualifications Framework for Lifelong Learning (NQF) to the European Qualifications Framework (EQF). Section 2.1 provides a brief introduction to the background and purpose of the process of referencing the NQF to the EQF. Section 2.2 describes the relation between the NQF-EQF referencing process and the overarching Qualifications Framework for the European Higher Education Area (QF-EHEA). Finally, section 2.3 describes the Danish referencing process and how it has been organised.

2.1 The European Qualifications Framework and the referencing process

The EQF seeks to support transnational mobility and promote lifelong learning by increasing the transparency of qualifications systems.

The EQF is a meta-framework – a high level and generalised communication tool – allowing the comparison of qualifications from one national system with the qualifications of another. It is a common European reference framework, which will make it easier to understand, compare and recognise qualifications across different countries and systems in Europe. The EQF contains eight reference levels. Each level is described in terms of learning outcomes, based on the concepts of knowledge, skills and competences.

The descriptions of learning outcomes at the different levels of the EQF are formulated in more general terms than the level descriptors in the national qualifications frameworks, so that the EQF can accommodate the different education and qualification systems of all the member states.

The EQF was formally adopted by the European Parliament and Council on 23 April 2008, following a development and consultation process that commenced in 2004. With the formal adoption of the EQF, a process of implementation was begun in early 2008. The European Parliament and Council recommended member states to:

- relate their national qualifications systems to the EQF by 2010, in particular by referencing, in a transparent manner, their qualification levels to the EQF levels; and
- adopt appropriate measures, so that by 2012 all new qualification certificates, diplomas and "Europass" documents issued by the relevant authorities through national qualifications systems include a clear reference to the appropriate EQF level.

In order to assist member states with implementation of the EQF, the European Commission has established an EQF Advisory Group, composed of representatives of member states and involving the European social partners and other stakeholders, as appropriate. The aim of the EQF Advisory Group is to ensure that there is overall coherence and transparency in the process of relating qualifications systems to the EQF. For this purpose, the Advisory Group has developed and published a set of ten criteria and procedures for referencing national frameworks to the EQF. The process of referencing the NQF to the EQF has been undertaken in line with these criteria and procedures, which are outlined in chapter 5.

2.2 The relation between the NQF-EQF referencing process and the Qualifications Framework for the European Higher Education Area

The EQF exists alongside another European meta-framework: the QF-EHEA, also known as the 'Bologna Framework'. The two systems have been developed through different processes but are compatible with each other.

The EQF and the entire set of EQF referencing criteria have been drawn up so as to take into account the relationship between the EQF and the Bologna Framework. The fact that EQF-levels 5-8 are designed in such a way that they are fully compatible with the QF-EHEA makes it possible to recognise the results of the Bologna references for higher education in the EQF references. Furthermore, the EQF referencing criteria and procedures have been designed in such way that a country which has completed the referencing process within the context of EHEA has the choice of not repeating it for higher education.

In the Danish case, compatibility between the NQF-HE and the NQF has been ensured in the development of the NQF, as qualification levels for first, second and third cycle higher education degrees are built into the NQF, and also as the HE-degrees are referenced to the NQF via the existing framework (NQF-HE).

The referencing of higher education qualification levels and qualifications is not repeated, since a self-certification process for the NQF-HE alignment with QF-EHEA was conducted in 2009 in accordance with the EHEA criteria. The report was presented to the other Bologna process members, who reached the conclusion that the NQF-HE was compatible and in alignment with the QF-EHEA.

The self-certification report on the alignment between NQF-HE and the Bologna Framework is enclosed as documentation at Annex A, and this report makes references to the conclusions when necessary.

2.3 Process for referencing the NQF to the EQF

On behalf of the ministries comprising the coordinating committee of the NQF, the Ministry of Education has initiated the NQF referencing process to the EQF and has formally requested the Danish Evaluation Institute (EVA) to organise and facilitate the process.

The referencing process in Denmark has been organised in five tiers:
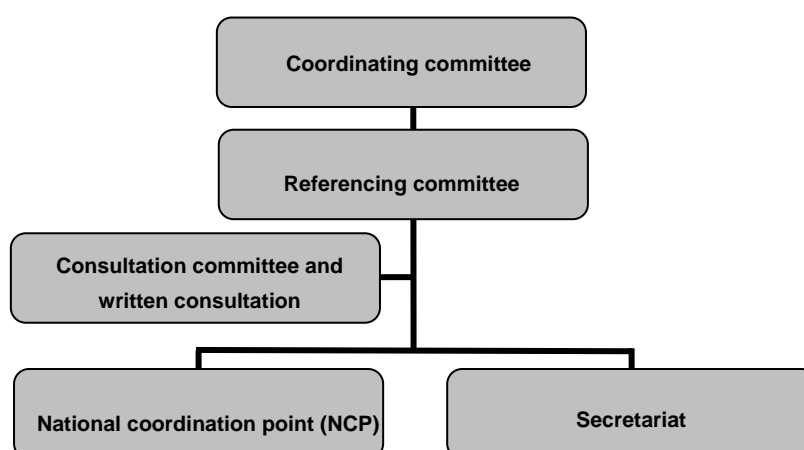
The coordinating committee, with representatives from the relevant ministries, has held overall responsibility for the NQF referencing process. The ministries in question are:

- Ministry of Education
- Ministry of Science, Technology and Innovation
- Ministry of Culture
- Ministry of Economic and Business Affairs

The national referencing process has been conducted by a referencing committee. The main task of this committee was to verify how the NQF refers to the EQF. The referencing committee consists of representatives from the relevant national authorities and agencies, as well as two international experts.

A consultation committee, comprised of key Danish stakeholders, was set up to engage stakeholders in the referencing process and to ensure co-responsibility for the referencing of the NQF and the EQF.

The consultation committee participated in a seminar where they were informed about the basis for the referencing process, and their input was integrated into the referencing process. To widen the engagement in the referencing process, the report was sent in written consultation to a broader audience of stakeholders.

The issues raised by the consultation committee and in the consultation process are reported upon in chapter 6 of this report.

A **national coordination point (NCP)** has been established under the auspices of the Danish Agency for International Education by the four ministries (the national qualification authorities) represented in the NQF-coordinating committee. The tasks of the NCP, as foreseen in the EQF-recommendation, have in Denmark been divided between the coordinating committee and the NCP.

The Danish Evaluation Institute has served as a **secretariat** to the referencing committee and has drafted the final report.

The responsibilities of the different committees and participants are described in depth in chapter 5 as documentation of criterion 1, and a list of all participants in the process can be found in Appendix E.

3   The Danish Qualifications Framework for Lifelong Learning

This chapter describes the Danish Qualifications Framework for Lifelong Learning (NQF). Section 3.1 describes how the NQF was developed and implemented and section 3.2 the purpose and scope of the NQF.

The structure of the NQF is presented in section 3.3, and section 3.4 elaborates on how level descriptors were developed. The key concepts are presented in section 3.5, and section 3.6 provides an overview of the types of degrees and certificates in the NQF. Section 3.7 outlines the principles and procedures for the inclusion of degrees and certificates into the NQF, and, finally, section 3.8 briefly describes the development of a web based edition of the NQF and a web-based database (uddannelsesguiden.dk) that contains all publicly validated degrees and certificates in Denmark.

3.1   Development and implementation

In 2006, the Minister for Education initiated the work of drawing up a national qualifications framework by forming an inter-ministerial working group comprised of representatives of the Ministry of Education, the Ministry of Science, Technology and Innovation, the Ministry of Culture and the Ministry of Economic and Business Affairs.

The basis for initiating the work was both national and international developments and the need to further lifelong learning and mobility by creating greater transparency and increased recognition of qualifications. The idea of an overarching national qualifications framework was raised in the context of the work on a national strategy for globalisation in 2005, which included a strategy for lifelong learning and, in particular, linked to reforms in vocational education and training where a coherent qualifications system aimed at providing transparency, permeability and recognition of qualifications was emphasised. The preparatory work on the EQF launched by the European Commission and the council in 2005 also played a significant role in the setting up of the inter-ministerial group and the work to be conducted.

The mandate was to draw up a proposal for a national qualifications framework covering the entire national qualifications system and how this could be linked with and correspond to the EQF. In doing so, it had to be taken into account that a qualifications framework for higher education already existed. The national HE-qualifications framework describes four levels of degrees that can be awarded within the Danish higher education area. The framework uses learning outcomes in the form of knowledge, skills and competences, similar to the EQF.

All key stakeholders representing primary school to higher education have been systematically consulted and involved throughout the development process on the Danish Qualifications Framework for Lifelong Learning. The consultation and involvement of stakeholders have included all relevant national education and training councils and training committees, which includes labour market representatives, representatives of educational institutions and students and it has included the various rectors' conferences and student bodies etc. in higher education and representatives from quality assurance and accreditation authorities. The consultation and involvement of stakeholders have included seminars, national consultation of stakeholders at different stages of the development and with regard to implementation also

working groups including representatives from education and training councils and committiees in the development of guidelines on the inclusion of qualifications in the framework
As part of the development work the responsible ministries and national agencies has been involved in several project's supported by the EU-Commission and a Nordic network supported by the Nordic Council of Ministers, which is still running. The sharing of experience and common development work regarding the implementation of NQF's and the referencing to EQF from these activities has provided a valuable input to the Danish development process.

Early in the process, it was decided that the qualifications framework should cover all publicly recognised qualifications that have been awarded pursuant to an Act or an executive order and that have been quality assured by a public authority in the Danish education system – from compulsory school to PhD levels, as well as adult and continuing education. It was assessed that an eight level structure best reflected the levels in the Danish education system and its qualifications.

In June 2009, the proposal for a Danish Qualifications Framework for Lifelong Learning and its implementation was approved by the Minister for Education, the Minister for Science, Technology and Innovation, the Minister for Culture and the Minister for Economic and Business Affairs.

The subsequent implementation of the Danish Qualifications Framework for Lifelong Learning was initiated in 2009. The implementation and continuing updating includes the following:
- An inter-departmental coordination committee with representatives from the Ministry of Education, the Ministry of Science, Technology and Innovation, the Ministry of Culture and the Ministry of Economic and Business Affairs, which was set up with the responsibility for coordinating the implementation and regular updating of the Qualifications Framework for Lifelong Learning. The coordination committee was also responsible for ensuring that the Danish Qualifications Framework for Lifelong Learning was referenced to the EQF. The referencing process was carried out between September 2010 and May 2011 (see chapter 5, criterion 1).
- Inclusion of existing degrees and certificates into the Qualifications Framework was carried out between August 2009 and the end of 2010. Inclusion of degrees for higher education takes place as part of the accreditation procedure. In the case of the other educational areas, inclusion was carried out by the authority or the particular body with responsibility for the qualifications and the objectives and content of education programmes in accordance with Danish Acts and executive orders. To support this, guidelines have been issued.
- A communication plan was drawn up. In 2010 two web-based information tools were developed: a web edition of the NQF at www.nqf.dk and information about the level of each qualification at Uddannelsesguiden [www.uddannelsesguiden.dk]. In addition, a more comprehensive introduction to the NQF was drawn up and is available on the Ministry of Education website.
- The Coordination Point for the EQF was set up under the auspices of the Danish Agency for International Education. The Danish Coordination Point is responsible for ensuring transparency between the NQF and the EQF and ensuring access to information about Danish qualifications and their referencing in relation to the EQF.
- Evaluation of the NQF is to be undertaken in 2012. The evaluation will examine the fulfilment of the objectives of the NQF and the validation of the level descriptors for levels 1-5.

3.2   Purpose and scope of NQF

The NQF is a comprehensive, systematic overview, divided by levels, of qualifications that can be acquired within the Danish education system – from primary and lower secondary school to university level as well as adult and continuing education and training.

The overall objective of the NQF is to support transparency in the Danish qualifications system and to further the possibilities for mobility and lifelong learning by:

- providing a comprehensive overview of qualifications approved by national authorities, while simultaneously making routes through the education system visible. Thus, making it easier for students and pupils to find out how to build upon the qualifications they already have;
- facilitating mutual recognition between Danish and non-Danish qualifications. As each level in the NQF and the Qualifications Frameworks and systems of other countries refers to a level in the European Qualifications Framework, it is easier to compare qualifications from different countries.

The intended users of the NQF are the general public, students, companies and counsellors who need an overview of the qualification levels in Denmark, including the level of specific qualifications and how they can be obtained. In the case of educational institutions and authorities, the NQF is a tool that can be used for counselling, description, assessment, comparison and recognition of qualifications and programmes.

The NQF has no regulatory functions in terms of the development and quality assurance of qualifications. Inclusion of Danish qualifications in the NQF and the quality assurance of qualifications are linked to Acts and executive orders within existing legal frameworks for publicly recognised qualifications.

The NQF includes all qualifications that have been awarded pursuant to an Act or an executive order and that have been quality assured by a public authority in the Danish education system.

The NQF does not cover either private sector provided qualifications or other non-state regulated qualifications that do not form part of the formal Danish education system and which have not been validated and quality assured in accordance with Acts and executive orders. As part of the scheduled evaluation of the NQF in 2012, it is foreseen that consideration will be given to how qualifications awarded outside the formal Danish education system, including international qualifications, can be aligned to the NQF.

The NQF framework consists of the following key elements:
- Structure: the NQF is organised as an eight level structure (see section 3.3);
- Level descriptors (see section 3.4);
- Key concepts: the level descriptors are based on the concept of learning outcomes, which are described in terms of knowledge, skills and competences (see section 3.5);
- Overview of types of degrees and certificates (see section 3.6);
- Principles and procedures for the inclusion of degrees and certificates (section 3.7);
- Web-based version of the NQF and database with description all the qualifications in the NQF (section 3.8).

Each of the key elements of the NQF is presented in the following sections, 3.3-3.8.

3.3   Structure of the NQF
The starting point for developing the structure including the number of levels in the NQF was that it should:
- encompass all officially validated degrees and certificates in the formal Danish qualifications system;
- take into account and ensure correspondence between the NQF and the qualifications framework for higher education;
- provide a basis for establishing a reference between the national qualifications framework and the EQF.

Based on a thorough analysis of the learning outcomes of existing qualifications (see also section 3.4), the NQF has been organised in an eight level structure. It is assessed that eight levels provide a framework that is both adequate and inclusive for a comprehensive description of the learning outcomes and levels of publicly recognised qualifications. The eight levels

of the NQF can be seen as a ladder of learning outcomes, which rises gradually from level 1 to level 8; see also the table below. Each level thus represents a progression in relation to the level below. For each level, there is a level descriptor.

Figure 1
NQF eight level descriptors

Level	Descriptor
Level 1	Level descriptor
Level 2	Level descriptor
Level 3	Level descriptor
Level 4	Level descriptor
Level 5	Level descriptor
Level 6	Level descriptor
Level 7	Level descriptor
Level 8	Level descriptor

The level descriptors for levels 6, 7 and 8 in the NQF are identical with the level descriptors in the NQF-HE for the bachelor, candidatus and PhD levels. It should be noted that there are no publicly recognised education qualifications in the Danish qualification system at levels 6-8 that are not included in the higher education area and NQF-HE in Denmark, and that all qualifications are subject to accreditation (for an in-depth description of the NQF-HE see Annex A).

A broader descriptor has been drawn up for level 5 in the NQF than for the corresponding level descriptor in the national NQF-HE for short cycle degrees. The broader level descriptor makes it possible to include qualifications at level 5 that are acquired through certain vocational education and training or certain maritime vocational education and training programmes.

Figure 2
NQF eight level structure by qualifications and supplementary qualifications

	Qualifications	Supplementary qualifications
Level 1		
Level 2		
Level 3		
Level 4		
Level 5		
Level 6		
Level 7		
Level 8		

In order to encompass all officially validated degrees and certificates, including certificates awarded in adult education and continuing training in the formal Danish education system, the NQF distinguishes between qualifications and supplementary qualifications, as can be seen in the table above. The level descriptors are common to both types of qualifications. The supplementary qualifications typically fulfil parts of the requirements concerning knowledge, skills and/or competences at a given level. For a description of supplementary qualifications, see section 3.5.

3.4   NQF level descriptors

The eight levels in the NQF are defined by learning outcomes. The level descriptors for learning outcomes are described in terms of knowledge, skills and competences. The level descriptors are formulated so as to accommodate very different degrees and certificates in the Dan-

ish education system, reflecting different types of learning outcomes, from the more theoretical to the more practical.

As a basis, it was decided to use the typology of knowledge, skills and competences as a common typology for defining national level descriptors in order to ensure correspondence with the NQF-HE, where the knowledge, skills and competences typology already existed, and also to facilitate correspondence with the EQF.

Secondly, an analysis of learning outcomes and descriptors for learning outcomes in laws, executive orders and the qualifications framework for higher education was conducted to ensure that the level descriptors of the NQF could provide a systematic - divided by levels - description of the learning outcomes that can be attained in the Danish education system. They were, furthermore, simultaneously formulated so that there would be a clear progression from one level to the next. Each level in the NQF builds on and subsumes the levels beneath. However, in order to keep the text as clear as possible and avoid repetitions, the descriptors of the respective previous levels have implicitly been included in the next level.

Finally, within the key concept of learning outcome, the level descriptors were formulated with a view to accommodating the assessment and inclusion of all qualifications in the Danish education system, providing generic but still detailed information on the learning outcomes at each level.

In drawing up the level descriptors, allowance was made for the fact that there already existed level descriptors for higher education in the qualifications framework for higher education. Therefore, the level descriptors for the bachelor, candidatus and PhD levels were utilised unchanged in the NQF as descriptors for levels 6, 7 and 8. These levels encompass existing higher education qualifications. Thus, the descriptors for levels 6-8 in the NQF are identical with the top three level descriptors in the NQF-HE. This, however, does not apply to the short cycle descriptor and level 5.

A new level descriptor for level 5 in the NQF, as for levels 1-4, was drawn up to encompass both higher education qualifications at this level (short cycle qualifications) and other types of qualifications at the same level. The NQF level 5 descriptor is broader than the corresponding HE-short cycle level descriptor to enable it to cover qualifications that are acquired through certain vocational education and training or maritime vocational education and training programmes.

The NQF level descriptors for levels 1-5 are presented as part of criterion 2 of the referencing criteria and procedures (see section 5.2) and the NQF level descriptors for levels 1-8 are also enclosed in Appendix A.

3.5 The NQF key concepts

The level descriptors in the NQF were developed on the basis of the following key concepts:
- Qualifications
- Learning outcomes
- Knowledge, skills and competences

3.5.1 Qualifications

A qualification in the NQF is a degree or a certificate for a qualification or a supplementary qualification that is officially validated and documents a learning outcome that has been attained. The degrees and certificates/diplomas must have been awarded pursuant to an Act or an executive order and must have been quality assured by a public authority in the Danish education system.

The concept of qualification stresses the result of a learning process, rather than the length or content of an education programme.

The NQF operates with three different types of qualifications that lead to officially validated degrees and certificates:

- **Degrees** that are acquired in higher education. Examples of degrees are the Academy Profession degree, Diploma, and Master's degree (Candidatus).
- **Certificates** that are acquired in the remainder of the Danish education system. Examples of such certificates include the certificate for the two-year upper secondary programme (The Higher Preparatory Examination), and the certificate/ journeyman's certificate for vocational education and training.
- **Certificates for supplementary qualifications** that are acquired in adult education and training. Examples of certificates for supplementary qualifications are the higher preparatory single subjects and adult vocational training certificates.

A certificate for supplementary qualifications is a supplement to a qualification, part of a qualification or can be a qualification that does not build on a qualification at an underlying level or is linked to an existing qualification. Supplementary qualifications are typically used by adults as stand alone qualifications for skills upgrading, but a large number of general and vocational supplementary qualifications provides opportunities to accumulate learning outcomes and credits in order to acquire a full general or vocational qualification.

It is the officially validated degrees and certificates that are included in the framework. Degrees and certificates document the learning outcomes achieved by a person who has completed a given educational programme. It is possible to acquire certain degrees and certificates by other methods than by completing entire education programmes and courses. Certain types of degrees and certificates can be acquired through recognition of what has been learned through working life or activity in associations, e.g. on the basis of an assessment of prior learning.

3.5.2 Learning outcomes

Learning outcomes are what the learner knows or is able to do as the result of a learning process. The learning outcome of a qualification is what a person with a given qualification is expected to know and be able to do.

In the NQF, the term learning outcome is used for describing level and qualification. As can be seen in the figure below, the concepts of knowledge, skills and competences are used to describe a learning outcome. Thus, a concrete description of a learning outcome in the NQF states the knowledge, skills and competences a person with a given qualification is expected to have.

Figure 3
Learning outcome in the NQF

Knowledge	Skills	Competence
Type and complexity	Type	Space for action
	Problem solving	Cooperation and responsibility
Understanding	Communication	Learning

Knowledge
Knowledge means knowledge and understanding of a subject. Knowledge contains the following aspects:

- The type of knowledge involved: knowledge about theory or knowledge about practice; knowledge of a subject or a field within a profession.
- The complexity of this knowledge: the degree of complexity and how predictable or unpredictable the situation is in which this knowledge is mastered.
- Understanding: the ability to place one's knowledge in a context. For example, understanding is expressed when one explains something to others.

Skills
Skill means what a person can do or accomplish. Skill contains the following aspects:

- The type of skill involved: practical, cognitive, creative or communicative.

- The complexity of the problem solving: the problem solving this skill is to be applied to and the complexity of the task.
- Communication: the communication that is required; the complexity of the message; to which target groups and with which instruments.

Competence

Competence is about responsibility and autonomy, and states the ability to apply knowledge and skills in a work situation or in a study-related context. Competence contains the following aspects:

- Space for action: the type of work and/or study-related contexts in which the knowledge and skills are brought into play, and the degree of unpredictability and changeability in these contexts.
- Cooperation and responsibility: the ability to take responsibility for one's own work and the work of others, and the complexity of the cooperative situations in which one can engage.
- Learning: the ability to take responsibility for one's own learning and that of others.

3.6 Overview of types of degrees and certificates

The NQF encompasses all publicly recognised degrees and certificates in the education system. The table below provides an overview of the different types of qualifications in the framework. How qualifications are placed in the NQF is described in the following chapter.

As mentioned earlier in this chapter, the degrees for higher education are placed at levels 5-8. The certificates and certificates for supplementary qualifications are placed at levels 1-5 in the NQF.

Figure 4
Overview over qualifications in the NQF

	Certificates and degrees			Certificates for supplementary qualifications	
1	Primary and lower secondary school certificate (9th class)		1	Preparatory adult education certificates	
2	Primary and lower secondary school certificate (10th class)		2	General Adult Education certificates	Basic VET courses and single subject VET certificates
3		VET certificates / Other vocational certificates	3		Adult vocational training certificates
4	General upper secondary certificates		4	Higher preparatory single subject certificates / Supplementary upper secondary certificates	
5	Academy Profession degrees and VVU Degrees		5		
6	Bachelor and Diploma Degrees		6		
7	Master's Degree (Candidatus) and Master Degrees		7		
8	PhD Degree		8		

The qualifications are described in detail in their educational contexts in Appendix C. For a brief insight, see chapter 4.

See Appendix B for examples of type of degrees, certificates and certificates for supplementary qualifications.

3.7 Principles for the inclusion of certificates and degrees

The inclusion of certificates and degrees into the NQF is based on an assessment of the learning outcomes that the individual degree/certificate documents in relation to the level descriptors of the framework.

The assessment is to be based on one of the two principles:

Best fit: The learning outcome of a qualification must - in general across the level descriptor - fit better with the level descriptor, in terms of knowledge, skills and competences, than other levels in the NQF, for the level to which the qualification is referenced.

The best fit principle is used when referencing qualifications at levels 1-5 in the NQF. This applies to both certificates for qualifications and certificates for supplementary qualifications. The best fit principle means that there is not necessarily a complete match between the learning outcome description of the qualification and the level descriptor in the NQF. A supplementary qualification is though in terms of best fit only required to fit either knowledge, skills and/or competences given the nature of these qualifications being typically too narrow to fill out the learning outcome across a level.

Full fit: The learning outcome of a qualification must correspond to the level descriptor, in terms of knowledge, skills and competences, for the level to which the qualification is referenced.

The full fit principle is used when referencing qualifications at levels 6-8 in the NQF. This applies to degrees in higher education, which are included in the NQF via the NQF-HE. The full fit principle which already exists in NQF-HE has been adopted for level 6-8 to ensure overall cohesion and transparency between the two frameworks. All public recognised qualifications at level 6-8 has by law to be accredited as higher education degrees and thereby included in NQF-HE and the NQF on the basis of full-fit, which are the basis for the accreditation.

In higher education, inclusion of a qualification into the NQF-HE takes place when a new programme leading to the qualification is accredited (for further information, see criterion 4, section 5.4.2 and self-certification report Annex A).

In criterion 4 (section 5.4), the principles and procedures for including certificates and degrees in the NQF are presented, as well as the procedures for the quality assurance of inclusion.

3.8 Web edition of the NQF and database of qualification levels

To provide users and the general public with information about the NQF and the levels of specific qualifications, web-based information has been developed.

This comprises a web edition of the NQF at www.nqf.dk and a database with information about the level of each qualification at www.uddannelsesguiden.dk. In addition, a more comprehensive introduction to the Qualifications Framework has been produced, and is available on the Ministry of Education website.

The main target group for the web edition of the NQF are people working with the qualifications framework and the recognition of qualifications in Denmark and other countries. The web edition contains detailed information about the NQF, types and examples of qualifications in

the NQF and what the NQF and EQF can be used for. This report is also available on the web-site.

The database at www.uddannelsesguiden.dk contains information about all publicly validated education programmes and qualifications in Denmark, including type, duration, credit points, providers, admission requirements, detailed information about programme aims, content, structure and examinations, further education possibilities and typical jobs or employment possibilities. In addition, the qualifications level of the NQF has been added as part of the im-plementation of the NQF. This facility also allows the possibility of various search functions related to educational possibilities, types of qualifications and qualification levels.

4 The Danish Lifelong Learning System and its Qualifications

To provide the reader with an understanding of Danish qualifications, their context, levels and progression between the levels, this chapter briefly introduces the Danish lifelong learning system and its various sub sectors. For a more in-depth presentation, see Appendix C, where each sub sector of the educational system is presented, including the aims of the programmes, how learners gain admission, the duration of the programmes, providers of the programmes and which degrees and certificates they award.

Furthermore, this chapter notes which certificates and degrees are awarded in the different sub sectors of the educational system, and at what level of the NQF the qualifications are included. See Appendix B for in-depth examples of qualifications.

4.1 An overview

Generally the Danish educational system is divided into two parts: the *mainstream educational system* and the *adult and continuing educational system*. The mainstream educational system is attended by children from the age of 6, who progress through the system into their youth and adulthood. The adult and continuing education system mirrors the mainstream system but is designed for adults.

Figure 5
The Danish educational system

Ordinary educational system			Adult and continuing educational system		
Primary and lower secondary school			**General adult education**	**Adult vocational education and training**	
Primary and lower secondary school			Preparatory adult education (FVU) General adult education (AVU)		
Upper secondary education					
General upper secondary education	Vocational education and training	Higher preparatory single subjects	Basic adult education (GVU)	Adult vocational training programmes (AMU)	
Higher education					
Bachelor's Degree, Bachelor's Degree in Arts/ Fine Arts	Professional Bachelors Degree	Academy Profession Degree	Academy Profession Degree (VVU)		
			Diploma Degree		
Master's Degree, Master's Degree in Arts/ Fine arts			Master Degree, Master Degree in Arts/ Fine Arts		

Ph.d

The following sections of this chapter present, firstly, the mainstream education system until higher education, which includes primary and lower secondary school (4.2) as well as upper secondary education (4.3). This is followed by a presentation of the adult and continuing education system at the corresponding levels (4.4-4.5). Finally, the higher education system is presented (4.6).

4.2 Primary and lower secondary school

The Danish 'Folkeskole' is a comprehensive school system, integrating primary and lower secondary school, where children start at the age of 6 and normally end their education at the age of 16. The first year is a mandatory pre-school year (0th class) followed by 9 years of mandatory education (1st to 9th class). Finally, the system ends with an optional year: the 10th class. 10th class is an optional extra year for pupils who need further academic qualification and clarification concerning their choice of continuing in either general or vocational upper secondary education.

The aims of primary and lower secondary school are to provide pupils with knowledge and skills that will prepare them for upper secondary education and training, and provide them with the desire to learn more. Primary and lower secondary school also aims to prepare pupils to be able to participate, demonstrate mutual responsibility, and understand their rights and duties in a free democratic society.

The Danish primary and lower secondary school is under the auspices of the Ministry of Education.

Certificates in Primary and lower secondary school

Level 1
- Certificate for the leaving examination of the 9th class of the Folkeskole (Leaving Certificate of Primary and Lower Secondary school)

Level 2
- Certificate for the 10th class of the Folkeskole (Primary and Lower Secondary school)

4.3 Upper secondary education

The system of youth education programmes (ungdomsuddannelser) in Denmark is divided into two branches at upper secondary level:
- General upper secondary education;
- Vocational education and training

General upper secondary education mainly gives access to further education and vocational education and training of qualified labour for the labour market. Upper secondary education is included in the NQF at levels 3-5.

General upper secondary education and vocational education and training are provided under the auspices of the Ministry of Education

This level also includes maritime vocational education and training under the responsibility of the Ministry of Economic and Business Affairs.

4.3.1 General upper secondary education

General upper secondary education comprises four different programmes. The overall aims of the four programmes are to prepare students for admission to higher education, develop their interest and ability to take part in society and to support their personal development. The programmes, moreover, strengthen the creativity, critical sense and innovative ability of the stu-

dents. The choice of programme and specific optional subjects within the programmes determine which higher education programmes the general upper secondary programme gives access to.

The four programmes are: the general upper secondary school leaving examination (stx), the higher technical examination (htx), the higher commercial examination (hhx) and the higher preparatory examination (hf).

Certificates in general upper secondary education

Level 4
- The Upper Secondary School Leaving Examination (Certificate for the three-year upper secondary education programme)
- The Higher Commercial Examination (Certificate for the three-year upper secondary education programme)
- The Higher Technical Examination (Certificate for the three-year upper secondary education programme)
- The Higher Preparatory Examination (Certificate for the two-year upper secondary programme)

4.3.2   Vocational education and training

Vocational education and training programmes in the mainstream educational system are in English referred to as initial vocational education and training (iVET). In Danish, it is abbreviated to EUD.

The system comprises approximately 107 vocational education and training programmes, which are organised into 12 vocational clusters (access routes), each with a specific basic course. Almost all the programmes are divided into steps and specialisation or profiles. The twelve clusters range from building and construction to healthcare and pedagogy and can be grouped into four types: agriculture, commercial, social and health and technical programmes. The duration of the programmes is between 1½ to 5 years, but typically a VET programme runs over 3.5-4 years, including the basic introductory course.

In Denmark the vocational education and training programmes are based on a dual training principle, which means that each programme is divided into periods of school based training and periods of in-company training.

A special part of the vocational education and training sub sector is the maritime vocational education and training programmes. They provide a number of programmes aimed specifically at the needs of the maritime sector.

Certificates in vocational education and training (VET)

Level 2
- Basic vocational education and training certificates (Certificate for supplementary qualification)

Level 3
- Basic vocational education and training certificates (2 year commercial programme, certificate for supplementary qualifications)
- Certificate for vocational education and training (e.g. social and healthcare helper, industrial assistant)

Level 4

- Certificate for vocational education and training [e.g. social and healthcare assistant, industrial technician)[1]

Level 5

- Certificate for vocational education and training (e.g. film and TV production technician, aircraft mechanic)

Certificates in maritime vocational education and training

Level 2-5[2]

Each programme in the maritime vocational education and training system has its own certificate

4.4   General adult education

The adult and continuing education system at these levels can be divided into general adult education (which is presented in this section) and adult vocational education and training (which is presented in section 4.5).

General adult education is offered at levels 1-4 in the NQF:
- Preparatory adult education (Level 1)
- General adult education (Levels 1-3)
- Higher preparatory single subjects (Level 4)

General Adult Education Programmes are provided under the auspices of the Ministry of Education.

4.4.1   Preparatory adult education

Preparatory adult education (in Danish shortened to FVU) is a service for young people over 18 and adults who wish to become more proficient at reading, writing, spelling or mathematics at a basic level. There are also courses for adults with reading and writing disabilities (dyslexia) as well as preparatory education for foreigners. Admission is open for applicants over 18 years old.

Certificates for supplementary qualifications in preparatory adult education

Level 1

- Certificate for preparatory adult education

4.4.2   General adult education

General adult education (in Danish shortened to AVU) is for both young and mature adults who have not completed lower secondary education or who need to improve or supplement their basic education. General adult education at lower secondary level is provided as single subject courses. The teaching leads to an examination which qualifies for admission to continued education in same way as with the school-leaving certificates obtained after the 9th and 10th classes of the Folkeskole.

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[1] *As a new option students can take a VET-programme with additional elements and examination, that in addition to qualifying the students for a vocation, also gives the students access to higher education (eux).*

[2] *Maritime education is also on level 6, Professional Bachelors Degree*

Certificates for supplementary qualifications in general adult education

Level 1
- Certificate for general adult education level G (9th class)

Level 2
- General adult education level F and E (10th class)

Level 3
- General adult education level D

4.4.3   Higher preparatory single subjects

The students taking the higher preparatory single subjects are in general learners with a desire to gain in-depth knowledge of one or more subjects or are in need of supplementing their upper secondary level education in order to gain admission to higher education. The aims of higher preparatory single subjects are equivalent to the aims of the 2 year higher preparatory examination programme (hf programme).

Certificates for supplementary qualifications in general upper secondary subjects

Level 4
- Certificates for supplementary single subject courses at upper secondary level
- Higher Preparatory Examination, single course subject

4.5   Adult vocational education and training

Another part of the adult and continuing educational system is the adult vocational education and training programmes. Adult vocational education and training consists of:
- Adult vocational training programmes;
- Basic adult education programmes.

Adult vocational education and training programmes are provided under the auspices of the Ministry of Education and are included in the NQF at levels 2-5.

4.5.1   Adult vocational training programmes

Adult vocational training programmes in the adult and continuing educational system are in English known collectively as continuing vocational training (cVET). In Danish, this is abbreviated to AMU.

Adult vocational training programmes provide training in specific work-related skills that meet the needs of specific sectors of the labour market. The programmes are aimed at both skilled and unskilled workers. The adult vocational training programmes can be placed in three main categories:
- Specific job/sector related skills and qualifications;
- General skills and qualifications;
- Labour management skills and qualifications.

Certificates for supplementary qualifications in adult vocational training

Level 2-5
- Adult vocational training certificate

4.5.2   Basic adult education programmes

Basic adult education programmes (in Danish abbreviated to GVU) aim to provide low skilled adults who have a minimum of two years' relevant work experience with the opportunity to supplement their work experience, previous learning and supplementary qualifications and achieve a qualification corresponding to an established VET programme. The certificates provided are not GVU certificates but VET certificates.

Before being admitted to a basic adult education programme, participants go through an obligatory assessment of prior learning. This assessment is based on the aims and learning outcomes of the corresponding VET programme (see section 4.3.2).

Certificates for supplementary qualifications in basic adult education (GVU)

Level 3-5
- Certificates correspond to the ones awarded in the VET programme

4.6   Higher education

The higher education programmes are organised according to a binary division between research-based and professionally oriented programmes. The purpose of the research-based programmes is to educate students to the highest international level within and across the scientific disciplines, whereas the purpose of the professionally oriented programmes is to ensure education closely based on practice and at an international level to meet the need for well qualified professionals in the private and public sectors.

Within higher education there are also two systems that mirror each other: Degrees in the mainstream system are reflected within the adult and continuing education system. The qualification levels correspond to each other, but the programmes within the adult and continuing educational system are distinct in terms of their content, profiles, etc.

Higher education is included in the NQF at levels 5-8 and is provided under the auspices of the Ministry of Science, Technology and Innovation, the Ministry of Education, the Ministry of Culture, the Danish Ministry of Economic and Business Affairs, the Ministry of Defence and the Ministry of Justice.

A self-certification process for the Danish Qualifications Framework for Higher Education (NQF-HE) and its alignment with QF-EHEA was conducted in 2009. See Annex A for a presentation of this.

Degrees in Higher Education

Level -5
- Academy Profession Degree
- Academy Profession Degree (VVU)

Level 6
- Bachelor's Degree
- Bachelor's Degree in Arts/ Fine Arts
- Professional Bachelors Degree
- Diploma Degree

Level 7
- Master's Degree (Candidatus)
- Master's Degree in Arts/ Fine Arts
- Master Degree
- Masters Degree in Arts/ Fine Arts

Level 8
- Ph.D Degree

5   Criteria for referencing

The aim of the referencing process has been to refer the Danish National Qualifications Framework for Lifelong Learning (NQF) to the European Qualifications Framework (EQF). To guide and help member states, the EQF Advisory Group has agreed the following set of ten referencing criteria and procedures:

1   The responsibilities and/or legal competence of all relevant national bodies involved in the referencing process, including the National Coordination Point, are clearly determined and published by the competent public authorities.

2   There is a clear and demonstrable link between the qualifications levels in the national qualifications framework or system and the level descriptors of the European Qualifications Framework.

3   The national framework or qualifications system and its qualifications are based on the principle and objective of learning outcomes and linked to arrangements for validation of non-formal and informal learning and, where these exist, to credit systems.

4   The procedures for inclusion of qualifications in the national qualifications framework or for describing the place of qualifications in the national qualification system are transparent.

5   The national quality assurance system(s) for education and training refer(s) to the national qualifications framework or system and are consistent with the relevant European principles and guidelines

6   The referencing process shall include the stated agreement of the relevant quality assurance bodies.

7   The referencing process shall involve international experts.

8   The competent national body or bodies shall certify the referencing of the national framework or system with the EQF. One comprehensive report, setting out the referencing and the evidence supporting it shall be published by the competent national bodies, including the National Coordination Point, and shall address separately each of the criteria.

9   The official EQF platform shall maintain a public listing of member states that have confirmed that they have completed the referencing process, including links to completed referencing reports.

10   Following the referencing process, and in line with the timelines set in the Recommendation, all new qualification certificates, diplomas and Europass documents issued by the competent authorities contain a clear reference, by way of national qualifications systems, to the appropriate European Qualifications Framework level.

This chapter contains the response from the Danish referencing committee to each of the ten referencing criteria and procedures.

It is the conclusion of the referencing committee that the NQF fulfils each of the ten reference criteria.

5.1   Criterion 1

The responsibilities and/or legal authority of all relevant national bodies involved in the referencing process, including the National Coordination Point, are clearly determined and published by the competent public authorities

The referencing process has involved the relevant national bodies. They have been organised in five tiers with different responsibilities and tasks:
- A coordination committee
- A referencing committee
- A consultation committee, including a written consultation process
- A National Coordination Point
- A secretariat

The involved ministries have appointed the members of the referencing committee, consulting committee and participants in the wider consultation process, as well as assigned the roles of National Coordination Point (NCP) and secretariat. Appendix E contains a list of all organisations and persons that have been involved in the referencing process as well as information about the National Coordination Point.

The responsibilities of the different committees and participants involved in the referencing process are - as well as presented here - also published on the NQF websites.

5.1.1   Coordination committee

The coordination committee has the overall responsibility for implementing the NQF and for the referencing of the NQF to the EQF, including the referencing process, its organisation, setting a timetable for the process and a framework for the report. The coordination committee is also responsible for presenting the final report to the responsible ministries for approval.

The coordination committee consists of representatives from the four ministries with responsibility for lifelong learning in Denmark:
- The Ministry of Education
- The Ministry of Science, Technology and Innovation
- The Ministry of Culture
- The Ministry of Economic and Business Affairs

The NCP appointed by the four ministries is also a member of the coordination committee.

5.1.2   Referencing committee

The referencing committee is responsible for carrying out the referencing process under the overall framework and line of direction defined by the coordination committee.

The main task of the referencing committee was to document and verify the reference between the EQF and the NQF, as well as ensure the use of a transparent methodology in accordance with the process criteria. This work is documented in this report. The referencing committee is responsible for:
- Defining the content of the report as well as the documentation requirements for the reference between the NQF and the EQF;
- Ensuring that a transparent methodology is used in the inclusion process, and that the decisions made as part of that work are published;
- Preparing this report and determining the reference between the levels in the NQF and the EQF based on the documentation and analysis;
- Ensuring that key stakeholders are involved;
- Supporting the distribution and publication of the results of the referencing process in an understandable way for both national and international users and interested parties.

The referencing committee consisted of representatives from the four ministries, two international experts, The Danish Agency for International Education (IU), ACE Denmark and The Danish Evaluation Institute (EVA).

5.1.3   Consultation committee

A consultation committee and a written consultation process involving Danish key stakeholders, was set up to engage the stakeholders in the referencing process and to ensure co-responsibility for the referencing of the NQF and the EQF.

The consultation committee is responsible for:
- Overseeing the referencing process as presented by the secretariat;
- Giving input to and qualifying the referencing process;
- Supporting the quality assurance of the results of the referencing process to ensure validity;
- Supporting the distribution and publication of the results of the referencing process in an understandable way for users and interested parties.

The consultation committee was involved through a seminar, where they were invited to comment on the first draft of the reference report.

The consultation committee involved councils and committees, as well as representatives from the organisations representing headmasters and vice-chancellors.

After the seminar with the consultation committee, the draft report was released for written consultation to a broader audience of stakeholders to widen the engagement and co-responsibility in the referencing process.

Issues arising in the consultation committee and from the written consultation are presented in chapter 6.

5.1.4   The National Coordination Point

A National Coordination Point (NCP) was established under the auspices of The Danish Agency for International Education – see also Appendix E for information about the person assigned as NCP.

The NCP has taken part in the referencing process as a member of the referencing committee. The NCP is, furthermore, responsible for disseminating information about the national referencing process and the results, including managing the NQF websites

The NCP is responsible for:
- Participating in the work of the referencing committee;
- Informing interested parties nationally and internationally about the Danish referencing process and the reference between the NQF and the EQF, including publishing the report on the NQF website and passing it on to the EU website;
- Using the report as basis for information and guidance on the reference between the NQF and the EQF, as well as the NQF levels of Danish degrees and certificates and how they relate to the NQF;
- Participating in the dialogue with other countries about the mutual recognition of qualifications.

Two websites with information about the NQF
The NCP has developed and manages two websites with information about the NQF:
- www.kvalifikationsrammen.dk – Website in Danish
- www.nqf.dk – Website in English

The websites contain information about the qualifications framework in general, how it can be used and at what levels different types of degrees and certificates are included in the framework, as well as descriptions of the referencing process.

The target group for these websites are professionals within the sector having a special interest in the referencing process or in need of a deeper understanding of the qualifications framework.

For pupils, students and citizens in general the national guidance portal – www.uddannelsesguiden.dk – is the key website for information about the Danish education system. This website contains updated information about all publicly recognised education programmes and qualifications, and it also contains information about the NQF levels of all the qualifications in the Danish education system.

5.1.5   Secretariat

The Danish Evaluation Institute (EVA) has acted as secretariat for the referencing committee and has drafted the final report.

5.2   Criterion 2

There is a clear and demonstrable link between the qualification levels in the national qualification framework or system and the level descriptors of the European Qualification Framework.

To demonstrate whether there is a clear and demonstrable link between the NQF and EQF, the referencing committee conducted a three step analysis using the following methodology:
- structural comparison of the two frameworks (5.2.1);
- conceptual comparison of the two frameworks (5.2.2);
- linguistic analysis of level descriptors in the two frameworks (5.2.3).

Based on the above three step analysis, the totality of the referencing of the levels in the NQF to the EQF was concluded to be following:

Figure 6
The referencing of levels in the NQF to the EQF

EQF	NQF
Level 1	Level 1
Level 2	Level 2
Level 3	Level 3
Level 4	Level 4
Level 5	Level 5
Level 6	Level 6
Level 7	Level 7
Level 8	Level 8

Where levels 2-5 in the NQF in the NQF can confidently be referenced the equivalent levels 2-5 in the EQF, the referencing committee concluded that NQF level 1 is more demanding than the EQF level 1. Therefore based on the linguistic analysis – based on the best-fit principle - level 1 in the NQF is rather confidently referenced to level 2 in the EQF

It should be noted that higher education qualifications are integrated into the NQF and are thus included as part of the referencing to the EQF set out here. The higher education qualifications have been separately aligned to the EHEA through the compatibility already verified between the NQF-HE and the EHEA frameworks (See Self-certification report Annex A). The two processes are fully compatible.

5.2.1 Structural comparison of the two frameworks

The architecture of the two frameworks was compared in order to ascertain whether there is an immediate similarity between the two frameworks.

The referencing committee concluded that a close correspondence between the architectures of the NQF and the EQF exists, as they are both based on an 8 level structure, where level 1 is the lowest level, rising to level 8 as the highest level, and they are both based on the concept of learning outcomes.

Furthermore, both frameworks are comprehensive and integrated, and designed to relate all qualifications, regardless of field, institutional setting and mode of learning. Both frameworks are designed to promote lifelong learning.

Although both frameworks are qualification frameworks and are focused on learning outcomes rather than learning input, the two frameworks have different purposes. The EQF is a meta-framework with the purpose of being a translation device between national systems, whereas the NQF is a national framework to which concrete qualifications are linked.

Evidence shows that concrete qualifications are linked to the Danish framework. This can be seen in chapter 3 which contains an overview of the degrees, certificates and supplementary certificates that have been included in the NQF, as well as in Appendix B which presents concrete example of degrees and certificates. In this connection the committee also concludes that there is a clear progression in the NQF, where the steps from one level to another – taking account of the concrete qualifications linked to the framework - are not too steep.

5.2.2 Conceptual comparison of the two frameworks

When comparing the use of concepts in the two frameworks, the referencing committee concluded that the NQF is evidently based on the same underlying concept of learning outcome as the EQF, although there are some differences in the definitions of concepts due to the different functions and origins of the two frameworks.

Firstly, in both frameworks the level descriptors are divided into knowledge, skills and competence categories. However, where the EQF deploys meta-concepts to define learning outcomes, the NQF includes specific national attributes in its definitions of learning outcomes, reflecting Danish educational culture and legislation.

By comparing the knowledge, skills and competence outcome definitions in the NQF and the EQF, the following parallels and differences can be found:

* **Knowledge:** There is a strong parallel between the definitions of knowledge outcome in the two frameworks. The knowledge definitions of both frameworks describe what is learned and also which learning processes are involved. There is, however, a slight difference in the definition of knowledge. In the EQF, knowledge is defined as either 'theoretical or factual', whereas the NQF refers to knowledge as either 'theoretical and/or practical', reflecting the Danish educational tradition of distinguishing between practical and/or theory based educational elements. Nevertheless, the underlying meaning remains the same. Furthermore, the NQF adds the category of 'understanding' in describing knowledge (see also section 3.5).
* **Skills:** The meaning of the skills outcome is the same in the two frameworks. However, again the NQF is more expansive than the EQF. The NQF adds the categories: 'complexity of the problem solving' and 'communication' (see section 3.5).
* **Competence:** The understanding of competence outcome is the same in the two frameworks. Thus again, competence in the EQF is described in broader terms as 'responsibility' and 'autonomy' whereas the NQF competence outcome definition is extended with 'cooperation' and 'learning' categories (see section 3.5). Both frameworks seek to describe the context in which competence is described.

Overall the referencing committee concludes that there is strong correspondence between the core understandings of learning outcomes that underpin the levels of the NQF and EQF. Both

frameworks are based on level descriptors for each level. The level descriptors are in turn based on the same key concepts of learning outcomes divided into knowledge, skills and competences, and on the same understanding of the concepts.

5.2.3 A linguistic analysis comparing level descriptors in the NQF with level descriptors in the EQF

Taking into account the above established correspondence between the architectures and underlying conceptual understandings of learning outcomes of the NQF and EQF, a basis for a linguistic comparison of the levels was established in order to facilitate a comparison of the NQF and EQF levels.

The process of referencing the NQF and EQF levels began by taking the Danish NQF level 1 indicators and testing them against the statements defining the EQF level 1. Wherever a reference could not be ascertained, the Danish level NQF 1 was referenced with level 2 of the EQF. Regarding the other levels, correspondence was sought and confirmed in rising order for levels 3-5.

In comparing the texts and semantics of each level descriptor in the two frameworks, the two frameworks were set out in tables, and a cross comparison of each level was conducted. In order to illustrate correspondence or difference, the comparative analysis employed the following colour code:
1. Red – correspondence between *knowledge* outcome in the EQF and NQF;
2. Green – correspondence between the *skills* outcome in the EQF and NQF;
3. Pink - correspondence between the *competence* outcome in the EQF and NQF;
4. Blue- differences between descriptors in the EQF and NQF.

In general, the analysis showed that there is close correspondence between the languages and the underlying concepts used to define the descriptors. The NQF level descriptors are more detailed than the EQF level descriptors. There are generally more statements in the NQF level descriptors than there are in the EQF descriptors.

Comparing NQF level 1 with EQF level 1
The *knowledge outcomes* in the two frameworks at level 1 are almost identical. In the EQF level 1, knowledge is referred to as 'basic general knowledge'. The NQF level 1 has an almost similar formulation: 'basic knowledge within general subjects'. However, the NQF level 1 knowledge outcome adds a democratic dimension to the knowledge base at level 1 with 'basic knowledge about natural, cultural, social and political matters', something which reflects the importance of this dimension as a characteristic of Danish basic education.

Skills in the EQF level 1 are described as 'basic skills required to perform a simple task'. The skills outcome in the NQF level 1 is more demanding in its description, referring to 'basic linguistic, numerical, practical and creative skills' and 'being able to utilise different methods' and rather refers to level 3 to in the EQF. NQF level 1 also is more demanding in requiring skills to 'evaluate' and 'present own work' than the level 1 EQF skills outcome.

Competence outcome is described in EQF as the 'ability to work under direct supervision', whereas NQF level 1 refers to the autonomy level of being able to take personal decisions' and 'work independently with predefined problems'. Also the EQF refers to 'direct' supervision and 'structured context', the NQF refers to 'partly open learning situations'. In all, the level 1 NQF competence outcome is more demanding than the EQF level 1 competence outcome, and rather refers to level 2 of the EQF.

Figure 7
The level 1 descriptors in the EQF and NQF

EQF-level 1			NQF-level1		
Knowledge	Skills	Competence	Knowledge	Skills	Competence
Basic general knowledge	Basic skill required to perform a simple task	Work or study under direct supervision in a structured context	Must have basic knowledge within general subjects. Must have basic knowledge about natural, cultural, social and political matters.	Must possess basic linguistic, numerical, practical and creative skills. Must be able to utilise different basic methods of work. Must be able to evaluate own work. Must be able to present the results of own work.	Must be able to take personal decisions and act in simple, clear situations. Must be able to work independently with pre-defined problems. Must have a desire to learn and be able to enter into partly open learning situations under supervision.

Comparing NQF level 1 with EQF level 2

In the EQF level 2, *knowledge* is referred to as 'basic factual knowledge of a field of work or study' where the NQF level 1 refers to knowledge as being 'basic knowledge within general subjects'. As in EQF level 1 we are still on basic knowledge level and the NQF level 1 therefore matches both level 1 and 2 of EQF in this area. An addition element of the NQF level 1 knowledge description is the democratic dimension to the knowledge base at level 1 with 'basic knowledge about natural, cultural, social and political matters'.

Skills in the EQF level 2 are described as 'basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools'. The NQF level 1 has similar formulation referring to skills as 'must possess basic linguistic, numerical, practical and creative skills' and 'must be able to utilise different basic methods of work'. However, it can be argued that the NQF level 1 is on a second tier learning level compared to EQF level 1 and 2 and, therefore, a more demanding level, as the person 'must be able to evaluate their own work', which can be referred to the *competence outcome* in EQF level 4. Another difference is in the use of 'methods' in level 1 of the NQF, a term which is first used in level 3 of the EQF.

Competence outcome is described in both the EQF level 2 the ability to work 'under supervision with some autonomy' which is partly similar to the NQF level 1 competence requirement of being 'able to take personal decisions and act in simple, clear situations' and being 'able to work independently with predefined problems'. However, the NQF level 1 is also on a slight more demanding autonomy level which rather relates to EQF level 3 competence requirement of taking 'responsibility for completion of tasks'.

Figure 8
The level descriptors in the EQF – level 2 and NQF level 1

EQF – level 2			NQF – level 1		
Knowledge	Skills	Competence	Knowledge	Skills	Competence
Basic factual knowledge of a field of work or study	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	Work or study under supervision with some autonomy	Must have basic knowledge within general subjects. Must have basic knowledge about natural, cultural, social and political matters.	Must possess basic linguistic, numerical, practical and creative skills. Must be able to utilise different basic methods of work. Must be able to evaluate own work. Must be able to present the results of own work.	Must be able to take personal decisions and act in simple, clear situations. Must be able to work independently with pre-defined problems. Must have a desire to learn and be able to enter into partly open learning situations under supervision.

Comparing NQF level 2 with EQF level 2

At level 2, *knowledge* in the EQF is defined as being 'basic factual knowledge' of a field of work or study. The NQF level 2 has the same reference to both work and study and also the same level of knowledge as 'basic knowledge'.

An extra social dimension exists in the NQF level 2 knowledge outcome, which refers to 'having understanding of the basic conditions and mechanisms of the labour market', reflecting that this level also covers basic vocational education in the Danish educational system.

In relation to *skills outcomes*, there are strong similarities between the EQF level 2 and NQF level 2. The EQF level 2 refers to skills as the ability 'to carry out tasks and to solve routine problems using simple rules and tools' and to 'use relevant information'. Matching requirements can be found in the NQF level 2, which states the ability 'to apply fundamental methods and tools for solving simple tasks while observing relevant regulations'. A slight semantic difference is the use of 'fundamental methods and tools' in the NQF at level 2, whereas the EQF only mentions 'rules and tools' at level 2 and first 'methods' at level 3.

In relation to the *competence outcome*, the NQF level 2 refers to the ability to take 'personal decisions and act in simple, clear situations' as well as to undertake a certain amount of 'responsibility', which corresponds to the EQF level 2 of autonomy: 'work or study under supervision with some autonomy'. However, it should be taken into account when comparing the autonomy level of the NQF and EQF level 2 descriptor, that the NQF level 1 competence descriptors (the level 1 NQF competence descriptor is implicit included in the NQF level 2) is also slight more demanding in autonomy level with the requirement of and being 'able to work independently with predefined problems' relating to EQF level 3 competence requirement of taking 'responsibility for completion of tasks'. Also the NQF level 2 competence outcome adds the requirement of being able 'to relate to others in group processes'.

Figure 9
The level 2 descriptors in the EQF and NQF

EQF-level 2			NQF-level 2		
Knowledge	Skills	Competence	Knowledge	Skills	Competence
Basic factual knowledge of a field of work or study	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	Work or study under supervision with some autonomy	Must have basic knowledge in general subjects or specific areas within an occupational area or field of study. Must have understanding of the basic conditions and mechanisms of the labour market.	Must be able to apply fundamental methods and tools for solving simple tasks while observing relevant regulations. Must be able to correct for faults or deviations from a plan or standard. Must be able to present and discuss the results of own work.	Must be able to take personal decisions and act in simple, clear situations. Must be able to undertake a certain amount of responsibility for the development of forms of work and to enter into uncomplicated group processes. Must be able to enter into partly open learning situations and seek guidance and supervision.

Comparing NQF level 3 with EQF level 3

There are close parallels in the description of *knowledge outcomes* in the two frameworks at level 3. Knowledge at level 3 of the NQF is described as, 'must have knowledge of basic methodology and norms', which corresponds to the EQF level 3: 'knowledge of facts, principles, processes and general concepts, in a field of work or study'. The NQF level 3 knowledge outcome again adds a more societal and vocational requirement: 'must have understanding of own possibilities for influence on the labour market and in society'. However, this can be argued to relate to the EQF skills outcome level 3 that refers to the ability to 'adapt own behaviour to circumstances in solving problem', as both are concerned with a person's ability to relate to environment and asses their own behaviour.

The *skills outcomes* in the NQF level 3 are very similar to the ones in the EQF at level 3, as they both describe the 'practical' level using words such as 'practical work' (NQF) and 'practical skills to accomplish tasks' (EQF). Correspondence is also seen in the required ability to use information: 'must be able to search for and assess information' (NQF) and 'by selecting and applying basic methods, tools, materials and information' (EQF). The NQF level 3 adds an extra skills outcome concerning communication, as a person must be able to 'use professional terminology in communication with colleagues, fellow students and users'.

Competence outcomes at level 3 in the NQF are described as being able 'to take responsibility for delimited work processes', and in the EQF as to 'take responsibility for completion of tasks', which display strong correspondence in responsibility levels. Regarding relation competence, the NQF operates with the formulation: 'must be able to enter into interdisciplinary cooperation within the practice of an occupation or field of study', and the EQF with the ability to 'adapt own behaviour to circumstances in solving problems', and the underlying concepts are very similar, albeit with the slightly more demanding competence outcome in the NQF of being able to 'enter into *interdisciplinary* cooperation'.

In general there is correspondence between the overall NQF level 3 descriptor and the EQF level 3 descriptor, although the NQF level descriptor is more detailed in its requirements and adds the elements: 'professional' and 'interdisciplinary'.

Figure 10
The level 3 descriptors in the EQF and NQF

EQF-level 3			NQF-level 3		
Knowledge	Skills	Competence	Knowledge	Skills	Competence
Knowledge of facts, principles, processes and general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	Take responsibility for completion of tasks in work or study Adapt own behaviour to circumstances in solving problems	Must have knowledge of basic methodology and norms within an occupational area or field of study. Must have understanding of own possibilities for influence on the labour market and in society.	Must be able to perform practical work assignments within an occupational area or field of study. Must be able to solve professional problems. Must be able to search for and assess information relevant to a practical work assignment within an occupational area or field of study. Must be able to use professional terminology in communications with colleagues, fellow students and users.	Must be able to take responsibility for delimited work processes. Must be able to enter into interdisciplinary cooperation within the practice of an occupation or field of study. Must be able to participate actively in learning situations within an occupation or field of study.

Comparing NQF level 4 with EQF level 4
The *knowledge* outcomes in the two frameworks at level 4 display close parallels. The NQF level 4 competence descriptor states: 'must have knowledge of concepts, principles and processes within the practice of an occupation or field of study or in general subjects', which strongly corresponds to the competence descriptor EQF level 4: 'must have factual and theoretical knowledge in broad contexts within a field'. Both frameworks specify the need for 'theoretical' and 'concepts' components. In the NQF at level 4, the societal dimension appears again, as in levels 1-3, but also an international aspect is introduced at this level.

The *skills* outcomes set out at level 4 are remarkably similar. The EQF at level 4 refers to skills as 'a range of cognitive and practical skills required to generate solutions to specific problems', which is closely matched by the NQF level 4: 'must be able to identify a practical and/or theoretical problem' and 'must be able to select and apply relevant tools, methodologies, techniques and materials within an occupational area or a field of study'. In the NQF level 4, the theoretical understanding at this level is also reflected in an extra skills outcome concerning the use of terminology from an occupation or field of study. Again, the NQF level 4

addition of a communication competence can be seen, as with the previous NQF levels. Also, under skills in the NQF level 4 it states, 'must be able to assess the quality of own and others' work in relation to a given standard', which is found to correspond with both the competence description in the EQF level 4 - the ability to 'take some responsibility for the evaluation and improvement of work or study activities' - and the EQF level 5 competence outcomes 'review and develop performance of oneself and others'.

The *competence* outcome for NQF level 4 is more detailed than the EQF competence outcome for level 4, but every aspect of the EQF descriptor can be matched to elements of the outcomes required in the NQF level 4. The EQF level 4 specifies the ability to 'exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change', which is also reflected in the NQF level 4: 'must be able to take responsibility for work processes in normally predictable work or study situations'. Similar correspondence can be found between the ability to 'supervise the routine work of others', and the NQF level 4 descriptor 'must be able to plan and take responsibility for own and joint work processes and results'. In the NQF, a competence requirement is added at level 4, which is related to the ability to pursue further studies.

Figure 11
The level 4 descriptors in the EQF and NQF

EQF-level 4			NQF-level 4		
Knowledge	Skills	Competence	Knowledge	Skills	Competence
Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self management within the guidelines of work or study contexts that are usually predictable, but are subject to change

Supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities | Must have knowledge of concepts, principles and processes within the practice of an occupation or field of study or in general subjects.

Must have understanding of the relations between professional problems and social/international conditions. | Must be able to select and apply relevant tools, methodologies, techniques and materials within an occupational area or a field of study.

Must be able to identify a practical and/or theoretical problem.

Must be able to assess the quality of own and others' work in relation to a given standard.

Must be able to utilise the terminology of an occupation or field of study in communication with collaboration partners and users. | Must be able to take responsibility for work processes in normally predictable work or study situations.

Must be able to plan and take responsibility for own and joint work processes and results.

Must be able to search for further education and training and professional development in structured learning environments. |

Comparing NQF level 5 with EQF level 5

Knowledge at level 5 covers both vocational training and higher education, which is also reflected in both the EQF and NQF level descriptors, where not only is the 'theoretical aspect' underpinned, but also the practical application.

The statements that describe the knowledge outcomes required in the NQF at level 5 refer to 'knowledge of practice, and application of methodology and theory', which closely matches the EQF level 5 descriptor: 'comprehensive, specialised, factual and theoretical knowledge'. The EQF level 5 refers to 'an awareness of the boundaries of that knowledge', which is formulated differently in NQF level 5 competence descriptor but with the same meaning that a person must have an 'understanding of practice and/or the most important theories and methodology, and be able to understand the utilisation of these'.

The *skills outcomes* in the two frameworks have similarities, but also differences at level 5. The EQF level 5 skill descriptor refers to 'a comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems'. The use of the terms 'creative' and 'abstract' is not found to be equivalent in the NQF level 5 skills description. Here, skills are rather described as the ability 'to utilise and combine a comprehensive set of skills connected with the practice and work processes of an occupation or field of study'. However, the creative problem-solution based skill can be argued to be found in the ability 'to assess practice-related problems and adjust work procedures and processes' in the NQF skill descriptor level 5. The concept 'abstract' is not used in the NQF in any of the higher education level descriptors. These levels refer to the concept of 'theoretical', which can be argued to have the same abstraction level and meaning. The skills outcome in NQF level 5 does not refer to 'theoretical problem solution', as this is already mentioned in NQF at level 4.

Regarding *competence outcome*, the EQF level 5 competence descriptor operates with 'exercise management and supervision in contexts of work or study activities where there is unpredictable change'. The NQF level 5 competence descriptor also refers to management responsibility: 'must be able to undertake defined management and planning functions in relation to the practice of an occupation or the field of study'. However, the NQF level 5 competence outcome does not relate to a 'context of unpredictable change' regarding the level of management ability – the individual capacity to handle unpredictable change is first mentioned at level 7 in the NQF. The competence to act in a complex context is described in the NQF at level 5 as the individuals' competence to enter 'into development oriented processes'.

The EQF competence descriptor at level 5 refers to the ability to 'review and develop performance of oneself and others'. This competence descriptor is already part of NQF level 4.and therefore implicit in NQF level 5 descriptor. In addition the NQF descriptor at level 5 refers to the ability to conduct self-assessment in relation to further education and training.

Figure 12
The level 5 descriptor in the EQF and NQF

EQF-level 5			NQF-level 5		
Knowledge	Skills	Competence	Knowledge	Skills	Competence
Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	Exercise management and supervision in contexts of work or study activities where there is unpredictable change Review and develop performance of self and others	Must have knowledge of practice, and application of methodology and theory in an occupational area or field of study. Must have understanding of practice and/or the most important theories and methodology and be able to understand the utilisation of these within an occupation.	Must be able to utilise and combine a comprehensive set of skills connected with the practice and work processes of an occupation or field of study. Must be able to assess practice-related problems and adjust work procedures and processes. Must be able to communicate practice-related problems and possible solutions to collaboration partners and users.	Must be able to enter into development oriented and/or interdisciplinary work processes. Must be able to undertake defined management and planning functions in relation to the practice of an occupation or the field of study. Must be able to identify and develop own possibilities for continued further education and training in different learning environments.

The report does not include the referencing of qualification levels 6 – 8 to EQF and higher education qualifications, since the referencing of Higher Education qualification levels and qualifications to the European Higher Education Area (EHEA) framework was officially and successfully completed in 2009 as part of the Bologna process. The result of this process is documented in the Self-certification report enclosed in this report as Annex A. The entire sets of NQF and EQF level descriptors 1-8 are enclosed in Appendix A and G.

5.3 Criterion 3

The national qualifications framework or system and its qualifications are based on the principle and objective of learning outcomes and are linked to arrangements for validation of non-formal and informal learning and, where these exist, to credit systems.

5.3.1 Learning outcomes in the NQF

The educational system in Denmark is in general based on the principle and objective of learning outcomes. Laws, departmental orders and guidelines regulating the educational system generally describe qualifications by learning outcomes or competence objectives. The Danish concept of learning outcome describes what a person with a specific qualification is expected to know and be able to do, and not the learning input such as syllabus. However,

the descriptions are often divided by subject, meaning that there is not always a comprehensive presentation of the overall learning outcome for the entire qualification.

For example, in general upper secondary education a reform came into force in 2005 in which a key element was a change in the course descriptions from content to learning outcomes and competence objectives. In vocational education and training, the student must comply with both defined learning outcomes and competence objectives in order to gain admission to the main course after the basic course, as well as to be awarded the certificates for the VET-programmes.

In higher education all qualifications are clearly described using a learning outcomes based terminology. Learning outcomes are categorised as knowledge, skills and competences, and these three categories are further divided into sub-categories, allowing for a systematic approach in the formulation of outcome descriptors and easy comparison between qualification levels and between degree types. For example it was in 2008, laid down in the departmental order on accreditation of new and existing professional bachelors degree programmes and academy profession degree programmes, that it is mandatory for all institutions to describe the learning outcome of their programme, using the terminology of knowledge, skills and competence. Also for university degree programmes and degrees in arts/fine arts it is laid down by regulation, that it is mandatory for the institutions to describe their programmes using the learning outcomes terminology. Finally is the shift from input to output based steering supported by the Danish quality assurance approach of accreditation as learning outcome constitutes an important reference point for accreditation of new and existing programmes.

It should be emphasised that, as a principle, learning outcomes are also tested through external examination across all educational sub sectors (see also criterion 5, section 5.5.1 on external examination).

The development of the NQF is based on this work and the principle and objective of learning outcomes. Degrees and certificates are placed at the eight levels of the NQF on the basis of their existing descriptions of learning outcome.

5.3.2 Validation of non-formal and informal learning in Denmark and the link to the NQF

Recognition of prior learning builds on the basic notion that an individual should not be made to learn the same thing twice, but should have the opportunity to use and build on his or her competences, irrespective of where and how they were acquired.

Since 2007, legislation relating to the recognition of prior learning has applied to the educational sectors: vocational education and training, single course subject; general adult education; general upper secondary education; basic adult education; adult vocational training programmes; academy profession degrees and diploma degrees in adult and further education.

The Danish concept for the recognition of prior learning - among other things - departs from the principle of learning outcomes, where the individual's competences are tested and assessed in relation to the learning outcomes of a particular programme. It is based on the principle that the individual's competences should be recognised, irrespective of where and how they were acquired, but without compromising the quality/standard of the education and training qualifications. The methods used must ensure a reliable assessment to secure confidence in the outcome, and the result of the assessment should be documented by issuing a certificate.

In the vocational education and training system, testing and assessing the student's prior learning is compulsory for all students within the first 14 days of all programmes. In the other educational sectors, the students have the right to ask an educational institution to assess their prior learning in order to obtain recognition for their competences. The legislation has also ensured that an individual can appeal against certain prior learning recognition decisions to the Qualifications Board.

The result of a prior learning assessment has to be documented by issuing 'documentation of admission', 'documentation of competence' or 'documentation of education'. 'Documentation of admission' can be used for basic adult education (GVU), academy profession degrees and diploma programmes. 'Documentation of competence' can be issued for all six education areas (vocational education and training, single course subject; general adult education; general upper secondary education; basic adult education; adult vocational training programmes; academy profession degrees and diploma degrees in adult and further education), while 'documentation of education' can be issued for all areas apart from general adult education and general upper secondary subjects.

The recognition of prior learning gives the individual the following opportunities:
• to qualify for entering educational programmes at a higher level;
• to tailor educational programmes to take account of what they already know and are able to do or receive credit for certain classes;
• to obtain 'documentation of competence' if the skills are the same as those obtained by completing part of an educational programme;
• to obtain a 'programme certificate' if the skills are the same as those obtained by completing an entire educational programme.

Linking non-formal and informal learning to the NQF
The NQF provides an overview of Danish qualifications in terms of level of learning outcomes and is, in this way, expected to provide transparent information on how certificates and degrees can be acquired, including information on how certificates and degrees can be acquired on the basis of non-formal and informal learning.

The Danish system for validation of non-formal and informal learning is only indirectly linked to the NQF by law. The degrees and certificates covered by the NQF are acquired through education and training programmes offered in accordance with Danish Acts and executive orders and which are subject to officially validated quality assurance. However, if the result of a prior learning assessment shows that a person fulfils all the learning outcomes of a publicly recognised qualification, then the person is entitled to the certificate or degree which is included in the NQF. A number of degrees and certificates, especially in adult education and training, can be acquired through recognition of what has been learned in working life or leisure time activities on the basis of an assessment of non-formal and informal learning.

5.3.3   International credit systems in Denmark

Qualifications are linked to compatible credits within higher education through the use of the European Credit Transfer System (ECTS) as a credit system. The use of the ECTS in course descriptions is compulsory by law for all programmes of higher education in Denmark.

In VET education a model for implementation of EQVET in the Danish VET system is expected to be finally formally decided 2011.

5.4   Criterion 4
The procedures for the inclusion of qualifications in the national qualifications framework or for describing the placement of qualifications within the national qualification system are transparent.

To demonstrate the procedures for inclusion of qualifications, the *principles* for referencing to the NQF are first presented (5.4.1). The *procedures* for including certificates and degrees in the NQF are then presented (5.4.2).

Also important are the procedures for *quality assurance of inclusion*, which is undertaken through the procedures for accreditation of higher education programmes and/or approval of new qualifications (5.4.3). The procedures for quality assurance of quality and level are presented in criterion 5 (5.5).

5.4.1   Principles for the inclusion of qualifications to the NQF

The inclusion of certificates and degrees in the NQF is based on an assessment of the learning outcomes that the individual degree/certificate documents in relation to the level descriptors of the framework.

The assessment is to be based on one of the two principles:
- best fit;
- full fit.

The best fit principle:
The best fit principle means that the learning outcome of a qualification must - in general across the level descriptor - fit better with the level descriptor in terms of knowledge, skills and competence for the level to which the qualification is referenced than other levels in the NQF. The best fit principle means that there is not necessarily a complete match between the learning outcome description of the qualification and the level descriptor in the NQF.

Referencing according to the best fit principle is, therefore, a matter of finding the focal point of the qualification. Are the learning goals for the qualification equally distributed among knowledge, skills and competences, or are they mostly weighted around one of the elements? Figure 13 below illustrates a qualification which, in accordance with the best fit principle, is to be referenced to level 3, as the main weight is to be found here.

Figure 13
Example of referencing according to the best fit principle

	Knowledge	Skills	Competence
Level 2			
Level 3			
Level 4			

The best fit principle is utilised when referencing qualifications at levels 1-5 in the NQF. This applies to both certificates and certificates for supplementary qualifications. A supplementary qualification is though in terms of best fit only required to match the learning outcome requirements in terms of either knowledge, skills and/or competences at a given level because these qualifications are typically too narrow to fill out the breath across the entire level.

The full fit principle:
The full fit principle means that the learning outcome of a qualification must correspond to the level descriptor in terms of knowledge, skills and competence for the level to which the qualification is referenced.

The full fit principle is used when referencing qualifications at levels 6-8 in the NQF. This applies to degrees in higher education, which are included in the NQF via the NQF-HE. The full fit principle which already exists in NQF-HE has been adopted for level 6-8 to ensure overall cohesion and transparency between the two frameworks. All public recognised qualifications at level 6-8 has by law to be accredited as higher education degrees and thereby included in NQF-HE and the NQF on the basis of full-fit, which are the basis for the accreditation.

The descriptors for levels 6-8 in the NQF are identical with the top three level descriptors in the NQF-HE, which is described in Annex A.

The academy profession degree and the short cycle programmes in the higher education system are referenced via the NQF-HE to level 5. This level corresponds to the short cycle degree level in the QF-EHEA. When referencing short cycle degree qualifications to the NQF-HE, an inclusion is based on the full fit principle. As mentioned in section 3.4, a broad descriptor has been drawn up for level 5 of the NQF, as there are qualifications at this level that are not covered by the NQF-HE. When referencing qualifications at level 5 of the NQF (which are not higher education short cycle degrees), the best-fit principle is applied.

5.4.2   Procedures for including qualifications in the NQF

Together with the establishment of the NQF, procedures were set up for including qualifications in the framework. The procedures for including certificates and degrees in the NQF are linked to the procedures applying to the accreditation of higher education programmes and/or approval of new qualifications in the individual educational sub sections.

In the areas of primary and lower secondary school, general upper secondary education, general adult and preparatory adult education, the inclusion of qualifications in the NQF is determined, validated and approved by the Minister of Education. For vocational education and training and adult vocational training, the trade committees and adult vocational training committees, respectively, assess and provide a recommendation to the Ministry of Education for the inclusion of qualifications in the NQF. The minister then approves the inclusion of the qualifications. Regarding higher education, the inclusion of a qualification into the NQF-HE takes place when a programme leading to the HE-qualification has been accredited by the Independent Accreditation Council.

Below is a presentation of how the certificates and degrees of the different educational sectors are included in the NQF.

Primary and lower secondary school
The Minister for Education determines the inclusion of qualifications into the NQF. For example of qualifications included in the NQF, see Appendix B, level 1-2.

Upper secondary education

General upper secondary education
The Minister for Education determines the inclusion of qualifications into the NQF. For example of qualifications included in the NQF, see Appendix B, level 4.

Vocational education and training
Inclusion of qualifications into the NQF takes place on the basis of an assessment and recommendation by one of the trade committees (see section 5.5.3), and the Minister for Education then approves the recommendation.

The trade committees consist of representatives from the social partners. The main task of the trade committees is to develop new vocational education and training qualifications and programmes and further develop existing programmes, and they have a high degree of co-responsibility for the qualifications, objectives and content of the programmes.

Guidelines have been drawn up for the trade committees, with further information about procedures for including vocational education and training qualifications in the Qualifications Framework for Lifelong Learning.

For example of qualifications included in the NQF, see Appendix B, level 3.

Maritime education and training
The Maritime Education Council assesses and makes proposals for referencing certificates for maritime vocational education to the Qualifications Framework to the Ministry of Economic and Business Affairs. The Danish Maritime Authority conducts the validation on behalf of the Ministry of Economic and Business Affairs.

For example of qualifications included in the NQF, see Appendix B, level 4.

General adult education

General adult education (AVU)
The Minister for Education determines the inclusion of qualifications in the NQF.

For example of qualifications included in the NQF, see Appendix B, level 4.
Preparatory adult education (FVU)
The Minister for Education is to set up procedures to certify the NQF level on the qualification certificates for the FVU level in reading and mathematics.

For example of qualifications included in the NQF, see Appendix B, level 1.

General upper secondary subjects
The Minister for Education determines the inclusion of qualifications in the NQF. For example of qualifications included in the NQF, see Appendix B, at level 4

Adult vocational education and training

Adult vocational training programmes (AMU)
In 2010, the Ministry of Education initiated a process in cooperation with the 11 adult training committees (see section 4.5.1) in order to ensure that each adult vocational training programme is included in the NQF. The assessments for the existing qualifications are being carried out from 2010-2013.

Inclusion of qualifications into the NQF takes place on the basis of an assessment and recommendation by one of the adult vocational training committees, and the Minister for Education then approves the recommendation. This process is described below.

The continuing training and education committee:
- assesses and proposes the placement of the adult vocational training certificate in the NQF;
- encloses a description of the endpoint of the adult vocational training certificate;
- adds the level and description of the adult vocational training certificate to the webpage for the sector (www.uddannelsesadministration.dk), which is organised by the Ministry of Education.

The Ministry of Education:
- approves the application from the continuing training committee for the approval of the adult vocational training certificate, including placement of the certificate in the qualification framework;
- is to establish a function at uddannelsesadministration.dk that makes it possible to certify the NQF levels on the qualification certificates.

The vocational training committees consist of representatives of the social partners. The vocational training committees develop new adult vocational training programmes and they have a high degree of co-responsibility for the objectives and content of the programmes.

Guidelines have been drawn up for the adult vocational training committees with further information about procedures for including adult vocational training into the Qualifications Framework for Lifelong Learning.

For example of qualifications included in the NQF, see Appendix B, level 5

Higher Education

Inclusion of a qualification into the NQF-HE takes place when a programme leading to the qualification is accredited. An accreditation is an assessment of whether an education programme leading to a given qualification meets external, predefined criteria for quality, relevance and academic level.

The Accreditation Council accredits all higher education programmes and provisions on the basis of accreditation reports. The reports are provided by two main operators, namely, ACE Denmark and The Danish Evaluation Institute (EVA):

- Regarding higher education qualifications and programmes under the Ministry of Education, the Ministry of Economic and Business Affairs, Ministry of Culture, Ministry of Defence and Ministry of Justice: the Danish Evaluation Institute prepares the accreditation reports and the Accreditation Council makes the decision.

- Regarding higher education qualifications and programmes under the Ministry of Science, Technology and Innovation: ACE Denmark prepares an accreditation report, and the Accreditation Council makes the accreditation decision. Due to academic considerations or in order to test the competitiveness of ACE Denmark, the Accreditation Council may decide to use an internationally recognised institution other than ACE Denmark for the preparation of accreditation reports. On its own initiative or following a request from a university, the Council may furthermore base its accreditation decision fully or partly on an accreditation report from another internationally recognised institution, to the extent that the report is prepared in accordance with the criteria for quality and relevance laid down by the Ministry.

For example of qualifications included in the NQF, see Appendix B, levels 5-8.

5.4.3   Quality assurance of the inclusion process

Inclusion of qualifications into the Danish NQF is quality assured through procedures for accreditation of higher education programmes and/or approval of new qualifications and procedures for quality assurance of quality and level.

There are different procedures for educational validation and quality assurance in the different parts of the educational system, as these depart from existing procedures that safeguard the quality and level of the qualifications. For levels 1-5, quality assurance of the inclusion of certificates takes place in connection with the approval of new qualifications and programmes, and the learning outcomes of the programmes and levels are assessed and documented in relation to the levels in the NQF. The qualifications are described in terms of national objectives and are covered by national rules for quality assurance and assessment of learning outcome.

For *primary and lower secondary school, general upper secondary education, general adult education*, the assessments were carried out in autumn 2010.

For *vocational education and training* and a*dult vocational training*, inclusion and placing of certificates at levels 2-5 is quality assured by means of procedures for validating new qualifications and programmes. This has been expanded to also include special procedures for assessing and validating the level of the qualification in the NQF. Guidelines have been drawn up for the inclusion of certificates, and the procedures and criteria used for the inclusion are under evaluation.

In the case of *maritime vocational education and training* programmes, inclusion of qualifications is processed and validated in the Maritime Education Council.

In *higher education*, inclusion and placing of higher education degrees at levels 5-8 is quality assured through the national system for accreditation. Accreditation of new and existing education programmes involves, among other things, a professional and independent assess-

ment of whether the learning outcomes of the individual programmes are in full agreement with the relevant level that is laid down in the NQF-HE.

Inclusion of degrees for higher education is built into the accreditation system and it is thus automatically covered by the Danish national quality assurance system for higher education. The system of accreditation for higher education is in accordance with international standards, including the Standards and Guidelines for Quality Assurance in the European Higher Education Area adopted by the European Ministers for Higher Education as part of the cooperation within the European Higher Education Area (EHEA).

An evaluation of the NQF will be undertaken in 2012. The evaluation will examine the fulfilment of the objectives of the NQF and the validation of the level descriptors for levels 1-5.

5.4.4   National website with all qualifications

The national guidance portal, www.uddannelsesguiden.dk, is the key website for information about the Danish educational system.

The national guidance portal contains a database with information about all publicly validated education programmes and qualifications in Denmark, including type, duration, credit points, providers, admission requirements, detailed information about programme aims, content, structure and examinations, further education possibilities and typical job or employment possibilities.

In addition, the qualification levels of the NQF has been added as part of the implementation of the NQF. This facility also provides the possibility of various search functions for educational possibilities and types of qualifications in relation to qualification levels.
The NQF and/or the EQF levels will be added to certificates and other documentation such as diploma supplements and certificate supplements at the end of 2011.

5.5   Criterion 5
The national quality assurance system(s) for education and training refer(s) to the national qualifications framework or system and are consistent with the relevant European principles and guidelines (as indicated in Annex 3 of the Recommendation).

This criterion documents that external quality assurance is established in the entire Danish Lifelong learning system. The reference committee concludes that a Danish quality assurance system is applied that ensures the quality of learning outcomes and qualifications in the Danish education system, and quality assurance procedures are consistent with European principles and guidelines.

The quality assurance procedures for inclusion of degrees and certificates have already been described in criterion 4, whereas the quality procedures described in this chapter are concerned with the quality assurance of <u>outcome</u>.

The quality assurance mechanisms for qualification levels 1-5 are linked to the NQF, as there are processes in place to assure learning outcomes and qualifications within the Danish education system and the underlying regulatory systems and governing principles. From levels 5-8, the quality assurance processes are directly linked to the qualifications framework through national accreditation procedures. Quality assurance of lifelong learning education in Denmark differs between the different sub sectors of education, as procedures are linked to the nature of the specific education, the different institutions providing the education and its governing ministries.

In this criterion the quality assurance mechanism for the different education sub sectors and governing ministries is documented. Firstly, the quality assurance procedures that cut across the subsectors under the auspices of the Ministry of Education are described. This is followed

by the quality procedures specific to the sub sectors under the Ministry of Education (5.5.2 to 5.5.5) – excluding procedures for HE under the auspices of the Ministry of Education. Following that, the quality assurance procedures within maritime education and training under the auspices of the Ministry of Economic and Business Affairs are documented in 5.5.6. Finally, in 5.5.7, the quality procedures within higher education under the auspices of the Ministry of Education, Ministry of Science, Technology and Innovation, Ministry of Culture, Ministry of Defence and Ministry of Justice are presented.

The referencing committee concludes that the Danish quality assurance system is consistent with the relevant European principles and guidelines. This is documented in the following sub sections: 5.5.3, where it is documented that the Danish VET systems is consistent with EQARF - the European Quality Assurance Reference Framework; and in 5.5.7, where it is documented that the higher education quality assurance system is consistent with the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).

The three national quality assurance bodies: The Danish Evaluation Institute, ACE-Denmark and the Accreditation Council have been involved in the referencing process and in drafting the report. Furthermore the three bodies have given official and positive written statements that the documentation provided is correct and that criterion 5 is fulfilled. See Appendix F for signed statements from the national quality assurance bodies.

5.5.1 Quality Assurance for education under the auspices of the Ministry of Education

There are three key cornerstones of quality assurance that cut across the sub sectors of the Ministry of Education:
- Quality assurance by the Ministry of Education;
- Quality assurance of learning outcomes through the external examiner system;
- Quality assurance by external quality assurance bodies.

These three elements are dominant across the sub sectors under the auspices of the Ministry of Education - although with a slightly different role in primary and lower secondary school - and will, therefore, be described before presenting the different sub sectors.

Quality Assurance by the Ministry of Education
The quality assurance conducted by the Ministry of Education is based on assuring the input, the processes and the outcomes. The four elements that cover all sub sectors are described here, and will be described in more depth under the specific sub sector:
1   Common guidelines
2   Act on Transparency and Openness
3   Ministerial approval, monitoring and inspection
4   Advisory councils

1. Common guidelines
The overall objectives of the programmes in the Danish education system are planned and laid down in legislation. National legislation covers the objectives and framework of education, competence levels, examination requirements, funding and in some cases curricula, examinations and staffing.

The Ministry of Education is responsible for setting up the framework for curricula and learning outcomes of the programmes. However, course contents are decided upon by the providers themselves and are described in local course regulations, with their students and the intended learning outcomes being tested through external examination.

2. Act on Transparency and Openness
One of the general aspects of Danish quality assurance is the Act on Transparency and Openness in the education system, which was adopted in 2002. The aim is to provide relevant information to stakeholders and the public about the different institutions.

The website of each provider must contain information that enables the reader to assess the quality of the teaching and educational programmes at the individual institution. Furthermore, each institution must publish completion times, completion rates, drop-out rates and continuation to further education.

3. Ministerial approval, monitoring and inspection
The Ministry of Education undertakes a legal, financial and pedagogical inspection of the institutions providing the various educational programmes. The inspection is carried out in different ways, based on a variety of input.

4. Advisory councils
Quality assurance in the educational system under the Ministry of Education is further supported through the work of advisory councils within the sector.

At upper secondary level, the Advisory Council for Initial Vocational Education and the Advisory Council for Upper Secondary Education advise the Minister on matters concerning each branch of the upper secondary education. The Advisory Council for Academy Profession Programmes and Professional Bachelor Programmes advices the Minister on all matters regarding higher education under the auspices of the Ministry of Education and National Advisory Council for Adult Education and Training advises the Minister on all matters of importance in relation to further education.

The advisory councils consist of representatives from the relevant leader, teacher and pupil associations. In addition, the Advisory Council for Initial Vocational Education and the Advisory Council for Adult and Further Education include representatives from the social partners.

At primary and lower secondary level there is the Council for Evaluation and Quality development of the Comprehensive School, which is presented in section 5.5.2.

External Examiner System
A well established quality measure in the Danish education system is testing and examination of learning outcomes by external examiners.

The function of the external examiners is to guarantee the professional and academic integrity of an examination, ensure that the same standards are applied to the examination of all pupils and assure that the individual learning outcomes are as objective as possible.

The external examiners are usually recruited from the entire pool of teachers from the level and subject in question. In the VET programmes and higher education programmes, the external examiner might well be recruited from the local trade or industrial community. The system of testing and examination contributes to the quality assurance of the education programmes, as well as to securing the legal rights of the students.

Quality assurance by external quality assurance agencies
There are the following external quality assurance bodies in Denmark:
- The Danish Evaluation Institute (EVA) covers quality assurance of education from primary and lower secondary school to professional degree level. Regarding higher education, EVA is one of two Danish operators providing accreditation reports for the accreditation of higher education degrees;
- ACE Denmark is the other Danish operator providing accreditation reports for the accreditation of Higher Education;
- The Accreditation Council accredits all higher education programmes on the basis of accreditation reports.

The Danish Evaluation Institute (EVA)
Denmark was one of the first countries in Europe to set up an external national agency for quality assurance. The system of external quality assurance began as a system solely focused on higher education. In 1999 the Parliament passed a law that established an evalua-

tion agency responsible for the systematic evaluation of all levels of the educational system. EVA is defined as an independent state institution.

EVA works at all levels of the educational system and with all types of institutions – from day care centres and primary and lower secondary schools through to upper secondary schools and vocational colleges, as well as university colleges and adult education. Excluded are the universities and parts of the maritime education and training system.

To contribute to developing the quality of the education system, EVA carries out evaluations and analyses. For example, EVA carries out impact evaluations and evaluations of how new regulations are translated into action, as well as evaluations and analyses of key themes within the educational sector. EVA also supports the educational institutions in using their knowledge and developing their quality assurance procedures and capacity. EVA also provide accreditation reports for the accreditation of higher education programmes – both initial and post accreditation – under the auspices of the Ministry of Education, the Ministry of Culture, the Ministry of Economy and Business Affairs, Ministry of Defence and Ministry of Justice. Excluded are the programmes under the Ministry of Science and Technology.

EVA is a recognised international European quality assurance agency and has been full member of ENQA since 1990 fulfilling the Standards and Guidelines for Quality Assurance in the European Higher Education Area. Evaluations are carried out on EVA's own initiative as well as on the request of ministries, local authorities and educational institutions, among others.

ACE Denmark and the Accreditation Council
ACE Denmark and the Accreditation Council was established by law in 2007 as an independent agency. The establishment came as a natural extension of Denmark's adoption of the Bologna declaration in 1999. The Accreditation Council is responsible for all accreditation decisions for all higher education study programs based on accreditation reports prepared by EVA and ACE Denmark. The responsibilities of ACE Denmark are to ensure and document the quality and relevance of higher research based education programmes in the university sector by carrying out an assessment based on centrally defined criteria for the quality and relevance of existing and new study programmes. In addition to accreditation ACE Denmark is to gather and disseminate relevant national and international knowledge related to accreditation.

In 2010, ACE Denmark and the Accreditation Council successfully went through an international evaluation that demonstrated compliance with the Standards and Guidelines for Quality Assurance in the European Higher Education Area. In the same year, ACE Denmark and the Accreditation Council became a full member of ENQA and became accepted in the European Quality Assurance Register (EQAR).

5.5.2   Primary and lower secondary level

In Denmark, it is the local authority, or municipal council, which has the primary responsibility for the quality assurance of primary and lower secondary school, i.e. assurance of the learning outcome. The Ministry of Education is responsible for general regulation; the Government Agency for Evaluation and Quality Assurance of the Comprehensive School is responsible for inspection and external quality assurance; and the municipalities for the implementation of a quality assurance mechanism.

The Government Agency for Evaluation and Quality Assurance of the Comprehensive School/
The Council for Evaluation and Quality Development of the Comprehensive school
The Government Agency for Evaluation and Quality Assurance of the Comprehensive School carries out various elements of quality assurance of primary and lower secondary school, including testing, exams, external evaluations, providing tools for internal evaluation, quality assurance and quality development. Furthermore, a Council for Evaluation and Quality Development of the Comprehensive school has been appointed. The council consists of academic representatives, a secretariat placed under The Government Agency for Evaluation and Quality Assurance of the Comprehensive School and a presidency which consists of five commit-

tee members selected by the Minister of Education. They decide which evaluations the institutions such as EVA must execute. Based on the external evaluation reports, the Council for Evaluation and Quality development of the Comprehensive School produces an annual report on the national status of the quality of the system. The Council also advises the Minister of Education on matters relating to the quality assurance and development of primary and lower secondary school.

Quality reports
The quality report is a tool designed to ensure systematic documentation and cooperation between the three local levels governing primary and lower secondary school: the local political priorities, the administration of primary and lower secondary school at local authority level and the individual Folkeskole. A quality report is drawn up on an annual basis by the local authorities to evaluate and improve the quality of the teaching and other activities in primary and lower secondary school. If poor teaching quality is identified in a public school, the local authority must present an action plan for the specific school. Finally, The Government Agency for Evaluation and Quality Assurance of the Comprehensive School assures the quality of the work of the local authority.

National test
Part of the quality assurance system covering the Folkeskole is a set of national compulsory tests prepared by academic experts. The pupils must take ten different written tests during the primary and lower secondary school programme. It is stated in the Act for the primary and lower secondary school which subjects are included in the tests during primary and lower secondary school. The first time pupils are tested is in the 2nd class, and the last time is in the 8th class. The tests are computer based and adaptive, meaning that they continuously adapt to the ability of the individual pupil taking the test.

The National tests are used in order to follow the knowledge and skills acquisition of the individual pupil in order to facilitate a differentiated planning and teaching to match the strengths, weaknesses and potential students.

Student plans
Another element of quality assurance is the student plan. A student plan is a compulsory tool, described in the primary and lower secondary school Act. The student plans are local documents drawn up by the class teacher in cooperation with the individual pupil. The aim of the plan is to support the cooperation between the school and the parents. The student plans contain information about the results of the ongoing evaluations of the pupil's acquisition of skills and competences in all subjects. Furthermore, a student plan contains an action plan drawn up by the teacher for the pupil based on the acquisition of skills and competences. The plans are drawn up annually, building on the results of the action plan for the previous year.

5.5.3   Upper secondary education

In addition to the quality assurance mechanisms across all sectors, the quality assurance of upper secondary level consists of elements that cut across the two branches of upper secondary education, as well as elements which are exclusively applied in the VET sector.
The cross cutting elements at the upper secondary level are the following:
* ministerial approval, monitoring and inspection;
* quality rules at institutional level;
* advisory councils;
* indicator based quality control (ressourceregnskab);
* examinations.

These are described below:

Ministerial approval, monitoring and inspection
The Ministry of Education undertakes a legal, financial and pedagogical inspection of the schools providing the various educational programmes. The inspection is carried out in different ways, based on a variety of input.

Quality rules at institutional level
One of the cross cutting elements, and one of the most important elements in the quality assurance system at the upper secondary level, is the common set of quality rules for each provider. The rules describe what is required of the obligatory quality assurance system. As an element of the system at institutional level, all providers must regularly carry out a self-evaluation as well as monitor internal processes in identified areas. The rules do not describe which system must be chosen or how the self evaluation is to be organised. They only describe which types of procedures have to be in place in order to form the quality assurance system at the school.

Each school can choose their own quality assurance system in order to implement a system that fits the size and culture of the school. A description of the entire quality system, results and the required follow-up plan to the self evaluation process must be published on the school website, as prescribed in the rules for quality assurance.

Indicator based quality control
A newly developed way of inspecting outcome and output is via the annual resource reports, which means that the individual provider accounts on a yearly basis for the results within four essential areas:
- high quality of the educational programmes;
- education for a large number of students/learners;
- development oriented institutions;
- efficient operation of institutions.

Within each area, the report format entails a total of 20 defined indicators. Examples of these are:
- test and examination results;
- completion rates;
- completion times;
- drop-out rates and timing;
- transition rates to other education programmes;
- transition rates to the labour market.

The aim of the indicator based system is to illuminate the priorities, quality and results of the providers through a number of indicators in order to make the overall monitoring of quality more systematic. The resource reports are also intended to provide a better foundation for the internal evaluation of quality.

The indicator based quality assurance system provides the Ministry of Education with the possibility to screen all educational institutions on an annual basis. The system has now been developed and is expected to be fully functioning during 2011

Examinations
Holding final examinations on a national basis is an important way of enhancing quality and national standards. The examinations can be written, oral, case and project tests or mixed formats. At most of the examinations, the students may utilise all types of aids, including IT, but not communicate with anyone. The Ministry formulates all written examination questions and appoints external examiners for all examinations, both oral and written. The average examination grade is crucial to the student's future opportunities in the education system, as it forms a decisive element of the basis for admission to higher education.

Vocational education and training (VET)
The quality assurance system of the VET sector comprises some additional elements exclusively applied in this sector. The additional quality assurance elements in the VET sector are:
- trade committees;
- local training committees;
- output monitoring;

- the European Quality Assurance Reference Framework for Vocational Education and Training (EQARF).

Trade committees
The Danish VET system is characterized by a high degree of stakeholder involvement. An element of stakeholder involvement is the trade committees. For each vocational sector, a trade committee is formed, comprised of representatives from both employers and employees. The trade committees are responsible for approval of companies and the quality assurance of the training in companies in cooperation with the local training committees (see below).

In addition, the trade committee provides advice on which qualifications are relevant to the sector and on the content, structure, duration and evaluation of the programmes within the sector. Finally, the trade committees are responsible for the journeyman's test and for issuing certificates to trainees. One trade committee is responsible for at least one VET qualification, but it can also be responsible for several qualifications. (The Danish approach to quality, UVM)

Local training committees
One of the essential features of the VET system is decentralisation, which means that a lot of the detailed planning of each programme must be locally determined and quality assured.

Through a local training committee, the local partners assist the vocational colleges in the local planning of the programmes by providing advice on the content and planning of training, examination, the local quality assurance system, etc. They are also responsible for strengthening the relationship between the school and local companies in order to assure the relevant amount of in-company training possibilities for the students.

The local training committees consist of representatives appointed by the national trade committee; both employers and employees. (The Danish approach to quality, UVM).

Output and process monitoring
One element in the Danish quality strategy that has become increasingly important over the years is output and process monitoring (in Danish 'Handlingsplaner for øget gennemførelse'). Whereas the focus previously was primarily on the process and motivation of the providers to set up quality assurance systems, focus has now shifted to the promotion of quality by providing incentives.

Providers have to draw up an "action plan for an increased completion rate". The purpose of the plan is twofold, as it serves both internal and external goals. Based on the plan, the providers can monitor their own measures and results in relation to drop out and completion rates.

In addition, the plans serve as a means for the Ministry of Education to monitor the implementation of measures and the development of completion rates for each provider. The providers may receive earmarked financial grants based on the goals and results documented in the "action plan for an increased completion rate".

The European Quality Assurance Reference Framework for Vocational Education and Training (EQARF)
The regulation stipulates that all VET providers must document that they have and use a system of quality assurance and development. They must meet the requirements laid down in the quality rules (described above), whereby they will also meet the requirements of the EQARF.

5.5.4 Adult vocational training programmes (AMU)

The quality assurance is according to the Act on adult vocational training programmes ensured by the providers at institutional level and by the involvement of the National Advisory

Council for Adult Education and Training (In Danish: Rådet for Voksen- og Efteruddannelse (VEU-rådet)),national continuing training committees as well as in local training committees.

At national level the social partners are represented in the National Advisory Council for Adult Education and Training and national continuing training committees. At institutional level the social partners are represented in local training committees and in the boards at each institution providing the adult vocational training programmes.

The aim of the involvement of the social partners are to ensure, that their expertise on job development and skills needs regarding the labour market for low-skilled and skilled labour can be translated into programmes and qualifications that responds to both short and long term training needs.

National continuing training committees
The social partners have established 11 national training committees covering the main sectors within the labour market for low-skilled and skilled labour including the public sector. The responsibility of the national continuing training committees are to develop proposals on adult vocational training programmes leading to a certificate with in their respective sector and thereby ensuring relevant training offers that meets the need for vocational competences in the labour market. Programmes are approved by the ministry of education. The national continuing training committees are also responsible for development of vocationally oriented teacher training within the AMU-programmes.

Local training committees
Local training committees aim at promoting the interplay between providers and the local labour market. The tasks of the local training committee is decided locally and can include identification of skills needs, advise on provision of training programmes and proposals on new programmes, development projects, quality assurance and teacher training. The local training committees provides a forum for cooperation and talks with the social partners on the provision of training programmes to the labour market and provide valuable advise at institutional level on the training programmes being provided and delivered. Providers are responsible for the establishment of local training committees in coordination with the national training committees, which appoint social partner representatives to the local committees.

Output and process monitoring
At institutional level the quality assurance of adult vocational training is based on the quality circle and the national evaluation system 'Show Quality' (in Danish 'Vis kvalitet'), which the institutions are obliged to use. This implies that all parts of the education effort should be documented, and that all the actors have a responsibility to carry out an assessment and follow-up on the results. The quality circle consists of four elements in the quality work of the providers: 1. plan/strategy and objective; 2. execution/implementation; 3. evaluation/measurement and result assessment; 4. follow-up and proposed amendment. These elements are in accordance with the requirements of the EQARF.

The evaluation system 'Show quality' is a web-based evaluation-tool. The goal of the system is to: provide the institutions with a systematic basis for continuous quality development and quality management; provide the continuing training and education committees with documentation for the quality of the adult vocational training programmes, with a view to revision, further development, teacher training initiatives, etc.

It is mandatory for the providers of adult vocational training to evaluate all their programmes by letting all participants and a share of companies fill out a questionnaire via the evaluation system, 'show quality'. These questionnaires contain common mandatory questions. Furthermore, all the continuing training and education committees are obliged to pose specific questions concerning the specific education goals they are in charge of. The evaluations form a basis for the dialogue between the Ministry of Education and the providers of adult vocational training regarding the quality of their educational programmes and provision. The continuing training committees use it as part of their work in ensuring the relevance of the education pro-

grammes. Furthermore, the evaluation system 'show quality' has a specific tool for measuring learning outcome achievements. The survey data are stored in a central database at the Ministry of Education with public access.

5.5.5 General adult education (AVU) and higher preparatory single subjects

As mentioned in chapter 4, general adult education and higher preparatory single subjects are offered at VUC centres. Apart from the general quality assurance measures mentioned at the beginning of this chapter, the quality assurance of general adult education and higher preparatory single subjects is therefore applicable to the VUC institutions.

Quality Assurance at VUC centres (AVU and upper secondary subjects)
The quality assurance mechanism for VUC is the same as for institutions providing upper secondary level (see section 5.5.4 above).

As mentioned in section 5.5.1, one important element in the quality assurance system at the upper secondary level is the common set of quality rules for each provider. The rules describe what is required of a quality assurance system. As an element of the system at institutional level, all providers must regularly carry out a self-evaluation, as well as monitor internal processes in identified areas. The rules do not describe which system must be chosen or how the self evaluation is to be organised. They only describe which types of procedures have to be in place in order to form the quality assurance system at the school.

The Ministry of Education supervises the implementation of education programmes by institutions, as well as programme outcomes, and an institution must be in a position to document its quality system to the Ministry.

As an additional element, the quality system of adult education (AVU) and higher preparatory single subjects (the adult education centres/VUCs) must include systematic and regular self-evaluations in key areas chosen by the institution. These self-evaluations should run continuously and as a minimum every third year.

Final written examinations on a national basis, as well as local oral examinations are offered to the students and are important ways of enhancing quality and national standards. At most of the examinations, the students may utilise all types of aids, including IT, but may not communicate with anyone. The Ministry formulates all written examination questions.

5.5.6 Maritime education and training

The Ministry of Economic and Business Affairs has appointed the Danish Maritime Authority as the responsible body for maritime education and training programmes in Denmark. The Danish Maritime Authority has established a quality system, which institutions offering maritime education and training programmes must comply with. The quality system is influenced by the ISO9001 standards and is in accordance with the international quality standards within the sector (the STCW-convention). The system covers maritime programmes from levels 2 to 6.

For an institution to offer a maritime education or training programme, it must be approved by the Danish Maritime Authority, which assess whether the programme can be offered based on the aims and objectives of programmes and the requirements of the quality system (an implementation audit). Furthermore, to maintain the approval, the institution is regularly audited by the Danish Maritime Authority, whereupon the institution must prove that the requirements still are fulfilled.

The key elements in the quality system are:
• The internal quality systems of the institutions
• External quality audits.

The internal quality systems of the institutions

Each institution must establish and maintain a quality system that documents procedures for educational quality processes, such as educational planning, selection of teaching methods and how credits are awarded. There must also be procedures for managing documentation of educational quality processes, such as learning agreements, information on students and employees and certificates. There must also be procedures in place to report deviations and/or suggestions for improvements by employees and students. A key element in the quality system is that teachers are required to evaluate their teaching, and after every study period students are to evaluate the course. The students are also entitled to an individual assessment of their learning outcome.

There must also be procedures for internal quality audits to verify that the institution fulfils its educational plans and other guidelines, including that these are carried out in accordance with the quality objectives.

In a quality handbook, the institution must describe how it meets the quality requirements and the procedures that are in place, including its organisation and the placement of responsibility. The quality system must be assessed continuously by management, and at least once a year. This work must be documented.

External Quality Audits
The Danish Maritime Authority approves and verifies approvals by carrying out audits based on the institution's quality system. The audits are carried out by external auditors appointed by The Danish Maritime Authority and who follow an audit plan made by the Authority.

The auditors write a report that covers deviations, recommendations and conclusions. Based on the report, the institution must take corrective action regarding any deviations within a limited timeframe, and they must assess the recommendations.

5.5.7 Higher education

In Higher Education, quality assurance is based on three main elements: internal quality assurance by institutions; external accreditation; and the external examiner system.

It is integrated in the accreditation criteria that the level of an accredited programme must be in compliance with the corresponding degree type – and thus qualification level – of the NQF-HE.

The Accreditation Council accredits all higher education programmes on the basis of accreditation reports or equivalent evaluations. Two main operators conduct accreditation assessments and prepare accreditation reports in Denmark: ACE Denmark and The Danish Evaluation Institute (EVA). Due to academic considerations or in order to test the competitiveness of ACE Denmark, the Accreditation Council may decide to use an internationally recognised institution other than ACE Denmark for the preparation of accreditation reports. On its own initiative or following a request from a university, the Council may furthermore base its accreditation decision fully or partly on an accreditation report from another internationally recognised institution, to the extent that the report is prepared in accordance with the criteria for quality and relevance laid down by the Ministry

For an in-depth description of the quality assurance mechanism for the assurance of qualification levels and learning outcomes in Higher Education, see Annex A, 'self-certification report'. This report concludes that the procedures are in alignment with the Standards and Guidelines for Quality Assurance in the European Higher Education Area.

5.6   Criterion 6
The referencing process shall include the stated agreement of the relevant quality assurance bodies.

This report on referencing the NQF to the EQF has been agreed by the four ministries with responsibility for lifelong learning in Denmark and the relevant national quality assurance bodies:

- Ministry of Education
- Ministry of Science, Technology and Innovation
- Ministry of Culture
- Ministry of Economic and Business Affairs
- The Danish Evaluation Institute
- The Accreditation Council
- ACE Denmark

The referencing process has engaged stakeholders and quality assurance bodies in the drafting process. The parties have agreed on the report that is produced. See chapter 6 for confirmation and Appendix E for list of stakeholders involved in the process. Furthermore, see Appendix F for signed statements from the national quality assurance bodies.

5.7   Criterion 7
The referencing process shall involve international experts.

Two international experts were appointed by the coordination committee to participate in the referencing committee:

- Former head of Department Ulf Öhlund, Department for the Recognition of International Qualifications, Swedish National Agency for Higher Education;
- Senior Advisor Øyvind Bjerkestrand, Department of Policy Analysis, Lifelong Learning and International Affairs, Ministry of Education and Research, Norway.

The international experts were recruited from Scandinavia, making it possible for them to read background literature in Danish, but still ensuring an independent and external view of the Danish educational sector and the process. Important criteria for the selection of international experts were thorough knowledge of different national education systems – including vocational education and training and experience in the internationalisation of education.

The international experts were selected in a process where EVA contacted the Ministry of Education and the Nordic quality assurance agencies. The coordination committee commented on the selection of the international experts before EVA contacted the selected experts.

The role of the international experts was to ensure the objectivity and independence of the referencing process. As members of the referencing committee, the international experts confirmed that the process of gathering evidence had taken place and that all the criteria were addressed in the report. The international experts have among many specific details commented on the structure of the report making the description of the Danish system more transparent and understandable for an international audience and played a significant and critical role in the comparative semantic analysis in the referencing of levels between the Danish framework and the EQF.

5.8   Criterion 8
The competent national body or bodies shall certify the referencing of the national qualifications framework or system with the EQF. One comprehensive report, setting out the referencing and the evidence supporting it shall be published by the competent national bodies, including the National Coordination Point, and shall address separately each of the criteria.

This report is one sole comprehensive report setting out the referencing of the NQF with the EQF.

The referencing committee has verified and documented the reference between the EQF and the NQF, and the results of this work are presented in this report. The report addresses each of the ten criteria and procedures agreed by the EQF Advisory Group.

The report and supporting evidence are published on the websites for the Danish qualification framework:
- www.kvalifikationsrammen.dk
- www.nqf.dk

This report is certified by the coordination committee that represents the four ministries with responsibility for lifelong learning in Denmark.

5.9 Criterion 9

The official EQF platform shall maintain a public listing of member states that have confirmed that they have completed the referencing process, including links to completed referencing reports.

On completion of this report the coordinating national authority will confirm that Denmark has completed the referencing process and will send the report to the EQF Advisory Group. Furthermore the coordinating body will present the report and the results to the EQF Advisory Group

The report will be published on the websites for the Danish qualification framework:
- www.kvalifikationsrammen.dk
- www.nqf.dk

5.10 Criterion 10

Following the referencing process, and in line with the timelines set in the Recommendation, all new qualification certificates, diplomas and Europass documents issued by the competent authorities contain a clear reference, by way of national qualifications systems, to the appropriate European Qualifications Framework level.

The coordination committee will by the end 2011 secure, in cooperation with the relevant ministries, that all new certificates, degrees and Europass documents contain a clear reference linking the NQF to the appropriate EQF level:
- a reference to the NQF and EQF levels will be added to certificates/certificate supplements in general upper secondary education, vocational education and training and adult education and training;
- a reference the NQF and EQF levels will be added to the diploma supplements for degrees in higher education;

The coordination committee will have a coordinating role in completing this work.

The NQF level of each qualification can be found at the national guidance portal: uddannelsesguiden.dk

6 Issues arising from the EQF referencing process

Stakeholders were involved in the referencing process through a consultation process. The consultation consisted of a consultation committee that participated in a seminar, followed by a written consultation (see Appendix E for a list of all members of the consultation committee and participants in the consultation process)

At the seminar the consultation committee was informed about the referencing process, and the members were invited to discuss and provide input to the draft report. This chapter is based on the discussion among the stakeholders at the seminar and comments to the process and report received in the written consultation. The stakeholders have contributed with general and specific comments to the draft reference report and have thus provided the reference committee with valuable feedback, which has enhanced the quality of the final report.

In addition to the specific factual comments to the draft report, several issues, which can be grouped under four headings, were raised in the consultation process: 1) Feedback on the Danish reference process and report 2) Use of the NQF 3) The national reference processes and EQF as translation device 4) Implementation of the NQF.

1. Feedback on the reference process and report
In general the feedback from the stakeholders on the reference process and report was very positive. It was noted by the stakeholders that the report provides a thorough and well-structured description of the Danish reference process with the establishment of the NQF and the referencing to the EQF. Together with the self-certification report (HE-QF), the reference report constitutes a good framework for promoting transparency and understanding of the Danish NQF, the Danish educational system and its qualifications as well as the referencing to the EQF.

2. Use of the NQF
Several stakeholders mentioned that a fine balance must be ensured between on the one hand the NQF as a recognisable and transparent framework for the education system, and on the other hand the need to maintain a flexible and adaptable system. Both objectives are important. However, there are risks related to each if they are not balanced. If the NQF is going to provide transparency on qualifications in the education system and become a useful tool for individual students, businesses and educational institutions, it is imperative that the levels established and described in the framework cover all recognised qualifications linked to educational programmes. At the same time several stakeholders stressed that the framework must not develop into a structural normative straitjacket that constrains the educational sector, for instance by forcing well-functioning existing programmes to change only for structural reasons Likewise, the stakeholders reflected on the need to maintain the NQF as a dynamic structure, and to avoid the risk that too strong an emphasis on maintaining a fixed structure might prevent the development of new educational programmes to match future societal needs.

Another aspect that was raised by the stakeholders, concerning the NQF was the distinction between the full-fit and best-fit principle in the NQF. As described in the report in chapter 3.7 and in criterion 4 inclusion of certificates and degrees in the Danish NQF is based on two different principles. The full fit principle is used when including higher education degrees to the NQF and the best fit principle is used when including certificates on level 1-5. Stakeholders

commented that this distinction and any possible implication of this distinction also ought to be subject to the evaluation in 2012.

3. The national reference processes and EQF as a translation device
A third theme which was raised by stakeholders is the importance of ensuring a robust and thorough reference processes in all countries. The stakeholders are looking forward to seeing the results of the reference processes and the reports from the other member countries – especially how the national levels in the other countries will be referenced to the EQF.

In this connection the levels analysis are going to be an important element of the reference process. The stakeholders were in general satisfied with the conceptual and semantic level descriptors analysis and could endorse the results. However one party in the consultation process, responded that the Danish level descriptors from 3-5 in general are viewed to be at a higher level than the corresponding EQF levels due to a) a higher level of autonomy in the Danish competence level descriptor 3-5 b) that the Danish skills descriptor on a meta level adds the category of communication.

4. Implementation of NQF
The stakeholders raised three main points regarding the implementation of the NQF: The scope of the NQF, information, and the planned evaluation of the framework in 2012.

As noted in chapter 3.2, the NQF encompasses all qualifications that have been awarded pursuant to an Act or an executive order and that have been quality assured by a public authority in the Danish educational system. The NQF does not at present cover either private sector provided qualifications or non-state regulated qualifications. Several stakeholders mentioned that this issue was an important matter to be further discussed and investigated.

Regarding information it was emphasised that there is still a need of targeted communication to properly inform the wide spectrum of stakeholders in the educational sector and especially the labour market – where the NQF is not yet widely known at present. In this connection, one party in the consultation process also expressed doubt also about the value of the NQF to the labour market in the VET area. The stakeholders welcomed the announcement of a launch conference to be organised by the Ministry of Education in the autumn of 2011.

The evaluation of the NQF in 2012 was mentioned by several stakeholders in both the seminar and the following written consultation. Stakeholders note that the evaluation will provide valuable input and will be an occasion to evaluate a number of important issues linked to the implementation of the NQF such as level descriptors, inclusion of qualifications and the value of the NQF.

Appendix A

The Danish Qualifications Framework for Lifelong Learning (NQF)

	Knowledge	Skills	Competence
Level 1	Must have basic knowledge within general subjects. Must have basic knowledge about natural, cultural, social and political matters.	Must possess basic linguistic, numerical, practical and creative skills. Must be able to utilise different basic methods of work. Must be able to evaluate own work. Must be able to present the results of own work.	Must be able to take personal decisions and act in simple, clear situations. Must be able to work independently with pre-defined problems. Must have a desire to learn and be able to enter into partly open learning situations under supervision
Level 2	Must have basic knowledge in general subjects or specific areas within an occupational area or field of study. Must have understanding of the basic conditions and mechanisms of the labour market.	Must be able to apply fundamental methods and tools for solving simple tasks while observing relevant regulations. Must be able to correct for faults or deviations from a plan or standard. Must be able to present and discuss the results of own work.	Must be able to take personal decisions and act in simple, clear situations. Must be able to undertake a certain amount of responsibility for the development of forms of work and to enter into uncomplicated group processes. Must be able to enter into partly open learning situations and seek guidance and supervision.
Level 3	Must have knowledge of basic methodology and norms within an occupational area or field of study. Must have understanding of own possibilities for influence on the labour market and in society.	Must be able to perform practical work assignments within an occupational area or field of study. Must be able to solve professional problems. Must be able to search for and assess information relevant to a practical work assignment within an occupational area or field of study.	Must be able to take responsibility for delimited work processes. Must be able to enter into interdisciplinary cooperation within the practice of an occupation or field of study. Must be able to participate actively in learning situations within an occupation or field of study.

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	Knowledge	Skills	Competence
Level 4	Must have knowledge of concepts, principles and processes within the practice of an occupation or field of study or in general subjects. Must have understanding of the relations between professional problems and social/international conditions.	Must be able to select and apply relevant tools, methodologies, techniques and materials within an occupational area or a field of study. Must be able to identify a practical and/or theoretical problem. Must be able to assess the quality of own and others' work in relation to a given standard. Must be able to utilise the terminology of an occupation or field of study in communication with collaboration partners and users.	Must be able to take responsibility for work processes in normally predictable work or study situations. Must be able to plan and take responsibility for own and joint work processes and results. Must be able to search for further education and training and professional development in structured learning environments.
Level 5	Must have knowledge of practice, and application of methodology and theory in an occupational area or field of study. Must have understanding of practice and/or the most important theories and methodology and be able to understand the utilisation of these within an occupation.	Must be able to utilise and combine a comprehensive set of skills connected with the practice and work processes of an occupation or field of study. Must be able to assess practice-related problems and adjust work procedures and processes. Must be able to communicate practice-related problems and possible solutions to collaboration partners and users.	Must be able to enter into development oriented and/or interdisciplinary work processes. Must be able to undertake defined management and planning functions in relation to the practice of an occupation or the field of study. Must be able to identify and develop own possibilities for continued further education and training in different learning environments.
Level 6	Must have knowledge of theory, methodology and practice within a profession or one or more fields of study. Must be able to understand and reflect on theories, methodology and practice.	Must be able to apply the methodologies and tools of one or more fields of study and to apply skills related to work within the field/fields of study or a profession. Must be able to assess theoretical and practical problems and to substantiate and select relevant solutions. Must be able to communicate professional issues and solutions to peers and non-specialists as well as to collaboration partners and users.	Must be able to handle complex and development oriented situations in study or work contexts. Must be able to independently participate in professional and interdisciplinary collaboration with a professional approach. Must be able to identify own learning needs and to organise own learning in different learning environments.

	Knowledge	Skills	Competence
Level 7	Must have knowledge within one or more fields of study that, in selected fields, is based on the highest international research within a field of study. Must able to understand and, on a scientific basis, reflect on the knowledge of the field/fields of study and be able to identify scientific issues.	Must master the scientific methodologies and tools of the field/fields of study as well as master general skills related to work within the field/fields of study. Must be able to assess and select from among the scientific theories, methodologies, tools and general skills of the field/fields of study and to set up new models of analysis and problem solving on a scientific basis. Must be able to communicate research-based knowledge and discuss professional and scientific issues with both academic peers and non-specialists.	Must be able to manage work and development situations that are complex, unpredictable and require new solutions. Must able to independently initiate and implement professional and interdisciplinary cooperation and take on professional responsibility. Must be able to independently take responsibility for own professional development and specialisation.
Level 8	Must have knowledge at the highest international level within the field of research. Must have made a significant contribution to the development of new knowledge and understanding in the field of research and on the basis of scientific studies.	Must master the scientific theories, methods and tools as well as other skills connected with research and development within the area. Must be able to analyse, evaluate and develop new ideas, including designing and developing new techniques and skills in the field of study. Must be able to participate in international discussions in the field of study and to disseminate research results and progress to a wider public.	Must be able to organise and conduct research and development tasks in complex and unpredictable contexts. Must be able to independently initiate and enter into national and international cooperation on research and development with scientific integrity. Must be able independently to initiate research and development projects and through this generate new knowledge and new skills that develop the field of research.

Appendix B

Overview and examples of type of degrees, certificates and certificates for supplementary qualifications

This appendix provides the reader with:
- An overview of the degrees, certificates and certificates for supplementary qualifications in the NQF
- Examples of description of type of degrees, certificates and certificates for supplementary qualifications

Overview

Figure 14
Overview of degrees, certificates and certificates for supplementary qualifications in the NQF as included in the NQF by November 15th 2010 :

Level	Degrees and certificates	Certificates for supplementary qualification
1	• Certificate for the leaving examination of the 9th class of the Folkeskole (Leaving Certificate of Primary and Lower Secondary school)	• Certificate for preparatory adult education • Certificate for general adult education level G (9 th grade)
2	• Certificate for the 10th class of the Folkeskole (Primary and Lower Secondary school)	• Basic Vocational Education and Training certificates • General adult education level F and E (10 th grade) • Adult Vocational Training Certificate
3	• Certificate/ journeyman's certificate for vocational education and training (e.g. social and healthcare helper, industrial assistant)	• Basic Programme certificate (VET) (2 year commercial programme) • Certificates for supplementary single subject courses at upper secondary level • Higher Preparatory Examination, single course subject • General adult education level D • Adult Vocational Training Certificate • Certificates for single subject courses at VET[3]
4	• Certificate for the three-year upper secondary education programme (The Upper Secondary School Leaving Examination, The Higher Commercial Examination, The Higher Technical Examination • Certificate for the two-year upper secondary programme (The Higher Pre-	• Certificates for supplementary single subject courses at upper secondary level • Higher Preparatory Examination, single course subject • Adult Vocational Training Certificate • Certificates for single subject courses at VET[4]

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[3] Not included in the DQF by November 15th, 2010

Level	Degrees and certificates	Certificates for supplementary qualification
	paratory Examination) • Certificate/ journeyman's certificate for vocational education and training [e.g. social and healthcare assistant, industrial technician)	
5	• Certificate/ journeyman's certificate for vocational education and training (e.g. film and TV production technician, aircraft mechanic] • Academy Profession Degree • Academy Profession Degree (VVU)	• Adult Vocational Training Certificate • Certificates for single subject courses at VET[5]
6	• Bachelor's Degree • Bachelor's Degree in Arts/ Fine Arts • Professional Bachelor's Degree • Diploma Degree	•
7	• Master's Degree (Candidatus) • Master's Degree in Arts/Fine Arts • Master Degree • Master Degree in Arts/Fine Arts	•
8	• The PhD Degree	•

Examples of type of degrees, certificates and certificates for supplementary qualifications

Enclosed are examples from:

Degrees and certificates:
Level 1   Primary and lower secondary school (Certificate for the leaving examination of 9th class of the Folkeskole)
Level 2   Certificate for 10th class of the Folkeskole (Primary and Lower Secondary School) at level 2
Level 3   Vocational education and training (Social and health care worker, step 1 of the social and health care training programme)
Level 4   General upper secondary education (The Upper Secondary School Leaving Examination, the Higher Commercial Examination, the Higher Technical Examination)
Level 4   Shipmaster (example of maritime vocational certificate)
Level 5   Higher education academy profession level (Academy Profession Degree in Financial Management – Further Education for Adults)
Level 6   Higher education Bachelor's level (Professional Bachelor Degree in Nursing)
Level 7   Higher education Master's Degree (candidatus)
Level 8   Higher education PhD level (PhD degree)

Certificates for supplementary qualifications (only examples – not all levels represented):
Level 1   Preparatory Adult Education – reading part 1
Level 2   General adult education (General adult education, levels F and E, at level 2)
Level 4   Certificate for upper secondary education (Higher Preparatory Examination, single subject course)
Level 5   Adult Vocational Training Certificate (Dairy and agriculture -Treatment for calving fever and uterine infections)

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[4] *Not included in the DQF by November 15th, 2010*

[5] *Not included in the DQF by November 15th, 2010*

Level 1

Certificate for the leaving examination of 9th class of the Folkeskole (Leaving Certificate of Primary and Lower Secondary School)	
Certificate/degree	The Leaving Certificate of the Folkeskole is awarded to pupils who have completed 9th class. At the conclusion of 9th class pupils are expected to have acquired the knowledge and skills in the subjects of the Folkeskole as appear from Common Objectives.
Employment and further education	The Leaving Certificate of the Folkeskole provides access to general and vocational upper secondary education etc.
How is the certificate obtained?	Every pupil who completes 9th class receives a leaving certificate containing, among other things, the marks received in the final examinations. The final examinations comprise 7 compulsory and a number of voluntary examinations. The examinations document the degree to which the pupil fulfils the targets and requirements laid down for the individual subject. Admission: Education is compulsory for all children living in Denmark from the pre-school class up to and including 9th class. There is free intake to the Folkeskolen.
Who can award the certificate?	The head teacher of the school issues the Leaving Certificate in accordance with the rules of the Act on the Folkeskole and the executive order on examinations.

Level 2

Certificate for 10th class of the Folkeskole (Primary and Lower Secondary School)	
Certificate/degree	The certificate for the 10th class of the Folkeskole is awarded to pupils who have completed 10th class. At the conclusion of 10th class pupils are expected to have acquired the knowledge and skills in the subjects of the Folkeskole as appear from Common Objectives.
Employment and further education	The certificate for the 10th class of the Folkeskole provides access to general and vocational upper secondary education etc.
How is the certificate obtained?	The certificate for the 10th class of the Folkeskole is awarded to pupils who have completed 10th class. 10th class is targeted at pupils who after the basic school need further academic qualification and clarity concerning their choice of education in order to complete a general or vocational upper secondary education. 10th class includes a transition programme, a number of elective subjects geared to general and vocational upper secondary education, and a personal education plan to be used in educational guidance for the pupil. The 10th class of the Folkeskole can be finished with a number of 10th class examinations and possibly one or more of the compulsory leaving examinations from 9th class. The examinations document the degree to which the pupil fulfils the targets and requirements laid down for the individual subject. Examinations in 10th class are voluntary. Admission: There is free intake to the 10th class of the Folkeskole.
Who can award the certificate?	The head teacher of the school issues the Leaving Certificate in accordance with the rules of the Act on the Folkeskole and the executive order on examinations.

Level 3

Social and health care worker, step 1 of the social and health care training programme	
Certificate/degree	The certificate documents that a person has obtained a qualification as a social and health care worker. The social and health care worker can independently care for and nurse the elderly, the sick or the disabled in their homes or at care homes and undertake health promoting and preventive work.
Employment and further education	The certificate leads to employment in domiciliary care, at care homes and day and activity centres. The certificate provides admission to step 2 of the social and health care training programme, the social and health care assistant programme, which is placed at level 4.
How is the certificate obtained?	The certificate is obtained by completing step 1 of the social and health care training programme. This is a dual VET-programme with a minimum of three school-based periods and 2 internships. The social and health care worker programme concludes with an oral examination on the basis of a project. There is, in addition, an examination in one basic subject and one area subject. Area subjects and basic subjects that have not been selected as examination subjects finish with a general proficiency mark. Admission: Everyone who has fulfilled compulsory education in accordance with the Act on the Folkeskole (primary and lower secondary school) has access to vocational education and training. The pupil's personal education plan is drawn up on the basis of an assessment of prior learning.
Who can award the certificate?	The institution where the pupil has taken the study programme issues the certificate in accordance with the guidelines drawn up by the trade committee for the assistant social educator programme and the social and health care training programme.

Level 4

Certificate for the three-year upper secondary education programme (the Upper Secondary School Leaving Examination, the Higher Commercial Examination, the Higher Technical Examination)	
Certificate/degree	The certificate documents that the pupil has successfully completed an upper secondary education programme with the following objectives: to prepare the pupils for higher education, including the acquisition of a liberal education, to develop academic insight and study competence, to become familiar with utilising different forms of work, and to achieve the ability to function in a study environment; to teach them to relate to their surroundings and their own development with reflection and responsibility as well as to develop their creative and innovative skills and their critical sense ; to prepare them for participatory democracy, co-responsibility, rights and duties in a society with freedom and democracy, including providing them with the prerequisites for active participation in a democratic society etc. The certificate documents the subjects and courses the pupil has followed as part of his or her upper secondary education and the results obtained, stated in the form of end of year marks and, where applicable, examination marks.
Employment and further education	The certificate provides the possibility of applying for admission to higher education.

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How is the certificate obtained?	The certificate is obtained by successfully completing an upper secondary examination. An upper secondary education is a three-year post-compulsory education course targeted at young people interested in knowledge, in-depth studies, putting things into perspective and abstraction. The programme comprises one whole and concludes with an examination in accordance with the national standard. Admission: Admission is conditional on the completion of the 9th or 10th class of the Folkeskole (the municipal primary and lower secondary school) and participation in the final examinations.
Who can award the certificate?	The certificate is issued by the school offering the programme.

Level 4

Shipmaster (maritime vocational education)	
Certificate/degree	The certificate documents that a person has obtained a qualification as a skipper/bargeman. A shipmaster can sail as a ship's mate, a master and a supervisor on board small and medium-sized ships.
Employment and further education	The certificate gives the right to sail as first and second mate on board all merchant ships in all waters. With sufficient sailing experience, one may also sail as master of all merchant vessels of not more than 3000 gross tonnage. The certificate also provides access to further education and training as ship's master at level 5.
How is the certificate obtained?	The certificate is obtained by successfully completing the shipmaster's programme. The programme takes 18 months and takes place at a navigation college. Admission: Admission to the programme is conditional on passing the 10th class examinations in Danish, mathematics, English, physics/chemistry with a minimum mark of 02, and in addition the basic course for ship's assistants and 12 months 'sailing experience as a probationary mate or 18 months 'sailing experience as a ship's assistant or a vocational training in the area of iron and metal or a ship mechanic including 12 months' sailing experience.
Who can award the certificate?	The certificate is issued by a navigation college.

Level 5

Academy Profession Degree in Financial Management – Further Education for Adults (VVU)	
Certificate/degree	The degree documents that a person has obtained a qualification in financial management. A person with an academy profession degree in financial management can combine knowledge about organisational, economic and social conditions with methodological and practical reflections on financial management in a global market. The degree qualifies the holder to undertake functions at specialist and middle manager level in terms of financial management.
Employment and further education	The degree leads to employment as a financial manager in a bank or in the field of mortgage credit, insurance or real estate. The degree provides access to relevant diploma degree programmes at level 6.
How is the degree obtained?	The degree is obtained by completing an academy profession study programme in financial management. The programme is a VVU degree (further education for adults) and consists of six modules: four subject modules, a specialised course and a final project. There is an examination after each module. The whole study programme concludes with an examination. The degree can also be obtained via an assessment of prior learning. Admission: There are several admission routes: via an upper secondary study programme; via a relevant vocational training programme; via a relevant basic adult education programme (GVU); via another relevant education or training programme at level 4 at minimum. In addition, the applicant must have at least 2 years' relevant vocational experience following a completed qualifying examination.
Who can award the degree?	The educational institution awards the degree issues a certificate for a completed study programme according to the rules in the executive order on examination regulations.

Level 6

Professional Bachelor Degree in Nursing (nurse)	
Certificate/degree	The degree documents that a person has obtained a qualification as a professional bachelor in nursing (nurse). A nurse has theoretical and clinical expertise, can adopt a critical and analytical approach to his or her job, and can function independently as a professional nurse and take part in professional and interdisciplinary cooperation.
Employment and further education	The degree leads to employment as a nurse in the health sector. The nurse is authorised pursuant to the Act on the authorisation of health personnel and on health professional activity. The degree qualifies for entry to relevant master's study programmes, supplemented by additional admission requirements if necessary.

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How is the degree obtained?	The degree is obtained by completing a professional bachelor study programme in nursing. The study programme equivalents 210 ECTS and takes place as alternation between theoretical and clinical (practical teaching). The prescribed period for clinical teaching is 90 ECTS. The theoretical and clinical modules are assessed by internal or external examinations. The programme contains a total of 5 external examinations. The study programme concludes with a bachelor project, which is assessed at an oral examination. Admission: There are several admission routs: via an upper secondary school study programmes;; vocational training as a social and health care assistant (level 2), fulfilling specific requirements; or via four upper secondary school single subjects, nine months' vocational experience and fulfilling a number of specific requirements.
Who can award the degree?	The educational institution awards the degree issues a certificate for a completed study programme according to the rules in the executive order on examination regulations.

Level 7

The Master's degree (Candidatus)	
Degree:	The degree documents that a person has obtained a qualification as a Master (Candidatus). The aim of the Candidatus study programme is to develop the student's academic knowledge and ability and to raise the theoretical and methodological qualifications, competences and independence in relation to bachelor level. In addition, the study programme enables the student to go into depth by applying the advanced elements in the disciplines and methods of the study, including training in academic work and method.
Employment and further education	The Master's (Candidatus) degree qualifies the student for specialised vocational functions, for participation in academic development work and for further education, including the PhD programme.
How is the degree obtained?	The degree is obtained by successfully completing a Bachelor study programme. Admission: Admission to the Master's (Candidatus) programmes requires a relevant bachelor qualification or other relevant Danish or a non-Danish qualification at the same level.
Who can award the degree?	The degree is awarded by the universities

Level 8

The PhD degree	
Degree:	The degree documents that a person has obtained a qualification as PhD on the basis of a PhD programme. The PhD programme is graduate training that qualifies the PhD student at international level to independently conduct research, development and teaching assignments in the private and the public sectors where broad knowledge of research is a precondition.
Employment and further education	The degree leads to research and development work in the private and public sectors.
How is the degree obtained?	The degree is obtained by completing a PhD programme at a university or other research institution. Admission: Admission to the PhD programme is based on a competed Master's programme from the point of view of level.
Who can award the degree?	The degree is awarded by the universities

Certificates for supplementary qualifications:

Level 1

Preparatory Adult Education – reading part 1	
Certificate/degree	The certificate documents that the participant can make use of reading and spelling techniques based on phonetic units, find a word's root morpheme in well known vocabulary, recognise frequently occurring irregular words, find simple information in everyday texts, read simple, coherent texts and write short texts for own use.
Employment and further education	Part 1 leads to instruction part 2, and constitutes a part of the reading proficiency requirements that are a precondition for employment and education in accordance with OECD recommendations.
How is the certificate obtained?	The certificate is obtained by completing a Preparatory Adult Education course part 1. It is possible to be an independent student. Admission: Everyone over the age of 18 with the learning prerequisites to benefit from the instruction can be admitted. Young people under the age of 18 can be admitted when, in combination with General Adult Education, they follow education under the Act on Adult Vocational Training, are in a job that follows General Adult Education aimed at enterprises, or follow teaching at educational institutions under the Prison Service. Participation requires a preliminary test to determine which General Adult Education course is the right one.
Who can award the certificate?	The certificate is issued by the Adult Education Centre responsible for the geographical catchment area to which the educational institution belongs.

Level 2

General adult education, levels F and E	
Certificate/degree	The certificate documents that a person has obtained a qualification in a general subject at level F or G. The purpose of single subject courses is to strengthen adults' possibilities for taking further education and promoting their interest in educating themselves. General adult education is offered as teaching in single subjects which concludes with tests and an examination in accordance with the national standard.
Employment and further education	Certificates for single subject courses at levels F and E can give admission to teaching at higher levels in general adult education and to study programmes where the admission requirement is level E or 10th grade of the Folkeskole (primary and lower secondary school).
How is the certificate obtained?	The certificate can be obtained by completing a subject in the general adult education programme. The certificate can also be obtained through an assessment of prior learning. Admission: On the basis of the applicant's qualifications, the educational institution decides whether the person in question can be admitted to subjects in general adult education and at which level.
Who can award the certificate?	The certificate is issued by the educational institution that offers the programme.

Level 4

Certificate for upper secondary education (Higher Preparatory Examination, single subject course) at level 4	
Certificate/degree	The certificate documents which higher preparatory examination single subjects the pupil has followed and the result, stated in the form of examination marks.
Employment and further education	The certificate provides the possibility of applying for admission to higher education.
How is the certificate obtained?	The certificate is obtained by passing the examination for a higher preparatory examination single subject course. The Higher Preparatory Examination, single subject courses are an educational service for adults who are interested in knowledge, in-depth studies, putting things into perspective and abstraction. The Higher Preparatory Examination, single subject courses correspond to the subject in the Higher Preparatory Examination. Each subject concludes with an examination. The subjects can be collected to form a full Higher Preparatory Examination in accordance with the national standard. A certificate for single subjects can also be obtained by means of an assessment of prior learning. Admission: Admission is conditional on the completion of the 10th class of the Folkeskole (the municipal primary and lower secondary school and participation in the fixed final examinations or similar qualifications.
Who can award the certificate?	The certificate is issued by the school offering the programme.

Level 4

Certificate for upper secondary education (Higher Preparatory Examination, single subject course) at level 4	
Certificate/degree	The certificate documents which higher preparatory examination single subjects the pupil has followed and the result, stated in the form of examination marks.
Employment and further education	The certificate provides the possibility of applying for admission to higher education.
How is the certificate obtained?	The certificate is obtained by passing the examination for a higher preparatory examination single subject course. The Higher Preparatory Examination, single subject courses are an educational service for adults who are interested in knowledge, in-depth studies, putting things into perspective and abstraction. The Higher Preparatory Examination, single subject courses correspond to the subject in the Higher Preparatory Examination. Each subject concludes with an examination. The subjects can be collected to form a full Higher Preparatory Examination in accordance with the national standard. A certificate for single subjects can also be obtained by means of an assessment of prior learning.
	Admission: Admission is conditional on the completion of the 10th class of the Folkeskole (the municipal primary and lower secondary school and participation in the fixed final examinations or similar qualifications.
Who can award the certificate?	The certificate is issued by the school offering the programme.

Level 5

Adult Vocational Training Certificate (Dairy and agriculture) ; Treatment for calving fever and uterine infections (in cows) (44601)	
Certificate / degree	The certificate documents that the participant has knowledge of the cow's anatomy, calving process and diseases in connection with calving with a view to being able to utilise this knowledge when introducing medicinal products containing calcium into the veins of cows suffering from calving fever and when placing uteritories in the uterus of cows suffering from uterine infection when this takes place under the guidance of a veterinary surgeon..
Employment and further education	The certificate allows the participant to undertake job functions in enterprises/organisations that employ skilled and/or unskilled workers within the area aimed at by the adult vocational training programme and which is described in the programme's objectives. Persons with this qualification certificate have the possibility in a number of areas of having the certificate recognised in the course of admission to a vocational education and training programme (merit).
How is the certificate obtained?	The certificate is awarded following an assessment of whether the participant has achieved the centrally validated, action-oriented objectives of the adult vocational training programme. In the case of programmes that conclude with an examination, the certificate can also be awarded to persons who have not taken part in the teaching but have taken the examination. Finally, the certificate can be awarded on the basis of an assessment of prior learning (individual competence assessment in adult vocational training).
Who can award the certificate?	The certificate is awarded by public and private educational institutions approved by the Ministry of Education to offer the adult vocational training programme.

Appendix C

The Danish Lifelong Learning System

This appendix is a supplement to chapter 4 and contains an in depth presentation of the Danish educational system and its sub-sectors. For each sub-section the following is presented:

- Aims
- Admission
- Duration
- Providers
- Degrees and certificates awarded

The appendix follows the same structure as chapter 4. The first sections contain a presentation of the mainstream education system up to higher education, which includes primary and lower secondary school (1), as well as upper secondary education (2). This is followed by a presentation of the adult and continuing education system at the corresponding levels (3 and 4). Finally, the higher education system is presented (5).

As already presented in chapter 4, the Danish educational system is divided into two main systems: the *mainstream educational system* and the *adult and continuing educational system*.

Figure 15
Overview of the Danish educational system

Ordinary educational system			Adult and continuing educational system		
Primary and lower secondary school			**General adult education**	**Adult vocational education and training**	
Primary and lower secondary school			Preparatory adult education (FVU) General adult education (AVU)		
Upper secondary education					
General upper secondary education	Vocational education and training		Higher preparatory single subjects	Basic adult education (GVU)	Adult vocational training programmes (AMU)
Higher education					
Bachelor's Degree, Bachelor's Degree in Arts/ Fine Arts	Professional Bachelors Degree	Academy Profession Degree	Academy Profession Degree (VVU)		
			Diploma Degree		
Master's Degree, Master's Degree in Arts/ Fine arts			Master Degree, Master Degree in Arts/ Fine Arts		

1 Primary and lower secondary education

Primary and lower secondary school
The Danish primary and lower secondary school (Folkeskole) is under the auspices of the Ministry of Education, and municipalities are responsible for providing the education. Education at primary and lower secondary school is placed at levels 1-2 in the NQF.

The Danish 'Folkeskole' is a system of 11 years of comprehensive school, integrating primary and lower secondary school, where children start at the age of 6 and normally end their education at the age of 16. The first year is a mandatory pre-school year (0th class) followed by 9 years of mandatory education (1st to 9th class). Finally, the system ends with an optional year: the 10th class. 10th class is an optional extra year for pupils who need further academic qualification and clarification concerning their choice of continuing in either general or vocational upper secondary education.

Aims
The aims of the primary and lower secondary school are to provide pupils with the knowledge and skills that will prepare them for upper secondary education and training and provide them with the desire to learn more. Primary and lower secondary school is also designed to prepare the pupils to be able to participate, demonstrate mutual responsibility and understand their rights and duties in a free democratic society. Furthermore, the learning objectives in each subject are described by a number of "common objectives". Common objectives determine the most important sets of texts in connection with the subjects and topics taught in primary and lower secondary schools.

Admission
There are no admission requirements for the primary and lower secondary school, but it is required that all children are taught at a level which suits their age.

Provider
The Danish Primary education programmes are primarily provided by the public Folkeskole. The alternative to primary and lower secondary school is the private independent schools. There are currently 2,285 comprehensive schools in Denmark, of which 509 are independent schools.

The management of primary and lower secondary school involves various levels. The national level (Ministry of Education) is responsible for determining the overall objectives and framework for primary and lower secondary school. In addition, the national level is responsible for implementing legislation. Another important level in the management of the Folkeskole is the municipal/local level. Municipalities are responsible for setting local objectives and monitoring the implementation of objectives at the schools. Each municipality determines the local guidelines and introduces special initiatives at the local schools.

Certificates
The certificate for the 9th class final examinations of the Folkeskole is awarded to pupils who complete the 9th class. At the end of the 9th class, pupils must take a number of compulsory examinations, and they can also choose to take other voluntary examinations. The examinations include oral and written tests. The final examinations certificate of the Folkeskole documents the degree to which the pupil fulfils the objectives and requirements laid down for each subject in the 9th class of the Folkeskole. The provisions concerning the final examinations of the Folkeskole apply to all types of schools that hold the final examinations of the Folkeskole.

The certificate for the 10th class of the Folkeskole is awarded to pupils who complete the 10th class. The examinations in the 10th class are voluntary. Pupils may choose to take the 10th class examination in one or more subjects and/or take one or more of the Folkeskole's 9th class final examinations

Progression

Attending 10 years of education in primary and lower secondary school gives the pupil the possibility to continue their education at upper secondary level. Each pupil is assessed by both the teachers and the local youth guidance counsellors in order to determine the pupil's readiness to access the programmes at the upper secondary level. The final examinations take place after the assessment of the pupil's readiness to continue in the upper secondary system.

Certificates in Primary and Lower Secondary Education

Level 1
- Certificate for the leaving examination of the 9th class of the Folkeskole (Leaving Certificate of Primary and Lower Secondary school)

Level 2
- Certificate for the 10th class of the Folkeskole (Primary and Lower Secondary school)

2 Upper secondary education

Upper secondary education is included in the NQF at levels 2-5 and is, in Denmark, called 'youth education' (ungdomsuddannelser). It is divided into two branches:
- General upper secondary education;
- Vocational education and training, including the maritime education and training programmes.

General upper secondary education and vocational education and training are provided under the auspices of the Ministry of Education, while maritime vocational education and training is the responsibility of the Ministry of Economic and Business Affairs.

General upper secondary education mainly gives access to further education, whereas vocational education and training and maritime vocational education and training provide qualified labour for the labour market.

General upper secondary education

General upper secondary education comprises the general upper secondary school leaving examination (stx), the higher technical examination (htx), the higher commercial examination (hhx) and the higher preparatory examination (hf), and are all placed at level 4 in the NQF. All four programmes leading to the examinations focus on general competences for studies in higher education. The choice of different optional subjects determines to which higher education programmes the upper secondary programme gives access.

The general upper secondary programmes are divided into two and three year programmes. Stx, hhx and htx are three year programmes, and hf is typically a two year programme.

The three year programmes are divided into a ½ year basic programme, which is common for all students attending the programme, followed by a 2½ year specialised study programme. The study programmes provide the students with the possibility for in depth studies. The specialised study programmes contain compulsory subjects as well as electives. The specialised study programmes are compiled and offered by the individual schools, and the number of different programmes varies from school to school.

The hf programme consists of compulsory subjects as well as a number of electives. The schools can choose to tone their hf programmes by offering electives as "packages" for the students to choose between. The number and specific content of the "packages" vary from school to school. The hf programme is also offered as a single subject course within the adult education system (see 4.3.3 for description).

Aims

The overall aim of the upper secondary programmes is to prepare students for admission to higher education and to develop the student's interest and ability to engage in society and support their personal development. The programmes, moreover, strengthen the creativity, critical sense and innovative ability of the students.

The four programmes have individual foci in addition to the overall focus on general study competences. In the stx programme, the students develop study competence in the humanities and the natural and social sciences. The hhx programme aims to provide study competence within business economics and socioeconomics in combination with foreign languages and other general subjects. The htx programme focuses on technology and natural sciences, and on the combination of theory and practical work in workshops and laboratories. The hf programme focuses on both theoretical and practical dimensions of the subjects.

Admission

All pupils who have completed the final examinations of primary and lower secondary school or the 10th class examination, and whose readiness for commencing an upper secondary programme is assessed to be adequate by the local youth guidance centre, are allowed to enrol into an upper secondary programme.

If a youth guidance centre finds that there is a risk that a student cannot meet the requirements of an upper secondary programme, the student can ask the institution providing the upper secondary programme for a second opinion.

In order to be admitted to a hf programme in one or more subjects, the student must have completed lower secondary school at least one year prior to admission. Students wishing to be admitted directly from the lower secondary school must have completed the 10th class of lower secondary school.

Duration

Stx, hhx and htx are three year programmes, and the duration of the hf programme is usually two years.

The majority of students following the three year upper secondary programmes are between 15 and 20 years old. The hf programme requires 10 years of basic school or the equivalent. This means that hf attracts both young people and adults, and that the students attending the hf programme are older than those attending the other upper secondary programmes.

Provider

The stx programme is typically offered by general upper secondary schools (*Gymnasiums*). Many *Gymnasiums* offer the hf programme as well, and the hf programme is also provided by adult education centres.

The hhx programme is offered at business colleges, which also provide VET programmes within the commercial cluster and often also short-cycle higher education and adult vocational training programmes.

The htx programme is offered by technical colleges, which provide VET programmes within the technically oriented clusters and often also short-cycle higher education within technical fields and adult vocational training programmes.

Some providers are mixed school types, offering more than one upper secondary programme.

Certificates

Certificates for the three year upper secondary school programmes are awarded to pupils who have successfully completed an upper secondary education. The stx programme leads to the General Upper Secondary Examination; the hhx programme leads to the Higher Commercial Examination; and the htx programme leads to the Higher Technical Examination. Passing re-

quires the fulfilment of an attendance requirement and achieving the required average grade. The grades comprise annual grades for each subject and grades for a minimum of 10 examinations plus a specialised study project.

The hf programme leads to the Higher Preparatory Examination. Certificates for the two year general upper secondary school programme are awarded to participants who have successfully completed such a programme. Passing requires the fulfilment of an attendance requirement and achieving the required average grade. The grades comprise grades for a minimum of 11 examinations as well as a major written assignment.

Progression
The four upper secondary examinations give access to higher education programmes, subject to the requirements for subjects and levels in each higher education programme.

Certificates in general upper secondary education

Level 4
- The Upper Secondary School Leaving Examination (Certificate for the three-year upper secondary education programme)
- The Higher Commercial Examination (Certificate for the three-year upper secondary education programme)
- The Higher Technical Examination (Certificate for the three-year upper secondary education programme)
- The Higher Preparatory Examination (Certificate for the two-year upper secondary programme)

Vocational Education and Training (EUD)
Vocational education and training programmes in the mainstream educational system are in English referred to as initial vocational education and training (iVET). In Danish, the abbreviation is EUD.

The VET-programmes are based on a dual training principle, which means that each programme is divided into periods of school based training and periods of in-company training. The school based periods and the in-company training alternate in the programme, typically first after the basic course, complementing each other and ensuring that the students acquire theoretical, practical and general personal skills according to the rules for each programme.

The VET-system comprises about 107 vocational education and training programmes, which are organised into 12 vocational clusters (access routes), and each having a specific basic course. Practically, all programmes are divided into steps and specialisations, or profiles. The twelve clusters range from *building and construction* to *healthcare and pedagogy*.

Aims
The objectives of the VET-programmes are to provide the student with vocational and personal skills, knowledge and competences, and to prepare the student for further studies which are relevant to labour market demand as well as the vocational mobility and needs of the student. Furthermore, the VET-programmes are designed to encourage the students in individual decision making, cooperation and communication.

Within the framework of the VET-programmes, a new and longer programme (EUX) is being developed, aimed at labour market needs as well as developing competences for commencing higher education programmes.

Admission
A student who has completed the final examinations of Primary and Lower Secondary school, and whose readiness for entering a VET-programme is assessed by the local youth guidance centre to be adequate, is allowed to enrol into a VET-training programme. Students who are assessed not to be ready for commencing a VET-programme are offered other educational

activities which aim to provide the student with the necessary competences to commence a VET-programme.

Each programme is individually organized and continuously adjusted according to the skills progression of the student. This means that the duration of a programme, to a large extent, also depends on the student's ability to meet the learning outcomes of the programme.

Duration
The duration of the programmes is 1½ to 5 years, but typically a VET programme lasts 2-4 years including the basic course.

Each VET-programme commences with a broad school based basic course, which is the most common way of commencing a VET-programme. The student can also begin the programme with an in-company period followed by the school based basic course. A completed basic course leads to admission to one or more main courses from the group of related vocational programmes within the cluster.

Provider
The VET-programmes are mainly provided by vocational colleges and companies. There are five different types of vocational colleges: agricultural colleges, commercial colleges, social and health care colleges, technical colleges and combination colleges. Many of the colleges are also engaged in providing short-cycle programmes leading to an Academy Profession degree as well as adult vocational training programmes.

Certificates
On completion of the basic course, the student is awarded a Basic Programme Certificate documenting that he or she has completed this course. The certificate indicates the subjects and levels completed and the main course(s) which the student is qualified to follow. This certificate is included in the NQF at level 2 and is defined as a certificate for supplementary qualification.

Certificates for vocational education and training programmes are awarded to students who have successfully completed a VET-programme. The final examination in most of the VET-programmes is a combination of project work with a practical content and a theoretical examination. During their programmes, the students also study basic subjects such as Danish, English and mathematics. These subjects usually conclude with oral examinations.

The final certificate – the VET qualification certificate - is issued when both the Basic Programme Certificate and a final practical training statement have been issued, and in some cases when a journeyman's test has been passed. The VET qualification certificate contains:
• The designation of the programme completed, including the profile and specialisation taken;
• Reference to the Basic Programme Certificate and the final practical training statement.

The issuing authority for the VET qualification certificates is the responsible Trade Committee, as authorised by the Ministry of Education.

Progression
A VET qualification certificate allows the qualified student to take up positions of vocational employment. Some of the programmes are designed in steps, and a student with a certificate from a particular step is qualified labour, able to seek employment. However, the step certificate also gives the student the right to continue the education programme at a higher step at a later time, perhaps after having worked for a few years. For example, a social and health-care helper certificate (short step in the long programme, Level 3) gives admission to Social and Healthcare Assistant (long programme, Level 4)

Furthermore, some VET qualification certificates give access to short-cycle programmes leading to an Academy Profession degree at level 5. However, the student must supplement the

VET qualification certificate by adequate general upper secondary courses to enrol into these short cycle programmes.

Certificates in vocational education and training (VET)

Level 2
- Basic vocational education and training certificates (Certificate for supplementary qualification)

Level 3
- Basic vocational education and training certificates (2 year commercial programme)
- Certificate for vocational education and training (e.g. social and healthcare helper, industrial assistant)

Level 4
- Certificate for vocational education and training [e.g. social and healthcare assistant, industrial technician)6

Level 5
- Certificate for vocational education and training (e.g. film and TV production technician, aircraft mechanic]

For young people under the age of 30 who are not attending an educational programme and who do not have a job, and who do not fulfil the preconditions for commencing and completing an upper secondary programme or a VET-programme, there is the possibility of attending a basic vocational education and training programme (EGU). The EGU consists of alternating practical training and school based elements in a 2-3-year programme. This programme is not described in detail here, as it is not yet included in the NQF.

Maritime education and training
The maritime education and training sector provides a number of programmes aimed at the maritime sector. Examples of maritime education and training programmes are: ship's assistant, commercial fisherman and marine engineer, as well as a number of short training courses. The Danish Maritime Authority, under the auspices of the Danish Ministry of Economic and Business Affairs, has overall responsibility for the maritime education and training sector.

The maritime education and training sector contains programmes equivalent to initial vocational education and training programmes at professional bachelor level, and are, therefore, placed in the NQF between levels 2-6. Generally, the study programmes within the maritime system are interconnected, where one maritime programme gives admission to other maritime programmes at a higher level.

The maritime education and training programmes are - as with other vocational education and training programmes - divided into periods of school based training and periods of on-ship training.

Aims
The maritime education and training sector has the overall aim of meeting the needs of the maritime sector and ensuring that maritime sector employees possess relevant qualifications for a global labour market.

Admission
For entry into the maritime education and training sector there are both programmes that admit pupils who have finished the 9 years of primary and lower secondary school, and others that require a VET qualification certificate from within the cluster *iron and metal* or an upper

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[6] *As a new option students can take a VET-programme with additional elements and examination, that in addition to qualifying the students for a vocation, also gives the students access to higher education (eux).*

secondary education. To progress from one maritime education programme to another, work experience from a ship is a precondition for many programmes.

A valid health certificate, cf. the medical examinations of seafarers and fishermen, is required by the majority of the study programmes, and some stipulate a minimum age of 16 years.

Duration
The duration of the maritime education and training programmes ranges from ½ to 5½ years. As the programmes in the maritime education and training sector are interconnected, one programme allows admission to another, often in combination with experience of working on a ship, which increases the duration of the combined programmes.

Provider
The maritime education and training programmes are divided into periods of school based training and periods of on-ship training.

Maritime education and training is provided by independent institutions, where most specialize in maritime education and training. Apart from colleges and academies, some training ships also offer some of the maritime education and training programmes.

Certificates
Upon completion of a maritime education and training programme, a certificate is issued to the student. The issuing authority for certificates from programmes within the maritime education and training is the responsible institution, as authorised by the Danish Maritime Authority.

The certificates are aligned with the competence standards required by the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW).

Progression
The qualifications and certificates from the maritime education and training sector qualify for jobs in the merchant navy or work as a self-employed fisherman. Some of the programmes also qualify for work on-shore.

The different maritime education and training programmes provide access to other defined maritime programmes. The maritime education programmes at professional bachelor level are part of the ordinary higher education system and give access to specific master programmes.

Examples
Examples of maritime education and training programmes and possible steps:
- Ship`s assistant (Level 3) plus 18 months' work on a ship give admission to Officer in charge of navigational watch (level 4) and Master on ships of less than 3,000 GT (level 4);
- A certificate from an upper secondary examination (level 4) or a VET qualification certificate (level 3-5), in combination with selected subjects such as mathematics and English to a specified level, give admission to Bachelor of Maritime Transport and Ship Management (level 6).

Certificates in Maritime education and training

Level 2-5
- *Each programme in the maritime education and training system has its own certificate*

Level 6
- Professional bachelor degree

3 General Adult Education

General Adult Education Programmes are provided under the auspices of the Ministry of Education and are included in the NQF at levels 1-4. Adult education is divided into general adult

education and vocational adult education. This chapter describes the general adult education, which consists of:

- Preparatory adult education (Level 1)
- General adult education (Levels 1-3)
- General upper secondary subjects (Level 4)

Preparatory adult education
Preparatory adult education (in Danish shortened to FVU) is a service for adults who wish to become more proficient in reading, writing, spelling or basic mathematics. The level is equivalent to primary and lower secondary education, and is level 1 in the NQF.

Aims
The aims of preparatory adult education are to provide adults with the opportunity to improve and supplement their fundamental skills in reading, spelling and written presentation, as well as their skills with numeracy, arithmetic and basic mathematical concepts in order to ensure the adult's further education and strengthen their prerequisites for active participation in all aspects of societal life.

Admission
Admission is open for applicants over 18, and where preparatory adult education is combined with an educational programme established under the law concerning vocational training I or is incorporated into a vocational training programme, or if the applicant is employed at an enterprise, or if the programme takes place at an institution under the Danish Prison and Probation Service.

In addition, courses are also provided for adults with reading and writing disabilities (dyslexia) as well as preparatory education for foreigners. The scope of the courses is 30-80 hours.

Duration
Preparatory adult education is organized in a flexible manner and, therefore, can have varying duration from 30 to 60 lessons.

Providers
FVU is a state-financed education programme offered through adult education centres (VUC). Based on organisational agreements with VUC, FVU programmes can also be offered by many other types of institutions, such as institutions that provide vocational education and training, production schools, language centres, etc.

Certificates
Certificates of preparatory adult education are awarded to adults who have successfully completed a preparatory adult education examination.

It is possible to take an examination after each level. These examinations are, however, voluntary. A certificate is awarded when the examination is passed. If pupils do not wish to take an examination, they will receive a certificate for participation, provided they have taken part in a minimum of 85% of the teaching.

Progression
Preparatory adult education does not formally provide access to further education, but improves educational ability by strengthening the reading or mathematical skills of the participants.

Certificates for supplementary qualifications in preparatory adult education

Level 1
- Certificate for preparatory adult education

General adult education

General adult education level (in Danish shortened to AVU) is offered at levels 1-3 in the NQF. The target group is both young and mature adults who have not completed lower secondary education or who need to improve or supplement their basic education .The subjects are at different levels, from basic level to levels G,F,E and D, where the latter is the highest level.

General adult education at lower secondary level is provided as single subject courses. General adult education is equivalent to – but not identical with – the municipal primary and lower secondary school (the Folkeskole). An exception is that the final level within general adult education is D, which is one level higher than the final level of the school-leaving examination of the Folkeskole. Level D provides a good academic basis for the Higher Preparatory Examination Programme (HF). Curricula and examinations are adapted to adults.

The teaching leads to an examination which qualifies for admission to continued education on a par with the school-leaving certificates obtained after the 9th and 10th class of the Folkeskole.

Aims

It is the aim of general adult education to offer young as well as mature adults the possibility to improve or supplement their general knowledge and skills, and to give them the possibility of fulfilling the general preconditions for continued education, as well as providing general knowledge and skills which are relevant to working life. Furthermore, general adult education should strengthen adults' possibilities for fulfilling the general preconditions for active participation in a democratic society and for understanding and influencing their own life situation.

Admission

General adult education (AVU single subject courses) is open to adults (18+). Before being admitted, all applicants must meet a guidance counsellor. The applicants are admitted following a concrete assessment of their qualifications in relation to the subjects they would like to study.

Duration

The duration of the courses depends on how the courses are organized. The different subjects and levels are allocated a varying number of hours (from 45 to 120 hours).

Providers

General adult education programmes (FVU, AVU and general upper secondary subjects) are offered by adult education centres (VUC). These centres are self-governing institutions funded by the state (EURYDICE 101). The Ministry of Education sets rules for the operation of the centres.

Certificates

General adult education single subject courses can be completed by an examination corresponding in level to the final examinations of the Folkeskole. The institution provides certificates for participants who have passed the examination in a single subject or who have passed the examinations of the general preparatory examination.

The levels of general adult education are: Basic, G, F, E and D. The levels Basic, G, F and E are equivalent to the levels of the 9th class, primary and lower secondary school – level 1 NQF. The participants can take examinations at levels G and D. The final level D within general adult education - level 3 NQF - is one level higher than the 10th class of primary and lower secondary school (level 2 NQF).

Progression

In general adult education there are the same examinations as in the corresponding mainstream courses. Completion gives access to upper secondary education (IU). Participants

who take the general preparatory examination have the right to access the two-year higher preparatory examination courses.

Examples

- *Danish E:* The participants learn how to express themselves clearly and grammatically correctly in order to communicate a text orally as well as in writing. Furthermore, the participants learn how to read, comprehend and analyse classic and modern texts. The written skills of the participants are also improved.
- *Psychology D:* The participants learn about human thoughts, feelings and actions. At the same time, they learn to understand and assess psychological issues, and they learn how to explain psychological mechanisms in social relations and assess the influence of cultural factors on human behaviour.

Certificates for supplementary qualifications in general adult education

Level 1
- Certificate for general adult education level G (9th grade)

Level 2
- General adult education level F and E (10th grade)

Level 3
- General adult education level D

General upper secondary subjects

General upper secondary subjects (e.g. higher preparatory single subject courses) are targeted at young people or adults with a final examination from primary and lower secondary school or an advanced final examination from primary and lower secondary school. The student taking the courses may have the desire to gain in-depth knowledge of one or more subjects or is in need of supplementing an upper secondary level education in order to gain admission to higher education. The courses are at level 4 in the NQF.

A full higher preparatory examination (hf) can also be gained by attending general upper secondary subjects at adult education centres and, thereby, gaining admission to higher education. Some higher education programmes only require certain specific general upper secondary subjects. These subjects are provided as so called "subject packages". (www.ug.dk).

Aims

The overall aims of general upper secondary subjects at adult education centres are equivalent to the aims of the 2 year higher preparatory examination programme (hf-programme). The general aim of the hf-programme is to develop the students' capacity for in-depth study and their understanding of the connections between subjects, and to promote the individual student's responsibility for his/her own and joint results. The students should achieve analytical and critical skills, as well as insight into natural science, social science and the humanities, and also develop their linguistic competences.

Admission

General upper secondary subjects (e.g. higher preparatory single subject courses) are targeted at young people or adults with a final examination from primary and lower secondary school or an advanced final examination from primary and lower secondary school.

Duration

The duration of most general upper secondary subjects is up to a year; some up to two years.

Providers

The primary provider of general upper secondary subjects is adult education centres (VUCs), but the subjects are also provided by gymnasiums (high schools) and other institutions providing the two year hf programme.

Certificates
Certificates for higher preparatory examination single subjects are awarded to students who have passed an examination in the subjects. Higher preparatory examination single subjects correspond to the subjects in the higher preparatory examination.

General upper secondary subjects have the same final examinations as higher preparatory examinations (hf). Certificates for supplementary single subject courses at upper secondary level are awarded to students who have passed an examination in these subjects. All subjects conclude with an oral and/or written examination.

Progression
Taking one or several general upper secondary subjects at adult education centres at certain levels can supplement an upper secondary education and give access to a higher education where specific subjects are a prerequisite for admission. A full higher preparatory examination (hf) gives access to all further and higher education provided the specific admission requirements for an education are fulfilled.

Example
- *Social science subject C* (hf single subject). By learning about social, economic and political concepts and linking them to societal development, the participants gain an understanding of the complexity of global society. Social science concerns both Danish and international social conditions. Participants gain a thorough knowledge of political decision making processes, e.g. in the EU.

Certificates for supplementary qualifications in general upper secondary subjects

Level 4
- Certificates for supplementary single subject courses at upper secondary level
- Higher Preparatory Examination, single course subject

4 Adult vocational education and training

Adult vocational education and training programmes are provided under the auspices of the Ministry of Education. Adult education is divided into general adult education and vocational adult education. This chapter describes the adult vocational education at levels 2-5, which consist of:
- Adult vocational training programmes (AMU) (Levels 2-5)
- Basic adult education programmes (GVU)

Adult vocational training programmes (AMU)
Adult vocational training programmes (cVET - in Danish abbreviated to AMU) - provide training in work-related skills that meet the needs of specific sectors of the labour market. The programmes lead to supplementary qualifications included in the NQF at levels 2-5.

The main target groups are unskilled and skilled workers. The adult vocational training programmes can be divided into three main categories, directed at the following: specific job/sector related skills and qualifications; general skills and qualifications; and labour management skills and qualifications. There are also special programmes for the validation of prior learning within the adult vocational training, as well as specific programmes for immigrants and refugees.

The vocational training programmes are organised according to joint competence descriptions (FKB) that correspond to job areas for unskilled and skilled workers. Each joint competence description covers three areas: a description of the work field; a description of the relevant competences within the work field; and finally, a list of adult vocational training programmes and affiliated single subjects from initial vocational training and education programmes. There are about 3,000 training programmes. Each training programme is defined by specific aims and learning outcomes and has a short duration. 11 adult training committees, representing

different sectors and areas of the labour market, are responsible for assuring that the joint competence descriptions and adult vocational training programmes correspond to the needs of the labour market. The committees are authorised to develop and propose new joint competence descriptions and programmes, which the Minister of Education then approves.

The learning outcomes of the adult vocational training programmes are defined by competence based goals.

Aims
The main aim of the adult vocational training programmes is to maintain, develop and improve participants' vocational skills and qualifications, to meet the needs of the labour market.

The adult vocational training programmes provide adults with the possibility of upgrading their skills and qualifications for the labour market, as well as developing personal competences, by achieving a formal competence in vocational education and training.

Admission
The formal admission requirement is to be resident or employed in Denmark. In addition, some adult vocational training programmes may require qualifications at skilled worker level, and there can be special entry requirements for certification courses.

Duration
The duration of the adult vocational training programmes varies from half a day to ten weeks, but typically the programmes last 1-5 days. It is possible to combine several programmes in a package with a longer combined duration, e.g. 4-6 months.

Providers
Different types of vocationally oriented institutions provide the adult vocational training programmes, the main providers being technical and commercial colleges, basic health care colleges and the adult vocational training centres (AMU centres).

Certificates
Certificates for adult vocational training programmes are awarded to adults who have completed an adult vocational and training programme or, on the basis of an assessment of prior learning (individual competence assessment) have documented corresponding competences and had these recognised.

For each programme within the adult vocational training system, the participant receives a certificate if they have fulfilled the requirements of the programme. A combination of several programmes can lead to qualifications equivalent to a qualification within the mainstream VET system. Some programmes are completed with an examination and lead to special qualification certificates. For some professions, other authorities have established special requirements for the job, e.g. sewerage worker, crane operator.

Progression
First and foremost, the programmes aim at job functions held by skilled and unskilled workers. In addition, an adult vocational training certificate gives the participants the opportunity to transfer credits for parts of a VET programme provided they subsequently commence a programme in a related field.

Certificates for supplementary qualifications in adult vocational training

Level 2-5
• Adult vocational training certificate

Basic adult education programmes (GVU)
Basic adult education programmes (in Danish shortened to GVU) form a framework of courses within vocational education and training programmes (cVET). The certificates pro-

vided are not GVU certificates, but VET certificates that have been placed in the NQF at levels 2-5.

Aims

The aim of basic adult education is to provide unskilled adults who have a minimum of two years' relevant work experience with the opportunity to supplement their work experience and previous qualifications in order to achieve a full qualification corresponding to an established VET programme.

The basic adult education programmes therefore have the same outcomes and the same levels as the equivalent VET programmes (EVA, 2008: 19-20). Adults who complete a basic adult education programme must pass the same final examinations as a pupil in the VET programmes, but a basic adult education programme is organised in a more flexible manner (IU). Furthermore, the content of the programme varies according to the participants' qualifications and experience. Basic adult education programmes are generally shorter in duration than the equivalent VET-programmes, as the participants already have extensive work experience or other relevant experience, and they receive credit for the in-company training part of the VET programmes.

Admission

Before being admitted to a basic adult education programme, participants go through an assessment of prior learning. The assessment is based on the aims and learning outcomes of the corresponding VET programme. The assessment takes account of competences achieved through work experience and other relevant experience, e.g. volunteer work, as well as relevant courses. The assessment procedure can include practical testing of skills in a course of up to two weeks. In relation to this, the provider produces a personal education plan describing the recognised qualifications and the courses which must be taken in order to earn a full qualification and a certificate equivalent to the VET programme in question.

Duration

The basic adult education programmes vary in duration depending on the applicant's former experience and education and the personal education plan. Due to the absence of the in-company training part of the VET programmes, the duration of a basic adult education programme is relatively short, i.e. a few weeks. The programmes are organised as either full-time or part-time courses and must be completed within a maximum of 6 years.

Admission

To be admitted, the applicant should be at least 25 years of age and have a minimum of two years' relevant work experience. Furthermore, the applicant should at least have a final examinations certificate from primary and lower secondary school in subjects that are relevant to the basic adult education course.

Providers

Basic adult education programmes take place at vocational colleges and other institutions offering the corresponding VET programme.

Certificates

When completing a basic adult education programme, the participant receives a VET qualification certificate. The certificate documents that the participant is qualified to take up positions of vocational employment. A basic adult education programme is completed with the same examination as the corresponding VET programme.

Some of the basic adult education programmes (and VET) programmes are designed as steps in a long vocational programme. If a programme certificate is issued as a step in a longer programme, the certificate gives the participant the opportunity to continue with further steps in the longer education programme towards its conclusion.

Progression

Completion of a basic adult education programme gives access to short cycle programmes that are relevant to the corresponding VET programme, which in turn can lead to an Academy Profession degree.

Examples of basic adult education/(GVU) programmes:
- *Carpenter* – e.g. a person with prior work experience as an unskilled carpenter would like have his/her skills and qualifications formally recognised. The skills and qualifications as a carpenter must be demonstrated over two weeks of practical testing as a part of the prior learning assessment. Subsequently, a teacher draws up a personal education plan, describing the competences that need to be developed in order to meet the learning outcomes of the carpenter basic adult education programme. The planned courses might run for 18 weeks over a period of two years, finalised by a journey man's test.

Certificates for supplementary qualifications in basic adult education (GVU)

Level 2-5
- Certificates correspond to the established VET programme

5 Higher education

Higher Education at levels 5-8 in the NQF is provided under the auspices of the Ministry of Science, Technology and Innovation, the Ministry of Education, the Ministry of Culture, the Danish Ministry of Economic and Business Affairs, the Ministry of Defence and the Ministry of Justice.

The self-certification of the NQF-HE to the Bologna Framework (QF-EHEA) presents a detailed description of the higher education system in Denmark. Below is an extract from the self-certification report, which presents the higher education system. This is included to provide a comprehensive overview of the entire Danish lifelong learning system and its qualifications. For further information, see the Danish self-certification report at Annex A:

> Over past decades, the Danish higher education system has undergone a series of reforms. At the institutional level, reforms have aimed at consolidating programmes of higher education at fewer and more sustainable institutions. At the programme level, reforms have aimed at implementing a transparent and coherent system of qualifications at distinct levels and with distinct profiles.
>
> Danish higher education programmes are organised according to a binary division between research-based and professionally oriented programmes. The purpose of the research-based programmes is to educate students to the highest international level within and across the scientific disciplines, whereas the purpose of the professionally oriented programmes is to ensure education closely based on practice and at an international level to meet the need for well-qualified professionals in the private and public sectors.
>
> The research-based programmes are offered by 8 universities, educating approximately 126,000 active students, and are regulated by the Ministry of Science, Technology and Innovation.
>
> The professionally oriented programmes, with approximately 83,000 students, are predominantly offered by 8 University Colleges and 10 Academies of Professional Higher Education. The knowledge base of these programmes can be described as business and profession based, as well as development based. These programmes and institutions are regulated by the Ministry of Education.
>
> A smaller group of educational programmes fall under the auspices of the Ministry of Culture and encompass educational programmes in the arts, and provide education for approximately 5,000 students at 13 specialised institutions, e.g. schools of architecture and academies of music.

A very limited number of professionally oriented programmes are offered at institutions under the auspices of other ministries, e.g. the Ministry of Defence, the Ministry of Justice, the Ministry of Economic and Business Affairs, as well as by some of the universities.

Finally, it is important to note that special programmes and degrees have been developed for further education for adults. This parallel system of further education is accorded great importance in the Danish system, with its long-standing tradition of lifelong learning for adults. The qualification levels correspond to those in the ordinary higher education system, but the adult further education programmes are distinct in terms of their content, profiles, etc. The content and delivery of these programmes shall permit adult students to utilise their professional and general life experience, as well as to combine education with a continuous working career.

Qualification levels and degree types

The Danish Higher Education System is organised into four qualification levels, with a number of both ordinary and adult further education degree types at each level. The qualification levels are shown in figure 4, chapter four. The National Qualifications Framework for Higher Education (self-certification report, Annex A) gives a more detailed description of the levels and degree types.

The 7 ordinary degree types are:

Academy Profession Degree (Academy Profession level) study programmes are 90-150 ECTS and include a work placement period covering at least 15 ECTS. The programmes are development based (applied science) and combine theoretical studies with a practical approach. The programmes are often focused on specific professions or jobs. Examples of programmes currently offered are the AP in Marketing Management; AP in Hospitality and Tourism Management; AP in Computer Science; AP in Multimedia Design and Communication; AP in e-design and AP as Lab Technician. The Academy Profession Degree programmes are predominantly offered by Academies of Professional Higher Education.

Professional Bachelor's Degree (Bachelor level) study programmes are 180-240 ECTS and include a work placement period covering at least 30 ECTS. The programmes are development based (applied science) and combine theoretical studies with a practical approach. The programmes exist in the fields of health care; bio and lab technology; media and communication; pedagogy; technology; social studies; economics and finance. Examples of programmes at this level are the programmes in nursing, teaching, as well as diploma engineer programmes, etc. Professional Bachelor's Degree programmes are predominantly offered by the university colleges.

Bachelor's Degree (Bachelor level) study programmes are 180 ECTS. The programmes are research based and are offered in all scientific fields: natural sciences; the humanities; social sciences; theology; technology and health sciences. Examples of programmes are the BA in History; BSc. in Economics; BSc in Engineering; BA in Archaeology; BA in French; BSc. in Physics, etc. Bachelor's Degree programmes are offered by the universities.

Bachelor's Degree in Arts/Fine Arts (Bachelor level) study programmes are 180 ECTS. The programmes are artistic and research based, and they are offered in a variety of fields, e.g. design and architecture, music and visual arts. Programmes are offered at specialised institutions under the auspices of the Ministry of Culture.

Master's Degree (candidatus) (Master's level) study programmes are 120 ECTS. The Master's Degree programmes are research based. They cover the same scientific fields as the Bachelor's Degree programmes and are also offered by the universities.

Master's Degree in Arts/Fine Arts (candidatus) (Master's level) study programmes are 120-180 ECTS. The programmes are artistic and research based, and they are offered in the same fields as the Bachelor's Degree in Arts/Fine Arts, and are offered by the same specialised institutions.

PhD Degree study programmes are 180 ECTS. The PhD programmes are only offered by the universities, and some institutions under the Ministry of Culture.

The 4 degree types within the adult further education system, included in the national qualifications framework for higher education, are:

Academy Profession Degree (VVU) (Academy Profession level) study programmes are 60 ECTS. The programmes are normally offered as part-time education, and theoretical studies are combined with a practical approach. The programmes cover the same subject areas as the ordinary Academy Profession Degrees, as well as broader subject areas, e.g. business.

Diploma Degree (Bachelor's level) study programmes are equivalent to 60 ECTS. These programmes, too, are normally offered as part-time education and combine theoretical studies with a practical approach. Programmes are offered in specialised fields related to the Professional Bachelor's Degree programmes or to broader subject areas, e.g. management.

Master Degree (Master's level) study programmes are 60 ECTS. As with the other degree types in the parallel system, Master Degree programmes are part time programmes. The programmes are offered in all scientific areas within specialised subjects or interdisciplinary fields, e.g. Master of Business Administration (MBA).

Master Degree in Arts/Fine Arts (Master's level) study programmes are 60 ECTS. These programmes for adults are part time programmes, and they are offered in a number of subject areas, e.g. Master in Electronic Music and Master in Design.

Admission and progression
Admission to and progression within higher education are regulated by national legislation, including in some cases centrally specified admission requirements for qualifications (typically a recognised upper secondary school leaving examination certificate) and subjects. In addition, some programmes admit students on the basis of relevant vocational education programmes, or through auditions or admission tests.

In principle, completion of a degree at one level qualifies the student for admission to the next level. The University Act gives holders of a Bachelor's Degree the right to continue their studies in at least two Master's programmes. Due to the binary system, however, this is not the case for holders of a Professional Bachelor's Degree. Admission to Master's programmes may for these graduates – as well as for graduates with an unrelated Bachelor's Degree – in some cases require completion of a supplementary course. Some Master's Degree programmes allow the admission of students holding relevant Professional Bachelor's Degrees without a supplementary course.

Admission to the adult further education programmes is dependent on meeting both specific educational admission criteria plus, normally, two years' of relevant professional experience, which explains why these programmes are of shorter duration than their counterparts at the same qualification levels in the ordinary system.

Within the professionally oriented programmes, progression has recently been furthered by es-tablishing the possibility of top-up programmes for Academy Profession Degree holders, leading to the attainment of a Professional Bachelor's Degree.

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- Website for evaluation in adult vocational training: www.viskvalitet.dk

Appendix E

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- Politican Consultant Charlotte Enevoldsen, The Council Academy Profession Programmes and Professional Bachelor Education
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- Consultant Anja Trier Wang, The Council for Vocational Training
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- Senior Consultant Gorm Johansen, The Council for Vocational Adult and Continuing Education and Training
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- Pro-vice Chancellor Leif Tranborg, Conference of Rectors of the Maritime Training Programmes
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- Head of Secretariat and International Consultant Inger-Margrethe Jensen, Rectors' Conference – University Colleges Denmark
- Principal Anne-Birgitte Rasmussen, The Danish Association of Upper Secondary Schools
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- Legal Adviser Jens Andersen, Association of Board members from Danish VET-institutions
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Consultation process
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- The Advisory Council for General Upper Secondary Education
- The Advisory Council for Initial Vocational Education
- The Advisory Council Academy Profession Programmes and Professional Bachelor Education
- The National Advisory Council for Adult Education and Training
- The Danish Ministry of Education's EU Educational Committee (EU-specialiseringsudvalget)
- Association of Board members from Danish VET-institutions
- Association of Managers at VUC
- The Danish Association of Upper Secondary Schools
- Rectors' Conference – University Colleges Denmark
- Associations of Managers at Adult Vocational Training Centres (AMU-centre)
- Association of Managers of Social and Health Colleges
- Educational Council of the Maritime Training Programmes
- Conference of Rectors of the Maritime Training Programmes
- Accreditation Council
- Universities Denmark
- The Danish Confederation of Professional Association
- The Danish Chamber of Commerce
- The Confederation of Danish Industry (DI)
- The National Union of Students in Denmark
- Free Forum – Social Democratic Students
- Danish Liberal Students
- Conservative Students in Denmark
- Confederation of Professionals in Denmark
- Rectors' Conference of the Danish Ministry of Culture

Secretariat

- Special Advisor Tine Holm (project manager)
- Special Advisor Sanya Gertsen Pedersen
- Evaluation Officer Pernille Hjermov
- Evaluation Officer Maria Mogensen
- Evaluation Assistant Ida Berg Meyer

Appendix F

Signed statements from national quality assurance bodies,
cf. criterion 5

EVA   **Signed statement**

Signed statement from The Danish Evaluation Institute (EVA)

	Date
The Danish Evaluation Institute (EVA) has been actively involved in the referencing process as a member of the referencing committee. We agree with the documentation provided in the referencing report and can confirm that criterion 5 is fulfilled as well as we agree on the conclusions of the level to level referencing.	31.03.2011
	Initials
	tin
	Ref. no.
	2010-0219
	Page
	1/1

Signature of legal representative of national quality assurance body / national body:

Place and date: *Copenhagen 1 April 2011*

Signed statement from ACE Denmark

Date
31.03.2011

ACE Denmark has been actively involved in the referencing process as a member of the referencing committee. We agree with the documentation provided in the referencing report and can confirm that criterion 5 is fulfilled as well as we agree on the conclusions of the level to level referencing.
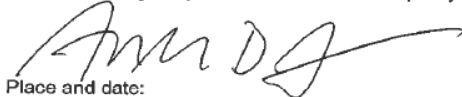
Initials
tin

Ref. no.
2010-0219

Page
1/1

Signature of legal representative of national quality assurance body / national body:
Place and date: 05.04.11

EVA   # Signed statement

Signed statement from The Accreditation Council

The Accreditation Council has been actively involved in the referencing process as a member of the referencing committee. We agree with the documentation provided in the referencing report and can confirm that criterion 5 is fulfilled as well as we agree on the conclusions of the level to level referencing.
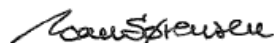

Signature of legal representative of national body:

Claus Sørensen

Place and date: *Copenhagen 3/4 2011*

Appendix G

The European Qualifications Framework for Lifelong Learning (EQF)

	Knowledge	**Skills**	**Competence**
Level 1	Basic general knowledge.	Basic skill required to perform a simple task.	Work or study under direct supervision in a structured context.
Level 2	Basic factual knowledge of a field of work or study.	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools.	Work or study under supervision with some autonomy.
Level 3	Knowledge of facts, principles, processes and general concepts, in a field of work or study.	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information.	Take responsibility for completion of tasks in work or study Adapt own behaviour to circumstances in solving problems.
Level 4	Factual and theoretical knowledge in broad contexts within a field of work or study.	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study.	Exercise self management within the guidelines of work or study contexts that are usually predictable, but are subject to change Supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities.
Level 5	Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge.	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems.	Exercise management and supervision in contexts of work or study activities where there is unpredictable change Review and develop performance of self and others.

Continues on the next page …

	Knowledge	Skills	Competence
Level 6	Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles.	Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study.	Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts Take responsibility for managing professional development of individuals and groups.
Level 7	Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research Critical awareness of knowledge issues in a field and at the interface between different fields.	Specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields.	Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches Take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams.
Level 8	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields.	The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice.	Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research.

Annex A

Self-certification

Verification of compatibility of the Danish National Qualifications Framework for Higher Education with the Framework for Qualifications of the European Higher Education Area

Self-certification

Verification of compatibility of the Danish National Qualifications Framework for Higher Education with the Framework for Qualifications of the European Higher Education Area

2009

Self-certification

Contents

Preface

This report contains the conclusions of the self-certification group regarding the Danish National Qualifications Framework for Higher Education (NQF-HE). The self-certification has been conducted as part of the Bologna process to ascertain the alignment of the NQF-HE with the overarching Framework of Qualifications for the European Higher Education Area (QF-EHEA).

The self-certification has been conducted by a group consisting of representatives of national authorities and quality assurance agencies. To verify the alignment between the NQF-HE and the QF-EHEA, and to ensure the objectivity and independence of the self-certification, two international experts with profound insight into the Bologna process have played a central role in the work of the self-certification committee. In addition, stakeholder representatives have been involved in the self-certification through a consultation process.

The report is the official Danish assertion to the other Bologna process members that the Danish NQF-HE is in alignment with QF-EHEA. Secondly, it is a reference document for Danish authorities with regard to the implementation of the NQF-HE. Thirdly, the report asserts the value of the NQF-HE as a tool to promote transparency in the education sector and to compare and clarify Danish qualifications abroad.

The report consists of an executive summary and five chapters. Chapter 2 provides an introduction outlining the purpose and process of the self-certification process, and chapter 3 describes the Danish system of higher education and the role of the NQF-HE. The verification and process criteria for the self-certification are addressed in chapters 4 and 5, respectively, while chapter 6 covers issues raised by stakeholders during the consultation process.

1   Summary

At the Bologna Process Ministerial meeting in London 2007, it was decided that the compliance of each national qualifications framework with the Overarching Framework of Qualifications for the European Higher Education Area (QF-EHEA) should be asserted through a process of self-certification.

This report presents the conclusions of the Danish self-certification committee tasked to assess and verify the alignment of the Danish National Qualifications Framework for Higher Education (NQF-HE) with the Framework of Qualifications for the European Higher Education Area (QF-EHEA). The self-certification committee, which consisted of international experts and representatives of Danish authorities and quality assurance agencies, reached the following conclusion:

> *The Danish National Qualifications Framework for Higher Education is compatible and in alignment with the Overarching Framework of Qualifications for the European Higher Education Area.*

This conclusion is based upon the assertion of the self-certification committee that all seven verification criteria and all six process criteria have been met. This conclusion has been supported by a reference group of stakeholders who were included in a consultation process. The self-certification committee noted that dissemination of the NQF-HE to national stakeholders could be stronger, and the reference group offered several suggestions as to how to realise this objective. These and other issues raised by the reference group are presented in chapter 6.

To illustrate the alignment of the NQF-HE with the QF-EHEA, the levels and degree types in the NQF-HE in relation to the QF-EHEA are presented in the figure overleaf:

Figure 1
Levels and degree types in the Danish National Qualifications Framework for Higher Education

QF-EHEA	NQF-HE	Levels and degree types in the Danish National Qualifications Framework for Higher Education
3. cycle	PhD level	PhD Degree
2. cycle	Master's level	Master's Degree — Master Degree
1. cycle	Bachelor's level	Bachelor's Degree — Professional Bachelor's Degree — Professional Bachelor's Degree (Top-up programme) — Diploma Degree
Short cycle within the 1. cycle	Academy Profession level	Academy Profession Degree — Academy Profession Degree

2 years of relevant work experience

University sector — College sector — Parallel further education system for adults

General and vocationally oriented upper secondary education

Vocational education and training

Self-certification

9

2 Introduction

2.1 The purpose of the self-certification

In 1999 the Bologna Process was initiated by education ministers from 29 countries with the aim of establishing a European Higher Education Area (EHEA) by 2010. Currently, 46 countries are involved in the process. A central objective of the Bologna Process is to create transparent and comparable structures of qualifications with the purpose of promoting mobility and international recognition of qualifications. Essential strategies aimed at obtaining these goals are the implementation of a three cycle structure for qualifications as well as the development and realization of National Qualifications Frameworks.

A Framework of Qualifications for the European Higher Education Area (QF-EHEA) was adopted at the Bologna-meeting in Bergen 2005 by the ministers responsible for higher education. The QF-EHEA was developed by an expert working group and is also known as the Bologna Framework. The objective of introducing the Bologna Framework is to relate the different National Qualifications Frameworks to each other by linking them to the Bologna Framework in order to strengthen international transparency and recognition of qualifications as well as international mobility of learners and graduates. The three cycles of higher education described in the Bologna Framework build on the *Dublin Descriptors,* describing the general learning outcomes obtained by students through the completion of higher education programmes at different qualification levels.

Parallel to the Bologna Framework, the European Union has adopted a European Qualifications Framework for Lifelong Learning (EQF), which covers all educational levels in an eight-tiered framework. The EQF is not part of this self-certification process and will thus not be addressed in this report. Similarly, as will be expanded upon in section 3.3, two qualifications frameworks have been developed in Denmark: A National Qualifications Framework for Higher Education (NQF-HE), and a Danish Qualifications Framework for Lifelong Learning (NQF). The relation between the EQF and the NQF will be elaborated in section 3.3.2.

At the London ministerial meeting of the Bologna Process in 2007, it was decided that the link between National Qualification Frameworks and the Bologna Framework should be established through a process of self-certification where national authorities verify that the National Qualification Framework is compatible with the Bologna Framework. The self-certification in each country is to be carried out by a committee of national as well as international experts based on both verification criteria and process criteria.

This report contains the self-certification of the alignment of the Danish NQF-HE with the Bologna Framework. Through the report, it will be verified and explained how the Danish NQF-HE aligns with the Bologna Framework.

2.2 Criteria and procedures

The self-certification is based on principles and criteria developed by the Bologna Working Group on Qualifications Frameworks, which were presented at the Bologna meeting in Bergen in 2005 and adopted by the ministers of higher education at the subsequent Bologna meeting in London in 2007. The criteria include seven verification criteria for establishing compatibility between the

National Qualifications Framework and the Bologna Framework, and six process criteria to guide the self-certification process.

Verification criteria:
- The national framework for higher education qualifications and the body or bodies responsible for its development are designated by the national ministry with responsibility for higher education.
- There is a clear and demonstrable link between the qualifications in the national framework and the cycle qualification descriptors of the European framework.
- The national framework and its qualifications are demonstrably based on learning outcomes, and the qualifications are linked to ECTS or ECTS compatible credits.
- The procedures for inclusion of qualifications in the national framework are transparent.
- The national quality assurance system for higher education refers to the national framework of qualifications and is consistent with the Berlin Communiqué and any subsequent communiqués agreed by ministers in the Bologna Process.
- The national framework, and any alignment with the European framework, is referenced in all Diploma Supplements.
- The responsibilities of the domestic parties to the national framework are clearly determined and published.

The purpose of the verification criteria is not to ensure a complete match, but rather to ascertain the compatibility and consistency between the cycle descriptors of the National Qualifications Framework and the Bologna Framework. The verification criteria are further elaborated in chapter 4, which also contains the conclusions of the self-certification committee on the compatibility between the Danish NQF-HE and the Bologna Framework.

Process criteria:
- The competent national body/bodies shall self-certify the compatibility of the national framework with the European framework.
- The self-certification process shall include the stated agreement of the quality assurance bodies in the country in question recognised through the Bologna Process.
- The self-certification process shall involve international experts.
- The self-certification and the evidence supporting it shall be published and shall address separately each of the criteria set out.
- The ENIC and NARIC networks shall maintain a public listing of States that have confirmed that they have completed the self-certification process.
- The completion of the self-certification process shall be noted on Diploma Supplements issued subsequently by showing the link between the national framework and the European framework.

The purpose of the process criteria is to ensure that the self-certification process is conducted by the competent national authorities in cooperation with unbiased international experts, as well as to ensure that the results of the self-certification process are made publicly available to relevant stakeholders, such as students, employers, trade unions, higher education institutions and the ENIC-NARIC network and Bologna partners. The actual process of the Danish self-certification will be described in the following section.

2.3 The process of self-certification

On behalf of the competent ministries comprising the steering group of the NQF-HE, the Ministry of Science, Technology and Innovation has initiated the self-certification of the Danish national qualifications framework and has formally requested the Danish Evaluation Institute (EVA) to organise and facilitate the process.

The process of self-certification has been organised in three tiers:

The steering group, with representatives from the competent ministries, has held the overall responsibility for the self-certification. The ministries in question are the Ministry of Science, Technology and Innovation, the Ministry of Education and the Ministry of Culture.

The self-certification has been conducted by a **self-certification committee**. The main task of this committee was to verify how the Danish NQF-HE refers to the Bologna Framework based on the above mentioned criteria for verification. The committee has also overseen that the self-certification process was in compliance with the process criteria.

The self-certification committee consists of the following members from the competent national authorities and agencies, as well as two international experts:
• Director of Projects Jon Haakstad, NOKUT – the Norwegian Agency for Quality Assurance in Education;
• Former Head of Department Ulf Öhlund, Department for the Recognition of International Qualifications, Swedish National Agency for Higher Education;
• Head of Section Mette Juul Jensen, the Danish Ministry of Science, Technology and Innovation;
• Special Adviser Anne-Kathrine Mandrup, the Danish Ministry of Science, Technology and Innovation;
• Head of Section Cathrine Christensen, the Danish Ministry of Education;
• Head of Section Mette-Astrid Jessen, the Danish Ministry of Culture;
• Special Adviser Allan Bruun Pedersen, CIRIUS (national agency for internationalisation of education and training in Denmark);
• Senior Adviser Lars Pedersen, ACE-Denmark – the Danish Accreditation Institution;
• Director of Projects Tue Vinther-Jørgensen, EVA – The Danish Evaluation Institute.

A **reference group,** comprising relevant Danish stakeholders, was set up to comment on the results of the self-certification (the members of the reference group are listed in Appendix C). The reference group was invited to a meeting at EVA in September 2009 to discuss the immediate results of the self-certification, as reached by the self-certification committee, and to raise issues in relation to the implementation, application and future development of the NQF-HE. Subsequently, the comments of the reference group were taken into consideration by the self-certification committee. The issues raised by the reference group are reported upon in chapter 6 of this report.

Evaluation Officer Simon Holmen Reventlow Clemmensen and Evaluation Assistants Maria Sacha Aagaard and Kristine Als Velling have served as the secretariat to the self-certification process and have drafted the final report on the self-certification of the Danish NQF-HE, which was adopted by the self-certification committee at a meeting on 20 October 2009.

3   Higher education in Denmark

3.1   The Danish higher education system

3.1.1   Introduction
Over the past decades, the Danish higher education system has undergone a series of reforms. At the institutional level, reforms have aimed at consolidating programmes of higher education at fewer and more sustainable institutions. At the programme level, reforms have aimed at implementing a transparent and coherent system of qualifications at distinct levels and with distinct profiles.

3.1.2   A binary system
Danish higher education programmes are organised according to a binary division between research-based and professionally oriented programmes. The purpose of the research-based programmes is to educate students to the highest international level within and across the scientific disciplines, whereas the purpose of the professionally oriented programmes is to ensure education closely based on practice and at an international level to meet the need for well qualified professionals in the private and public sectors.

The research-based programmes are offered by 8 universities, educating approximately 121,000 students, and are regulated by the Ministry of Science, Technology and Innovation.

The professionally oriented programmes, with approximately 83,000 students, are predominantly offered by 8 University Colleges and 10 Academies of Professional Higher Education. The knowledge base of these programmes can be described as business and profession based, as well as development-based. These programmes and institutions are regulated by the Ministry of Education. A very limited number of professionally oriented programmes are offered at institutions under the auspices of other ministries, e.g. the Ministry of Defence and the Ministry of Justice, as well as by some of the universities.

A third and smaller group of educational programmes fall under the auspices of the Ministry of Culture and encompass educational programmes in the arts, and provide education for approximately 5,000 students at 15 institutions. These qualifications have not yet been integrated into the NQF-HE.

Finally, it is important to note that special programmes and degrees have been developed for further education for adults. This parallel system of further education is accorded great importance in the Danish system, with its long-standing tradition of lifelong learning for adults. The qualification levels correspond to those in the ordinary higher education system, but the adult further education programmes are distinct in terms of their content, profiles, etc. The content and delivery of these programmes shall permit adult students to utilise their professional and general life experience, as well as to combine education with a continuous working career.

3.1.3   Qualification levels
The Danish Higher Education System is organised into four qualification levels, with a number of both ordinary and adult further education degree types at each level.

The first level is named the Academy Profession level. This level is comparable to the short cycle within the first cycle, as described in the proposal for the Bologna framework presented to the ministers in Bergen. Two degree types are attached to this qualification level in the Danish NQF-HE.

The next level is the Bachelor's level. The Bachelor's level corresponds to the first cycle of the Bologna Framework. Currently three different degree types are integrated into the NQF-HE at this level.

The Master's level in the NQF-HE, which follows after the Bachelor's level, corresponds to the second cycle in the Bologna Framework. The NQF-HE has two degree types at the Master's level.

The PhD level is the highest level in Danish higher education, corresponding to the third cycle in the Bologna Framework. Just one degree type is attached to this level.

The correspondence between the levels and cycles of the two Danish and the two European qualifications frameworks is illustrated by figure 1.
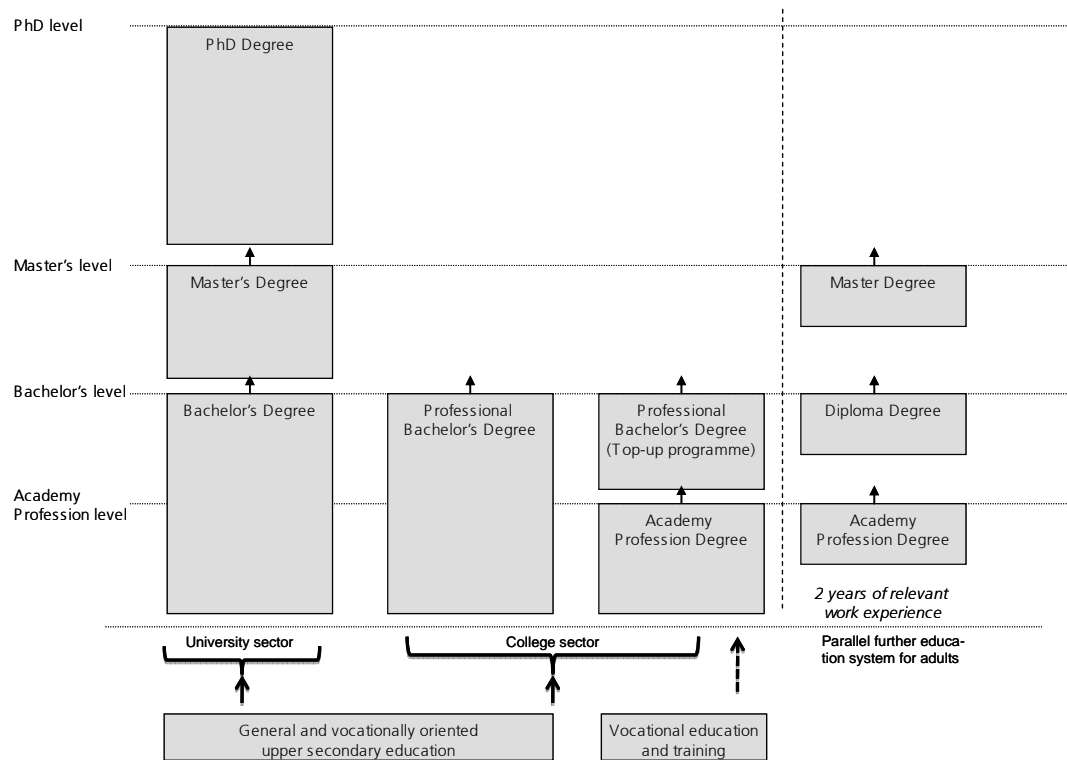
Figure 2
Correspondence between levels of Danish and European qualification frameworks

Danish Qualifications Framework for Higher Education	Qualifications Framework for the European Higher Education Area	Danish Qualifications Framework for Lifelong Learning	European Qualifications Framework for Lifelong Learning
PhD level	3. cycle	Level 8	Level 8
Master's level	2. cycle	Level 7	Level 7
Bachelor's level	1. cycle	Level 6	Level 6
Academy Profession level	Short cycle	Level 5	Level 5
		Level 4	Level 4
		Level 3	Level 3
		Level 2	Level 2
		Level 1	Level 1

Higher Education

3.1.4 Degree types
The National Qualifications Framework for Higher Education currently includes 5 ordinary degree types and 3 adult further education degree types. Specific degree types for the artistic programmes under the Ministry of Culture are under development, and are to be included in the NQF-HE in addition to the current 8 degree types. All degrees offered by Danish institutions of higher education are end-of-cycle degrees, meaning that the learning outcomes achieved through obtaining a given degree are at the same qualification level as the corresponding level in the NQF-HE, as illustrated by the figure below. This implies that there are no intermediate degrees in the Danish higher education system.

Figure 3
The Danish system of higher education

PhD level				
	PhD Degree			
Master's level	Master's Degree			Master Degree
Bachelor's level	Bachelor's Degree	Professional Bachelor's Degree	Professional Bachelor's Degree (Top-up programme)	Diploma Degree
Academy Profession level			Academy Profession Degree	Academy Profession Degree
				2 years of relevant work experience
	University sector	College sector		Parallel further education system for adults
	General and vocationally oriented upper secondary education		Vocational education and training	

The 5 ordinary degree types are:

The Academy Profession Degree (Academy Profession level) study programmes are 90-150 ECTS and include a work placement period covering at least 15 ECTS. The programmes are development-based and combine theoretical studies with a practical approach. The programmes are often focused on specific professions or jobs. Examples of programmes currently offered are the AP in Marketing Management; AP in Hospitality and Tourism Management; AP in Computer Science; AP in Multimedia Design and Communication; AP in e-design and AP as Lab Technician. The Academy Profession Degree programmes are predominantly offered by Academies of Professional Higher Education.

The Professional Bachelor's Degree (Bachelor level) study programmes are 180-240 ECTS and include a work placement period covering at least 30 ECTS. The programmes are development-based and combine theoretical studies with a practical approach. The programmes exist in the fields of health care; bio and lab technology; media and communication; pedagogy; technology; social studies; economics and finance. Examples of programmes at this level are the programmes in nursing, teaching, as well as diploma engineer programmes, etc. Professional Bachelor's Degree programmes are predominantly offered by the university colleges.

The Bachelor's Degree (Bachelor level) study programmes are 180 ECTS. The programmes are research based and are offered in all scientific fields: natural sciences; the humanities; social sciences; theology; technology and health sciences. Examples of programmes are the BA in History; BSc. in Economics; BSc in Engineering; BA in Archaeology; BA in French; BSc. in Physics, etc. Bachelor's Degree programmes are offered by the universities.

The Master's Degree (candidatus) (Master's level) study programmes are 120 ECTS. The Master's Degree programmes are research based. They cover the same scientific fields as the Bachelor's Degree programmes and are also offered by the universities.

The PhD Degree study programmes are 180 ECTS. The PhD programmes are only offered by the universities, and some institutions under the Ministry of Culture.

The 3 degree types within the adult further education system included in the NQF-HE are:

Academy Profession Degree (VVU) (Academy Profession level) study programmes are 60 ECTS. The programmes are normally offered as part-time education, and theoretical studies are combined with a practical approach. The programmes cover the same subject areas as the ordinary Academy Profession Degrees, as well as broader subject areas, e.g. business.

Diploma Degree (Bachelor's level) study programmes are equivalent to 60 ECTS. These programmes, too, are normally offered as part-time education and combine theoretical studies with a practical approach. Programmes are offered in specialised fields related to the Professional Bachelor's Degree programmes or to broader subject areas, e.g. management.

Master Degree (Master's level) study programmes are 60 ECTS. As with the other degree types in the parallel system, Master Degree programmes are part time programmes. The programmes are offered in all scientific areas within specialised subjects or interdisciplinary fields, e.g. Master of Business Administration (MBA).

3.1.5   Admission and progression
Admission to and progression within higher education are regulated by national legislation, including in some cases centrally specified admission requirements for qualifications (typically a recognised upper secondary school leaving examination certificate) and subjects. In addition, some programmes admit students on the basis of relevant vocational education programmes, or through auditions or admission tests.

In principle, completion of a degree at one level qualifies the student for admission to the next level. The University Act gives holders of a Bachelor's Degree the right to continue their studies in at least two Master's programmes. Due to the binary system, however, this is not the case for holders of a Professional Bachelor's Degree. Admission to Master's programmes may for these graduates – as well as for graduates with an unrelated Bachelor's Degree – in some cases require completion of a supplementary course. Some Master's Degree programmes allow the admission of students holding relevant Professional Bachelor's Degrees without a supplementary course.

Admission to the adult further education programmes is dependent on meeting both specific educational admission criteria plus, normally, two years' of relevant professional experience, which explains why these programmes are of shorter duration than their counterparts at the same qualification levels in the ordinary system.

Within the professionally oriented programmes, progression has recently been furthered by establishing the possibility of top-up programmes for Academy Profession Degree holders, leading to the attainment of a Professional Bachelor's Degree.

3.1.6   Governance and financing of higher education
Institutions of Higher Education have been founded in different historical periods and for different purposes. They are situated in different locations across Denmark and vary widely in both size and form. Danish Institutions of Higher Education are self-governing with independent boards responsible for the overall operation and management of the institutions. The institutions are thus outside the ministerial hierarchy but are subject to public supervision by their regulating ministries.

National legislation also differs according to the type of institution and provision of programmes. For all institutions, national legislation covers the framework of education, funding, examinations and staffing. In addition, legislation regarding the University Colleges and the Academies of Professional Higher Education also covers educational aims and curricula.

Higher education is financed by the state through a taximeter system and block grants allocated to the institutions. The taximeter system is activity-level dependent, and education funding thus relies on output control, whereby funding is allocated on the basis of the students' academic activity measured in terms of exams passed. In addition, institutions may raise additional funds

through income-generating activities and earn incentive-oriented bonuses, e.g. for high completion rates.

The appropriations are given to the institutions as block grants, to be prioritised freely by the institution within the limits of national legislation, the remit of the institution and other agreements between the institution and the regulating ministry.

Basic funding for the universities is allocated to their main objectives – education, research and other purposes. As a general principle, the universities receive their funding from two sources: 1) state funding earmarked for the universities in the annual Danish Appropriations Act; and 2) other income from research councils, e.g. the EU, private investors, etc.

In contrast to the ordinary system, where education is free of charge for the student, study programmes in the parallel system are financed partly by the state and partly by the student.

3.2   Quality assurance of higher education

Higher education institutions are responsible for the high quality provision of education and training and must establish internal quality assurance procedures. In addition, their study programmes are subject to accreditation, and the students' learning outcomes are assessed and assured by external examiners.

3.2.1   Internal quality assurance

All institutions of higher education are required to conduct systematic quality assurance of their provision of education. The quality assurance of study programmes is conducted via different types of quality systems, but typically includes course evaluations, feedback from external examiners, strategies for the further education and training of teachers, and regular interaction with stakeholders. While the institutions can independently decide which approach and method they want to apply, they are legally obliged to make evaluation results publicly available on their websites, and their internal quality work will be assessed through accreditation procedures.

3.2.2   Accreditation

Since 2007, accreditation of all study programmes has been the primary approach to external quality assurance of higher education in Denmark. Accreditation is mandatory and a precondition for attaining public funding. An Accreditation Council has the authority to award, conditionally award or deny the accreditation of programmes.

Two types of accreditation are conducted:
- Accreditation of new programmes and supplies (ex ante);
- Accreditation of existing programmes (ex post).

Accreditation is based on predefined criteria for quality and relevance (employability) as set out in the ministerial orders following the Accreditation Act. An accreditation is valid for up to six years, and at the end of this period, institutions must apply for reaccreditation.

It is integrated in the accreditation criteria that the level of a programme must be in compliance with the corresponding degree type – and thus qualification level – of the NQF-HE.

Two accreditation operators conduct the accreditation evaluations: ACE Denmark for programmes under the Ministry of Science, Technology and Innovation, and The Danish Evaluation Institute (EVA) for programmes under the Ministry of Education and the Ministry of Culture.

3.2.3   External examiners

A fundamental aspect of external quality assurance of higher education is the use of external examiners for some of the examinations a student must pass in order to graduate. The function of the external examiners is to guarantee the professional and academic integrity of an examination and assure that the same standards are applied to the examination of all students. In that way, the external examiners contribute to the quality assurance of higher education programmes, as well as to securing the legal rights of the students.

3.3 The Danish National Qualifications Framework for Higher Education (NQF-HE)

3.3.1 The Danish framework

The purpose of the Danish NQF-HE is:

- to make the degree structures more transparent and make the different paths through the education system more visible;
- to enhance international comparison with the aim of facilitating credit transfer, mobility and the recognition of foreign qualifications.

The first version of the Danish NQF-HE was developed between 2001-2003 by the Danish Bologna Follow Up Group on the initiative of the Minister of Education and the Minister for Science, Technology and Innovation.

In 2006 the relevant ministers decided that the Danish NQF-HE should be revised to bring it into line with national and European developments. A steering group was established consisting of representatives from the three ministries responsible for higher education in Denmark: the Ministry of Science, Technology and Innovation; the Ministry of Education and the Ministry of Culture.

Central themes in the revision were to include the knowledge and practical experiences gained by the higher education institutions from having implemented the original framework, and also to include the perspectives of other stakeholders on the usefulness and applicability of the framework. Another central point was to make the Danish NQF-HE compatible with the Qualifications Framework for the European Higher Education Area (QF-EHEA). Following a process of external consultation, the current NQF-HE was approved by the relevant ministers, and on 1 July 2008 it came into force.

The Danish NQF-HE contains both a systematic description of the different qualification levels at an aggregated level and the underlying descriptions of the individual Danish degree types.

Qualification levels and degree types are described in terms of the learning outcomes that students are intended to have when they finish a study programme. The learning outcomes are divided into three categories: knowledge, skills and competences, which are further subdivided into more detailed subcategories (e.g. field of knowledge, understanding and reflection level, etc.).

The NQF-HE was developed by first describing the existing degree types in terms of learning outcomes. Subsequently, the descriptors for degree types at each level were integrated in order to develop generic descriptors for the four levels in the NQF-HE.

3.3.2 The Danish Qualifications Framework for Lifelong Learning

In 2006, a political decision, following the recommendation of the EU commission, initiated the development of a Danish Qualifications Framework for Lifelong Learning (NQF) covering the entire Danish educational system in correspondence with the EQF.

The objective of the NQF is to support and promote lifelong learning and mobility by creating an overview of recognised programmes and progression routes, both within the ordinary system and within the parallel system of adult further education. A second objective is to promote the mutual recognition of Danish and international qualifications by linking the NQF and the EQF.

The NQF aims to provide a complete overview of Danish qualification levels, their typical learning outcomes and types of degrees, how they are obtained and which opportunities for further education they provide. The eight levels of the NQF are designed to correspond to the levels of the EQF.

The NQF is currently in the process of being implemented. The descriptions of the levels of higher education (levels 5-8) are identical with those of the NQF-HE, except for the description of level 5, which has been reformulated in order to embrace a group of educational programmes which are

defined as post secondary education vocational programmes and not as higher education pro-
grammes.

4   Criteria for self-certification

The heart of the self-certification process has been to evaluate whether the Danish National Qualifications Framework for Higher Education (NQF-HE) meets the seven verification criteria for compatibility with the Bologna Framework. This chapter contains the assessments and conclusions of the self-certification committee.

The self-certification committee concludes that the Danish NQF-HE meets all seven verification criteria.

Criteria 1: The national framework for higher education qualifications and the body or bodies responsible for its development are designated by the national ministry with responsibility for higher education.
Responsibility for the development of the NQF-HE rests with a steering group comprised of representatives of the three ministries responsible for higher education: The Ministry of Science, Technology and Innovation; The Ministry of Education, and the Ministry of Culture.

The NQF-HE was developed by a reference group consisting of representatives of the three ministries and relevant stakeholders from the educational sector and the labour market. The reference group was appointed by the steering group.

A section of the NQF-HE covering programmes under the jurisdiction of the Ministry of Culture is under development, and these supplementary degree types will be integrated into the NQF-HE at a later date. Both the steering group and the reference group are involved in this process, which also includes a broader consultation process.

CIRIUS, the Danish ENIC/NARIC under the auspices of the Ministry of Science, Technology and Innovation, acts as the national information point for the NQF-HE. This role has been accorded to CIRIUS by the steering group.

Criteria 2: There is a clear and demonstrable link between the qualifications in the national framework and the cycle qualification descriptors of the European framework.
As noted in the 2007 report from the Bologna Working Group on Qualifications Frameworks, the objective of the self-certification is to ascertain whether the NQF-HE is in accordance with the Framework of Qualifications for the European Higher Education Area. There is, thus, no requirement for a perfect match between the descriptors employed in the two frameworks.

To investigate whether such accordance exists between the NQF-HE and the Bologna Framework, the self-certification committee conducted a conceptual analysis and comparison of the qualification level descriptors contained in the two frameworks. The comparison was conducted in three steps.

Overall consistency
Firstly, the two frameworks were compared to ascertain whether there is an immediate recognisability between the qualification levels of the Danish NQF-HE and the three cycles of the Bologna Framework. The NQF-HE contains three qualification levels corresponding to the cycles of the Bologna Framework, as well as an Academy Profession level corresponding to the short cycle within the first cycle described in the original proposal of the Bologna Framework. The self-certification committee concluded that there is a high degree of recognisability, reflecting the fact that the NQF-HE was developed with its basis in the Bologna Framework. Furthermore, the high degree of

compatibility between the NQF-HE and the Bologna Framework also reflects the fact that Denmark has gradually been implementing the 3 cycle structure since the late 1980's. Today, this structure is firmly embedded in the Danish higher education system. In developing the NQF-HE, an approach was used whereby the existing degrees were described in a way that reflected their specific characteristics and positions in the Danish system of higher education. It was an explicit goal that the different educational programmes should be recognisable in the descriptions of the degree types. At the same time both the degree type descriptions and the level descriptions were formulated with due reference to the Dublin descriptors, but without using the specific wording of the Dublin Descriptors directly in the Danish descriptions. Thus, there is an obvious difference between the wordings of the Dublin Descriptors and the descriptors of the NQF-HE, as it has never been an objective to achieve similarity in the wordings. The international members of the self-certification committee noted that the use of knowledge, skills and competences as categories for the descriptors is a good way of achieving alignment with the Dublin descriptors while developing specific descriptors that reflect the Danish context.

External consistency
Secondly, each descriptor from the Bologna Framework was compared with the corresponding descriptor in the NQF-HE in order to assess the conceptual and semantic, as well as the discursive, consistency between the two frameworks. The committee concluded that there is consistency between the qualification level descriptors of the NQF-HE and the cycle descriptors of the Bologna Framework.

The self-certification committee noted that the terminology employed in the NQF-HE is more general and less specific than that of the Bologna Framework, in that the NQF-HE employs more meta-concepts to describe learning outcomes. For instance, under the "skills" category, no explicit mention is made of the ability to gather information. Instead, this specific skill is contained in the use of the meta-concept "methodology", as can be seen in the table below.

Tabel 1
Comparison of skills descriptors

Dublin descriptor, first cycle	Danish NQF-HE, first cycle
have the ability to gather and interpret relevant data (usually within their field of study) to inform judgments that include reflection on relevant social, scientific or ethical issues	Must be able to apply the methodologies and tools of one or more subject areas as well as apply skills related to work within the subject area(s) or in the profession.

Likewise, the ability to reflect on ethical issues is not explicitly mentioned in the NQF-HE. In relation to a qualifications framework, this may well be due to the fact that ethics and moral issues/questions are conceived as being closely related to the professional aspects of particular qualifications, i.e. professional ethics. For those qualifications where particular ethical aspects play a particularly central role, this is included in the relevant ministerial orders and study plans. Furthermore, in a historic university perspective, ethics in a general sense are embedded in the academic disciplines themselves and the very act of research, scientific study, and scientific teaching. This may also help to explain why ethics are only mentioned explicitly for the Professional Bachelor's Degree in the Danish NQF-HE.

A further distinction between the Bologna Framework and the NQF-HE is that "critical analysis" is not mentioned explicitly in the Danish third cycle descriptors. In a Danish and Nordic context, it has proved to be unfruitful to use the term *critical thinking* as a level indicator, since development of the student's ability to think critically and engage independently with the curriculum is already sought in secondary education. It would thus be superfluous to specifically highlight this at the PhD level (which is the only cycle in the Bologna Framework where critical thinking is an explicitly stated objective), and thus the emphasis is instead placed on the ability to develop and evaluate new ideas, techniques and skills, as illustrated in the table below.

Tabel 2
Comparison of skill descriptors regarding critical thinking

Dublin descriptor, third cycle	Danish NQF-HE, third cycle
Are capable of critical analysis, evaluation and synthesis of new and complex ideas	Must be able to analyse, evaluate and develop new ideas, including design and develop new techniques and skills within the subject area.

The self-certification committee concluded that there is strong alignment between the terminologies used in the Bologna Framework and the NQF-HE, and that the differences merely stem from different traditions and are of no significant consequence. The alignment between the descriptors of the Bologna Framework and the NQF-HE is shown in Appendix B.

Internal consistency
Thirdly, the self-certification committee investigated whether there is internal consistency within the NQF-HE between the descriptions of the qualification levels and the descriptions of degree types at the different levels. The NQF-HE was established by first developing the degree type descriptions, following which the qualification levels were described using the highest common denominator as the expected learning outcome for each level to reach end-of-cycle level. The self-certification committee concluded that this has been a useful approach which has ensured a strong recognisability between the qualification level descriptions and the degree type descriptions, and a strong internal consistency in the NQF-HE. Furthermore, the approach has ensured that the NQF-HE closely reflects and is embedded in the higher education system in Denmark.

Criteria 3: The national framework and its qualifications are demonstrably based on learning outcomes, and the qualifications are linked to ECTS or ECTS compatible credits.
The self-certification committee noted that all qualifications included in the NQF-HE are clearly described using a learning outcomes based terminology. Learning outcomes are categorised as knowledge, skills and competences, and these three categories are further divided into sub-categories, allowing for a systematic approach in the formulation of outcome descriptors and easy comparison between qualification levels and between degree types. The categorisation of learning outcomes regarding knowledge for the ordinary degree types can be seen in the table below.

Tabel 3
Categorisation of learning outcomes regarding knowledge in the NQF-HE

	Academy Profession Degree	Professional Bachelor's Degree	Bachelor's Degree	Master's Degree	PhD Degree
Knowledge field	Must possess development-based knowledge of the practice and central applied theories and methodologies of the profession and the subject area.	Must possess development-based knowledge of the practice and applied theories and methodologies of the profession and the subject area.	Must possess research-based knowledge of theory, methodology and practice within one or more subject areas.	Must possess knowledge of one or more subject areas which, in selected fields, is based on the highest international research within a subject area.	Must possess knowledge at the highest international level within the research field.
Understanding and reflection level	Must be able to understand the practice and central applied theories and methodologies as well as the profession's application of theories and methodologies.	Must be able to understand the practice, applied theories and methodologies as well as reflect on the practice and application of theories and methodologies of the profession.	Must be able to understand and reflect on theories, scientific methodologies and practice.	Must be able to understand and, on a scientific basis, reflect on the knowledge of the subject area(s) as well as be able to identify scientific issues.	Must have made a significant contribution to the development of new knowledge and understanding within the research field based on scientific studies.

Source: English translation of the Danish National Qualifications Framework for Higher Education, cf. Appendix A

The programmes and qualifications are defined in the NQF-HE as comprising a specific number of ECTS credits or an interval of ECTS credits. The use of ECTS in course descriptions is compulsory under law for all programmes of higher education in Denmark.

Criteria 4: The procedures for inclusion of qualifications in the national framework are transparent.

Overall, it is an explicit ambition underpinning the NQF-HE that it shall reflect the Danish higher education sector, and that new educational programmes are developed so that they not only meet needs and demands in society but also fit into the established qualifications structure. Thus, the self-certification committee has investigated the procedures for inclusion of qualifications, understood as both inclusion of new degree types and as inclusion of new programmes.

Inclusion of degree types

There is a limited range of Danish higher education degree types, the provision of which is dependent on type of institution. Establishment of new degree types happens at the legislative level, after which they will be included in the Danish NQF-HE by the relevant ministries via the steering group.

Inclusion of programmes

Establishment of a new educational programme requires a positive ex ante accreditation by the Accreditation Council. The criteria for accreditation are promulgated in the Accreditation Act and related ministerial orders, and it is explicitly taken into account whether a proposed programme is in compliance with the NQF-HE.

The accreditation procedures are clearly described on the websites of the accreditation operators, who also organise regular information events for institutions interested in developing and offering new educational programmes.

Criteria 5: The national quality assurance system for higher education refers to the national framework of qualifications and is consistent with the Berlin Communiqué and any subsequent communiqués agreed by ministers in the Bologna Process.

The European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), which have been developed by ENQA (the European Association for Quality Assurance in Higher Education) is the cornerstone of the Danish national quality assurance system. In the fall of 2007, a national accreditation system was established, making programme accreditation the predominant approach to external quality assurance of Danish higher education. Compliance with the ESG is a requirement for all quality assurance agencies wishing to function as accreditation operators in Denmark. In order to gain admission to the European Quality Assurance Register for Higher Education (EQAR), ACE Denmark is required to document compliance with the ESG. EVA's compliance with the ESG was confirmed on the basis of an external evaluation in 2005 reconfirming EVA's full membership of ENQA. Both ACE Denmark and EVA will undergo external evaluations in 2010 to assess their compliance with the ESG.

The main component of the Danish system for external quality assurance is the accreditation system, in which the NQF-HE is referred to in key criteria. Thus, compliance with the NQF-HE is a prerequisite for positive accreditation of both new and existing programmes.

Criteria 6: The national framework, and any alignment with the European framework, is referenced in all Diploma Supplements.

All higher education institutions providing publicly recognised programmes are legally obliged to provide a Diploma Supplement with each formal diploma issued to students completing a programme of higher education. The institutions design the Diploma Supplements individually subject to a national template, which ensures that due reference is made to the Bologna process.

CIRIUS is chair of the inter-ministerial working group tasked with ensuring that compliance of the NQF-HE with the Bologna Framework is included in the national Diploma Supplement template by January 2010. At the same time, the template will be revised so both the Bologna Framework and the EQF are referenced in future Diploma Supplements.

Criteria 7: The responsibilities of the domestic parties to the national framework are clearly determined and published.

The main parties with responsibility in relation to the NQF-HE are the three ministries represented in the steering group tasked with the maintenance of the NQF-HE: The Ministry of Science, Technology and Innovation; The Ministry of Education and the Ministry of Culture.

Other actors with responsibilities are the two accreditation operators and the Accreditation Council, who are charged with ensuring the alignment of specific educational programmes with the degree type descriptions in the NQF-HE. CIRIUS has been designated as national information point regarding the NQF-HE.

Responsibility for the implementation of the NQF-HE at the programme level rests with the institutions of higher education, which are responsible for incorporating learning outcomes in line with the degree type descriptions in their descriptions of each study programme. Public funding of study programmes presupposes a positive accreditation of each programme, including evidence that individual programmes are in compliance with the NQF-HE.

The division of responsibilities is clearly defined in Danish legislation. However, more could be done to inform outside parties and the general public as to the responsibilities of each actor in the system. This could be done via a dedicated page on the CIRIUS website and via information initiatives targeted relevant stakeholders in Danish and European Higher Education.

5 Procedures for self-certification

The self-certification committee has also considered whether the Danish NQF-HE meets the six process criteria for the alignment of national qualifications frameworks to the Bologna framework. This chapter contains the assessments and conclusions of the committee.

The self-certification committee concludes that the process of self-certification of the Danish National Qualifications Framework for Higher Education is in compliance with all 6 process criteria.

Procedure 1: The competent national body/bodies shall self-certify the compatibility of the national framework with the European framework.
The steering group responsible for the self-certification consists of representatives from The Ministry of Science, Technology and Innovation, The Ministry of Education and the Danish Ministry of Culture. These ministries are the competent national bodies.

On behalf of the steering group, the Ministry of Science, Technology and Innovation has requested the Danish Evaluation Institute (EVA) to organise and facilitate the self-certification process.

Procedure 2: The self-certification process shall include the stated agreement of the quality assurance bodies in the country in question, as recognised through the Bologna Process.
ACE Denmark and EVA are the responsible quality assurance bodies in Denmark.

The self-certification has been conducted by a self-certification committee with members from; ACE Denmark, EVA, the Ministry of Science, Technology and Innovation, the Ministry of Education, The Danish Ministry of Culture, CIRIUS and two international experts. This report serves as the stated agreement of the members of the self-certification committee.

The self-certification committee agreed on the conclusions of the report at a meeting on 20. October and thus confirmed that the Danish NQF-HE is compatible with the QF-EHEA.

Procedure 3: The self-certification process shall involve international experts.
Two international experts have been involved in the self-certification process as full members of the self-certification committee.

• Director of Projects Jon Haakstad, NOKUT – the Norwegian Agency for Quality Assurance in Education;
• Former Head of Department Ulf Öhlund, Department for the Recognition of International Qualifications, Swedish National Agency for Higher Education.

These two international experts played a key role in the discussions during the self-certification process.

Procedure 4: The self-certification and the evidence supporting it shall be published and shall address separately each of the criteria set out.
The final self-certification report will be forwarded by the self-certification committee to the steering group who will present it to CIRIUS for publication. The self-certification report will be published at CIRIUS' website www.ciriusonline.dk on the same subpage as the NQF-HE The report will also be available on the Bologna Process website and the ENIC-NARIC website.

Procedure 5: The ENIC and NARIC networks shall maintain a public listing of States that have confirmed that they have completed the self-certification process

The self-certification committee will inform CIRIUS, the Danish ENIC-NARIC, when the self-certification process is completed in order for Denmark to be included in the list of countries that have completed the self-certification process.

Procedure 6: The completion of the self-certification process shall be noted on Diploma Supplements issued subsequently by showing the link between the national framework and the European framework.

Diploma Supplements in Denmark are issued by the institutions awarding degrees using a national template. Following the publication of this report, CIRIUS, as chair of the inter-ministerial working group, is tasked with ensuring that compliance of the NQF-HE with the Bologna Framework is included in the national Diploma Supplement template by January 2010. This will thus be noted on Diploma Supplements issued henceforth by Danish institutions of higher education.

6 Issues raised by stakeholders

Stakeholders were involved in the self-certification process through the reference group for the Danish National Qualifications Framework for Higher Education, which consisted of representatives from higher education institutions, student organisations, employer organisations and trade unions. The consultation took the form of a meeting, in which members of the self-certification committee also participated.

The reference group made general and specific comments to the draft self-certification report and thus provided valuable feedback to the self-certification committee, which enhanced the quality of the final report. In addition, several issues, which can be grouped under three headings, were raised and discussed during the meeting: the importance of a framework that includes all types of higher education programmes and degrees; the necessity of identifying a balance between flexibility and firmness in the approach to the framework; and the need for targeted information initiatives.

Inclusion of all higher education programmes and degrees
As noted in chapter 3, the educational programmes under the remit of the Ministry of Culture are not yet included in the NQF-HE, although the process of developing degree type descriptions is well advanced. There is, however, still some uncertainty as to how some specific programmes will be integrated into the Ministry of Culture's section of the NQF-HE, as their current content and structure do not fit into the proposed new degree types. This situation led to the first main theme, as the reference group took this work as an opportunity to stress the importance of ensuring that the NQF-HE is designed to be able to accommodate all types of higher education programmes in order to maximise its utility and the transparency of the Danish higher education system. However, the reference group also agreed on the importance of not forcing any programmes into the framework for the sake of completeness without first carefully assessing their peculiarities and taking these into account.

Balance between the needs for structure and flexibility in the higher education system
This conclusion led the reference group directly to the second main theme of the discussion. The reference group agreed that a fine balance must be ensured between the NQF-HE as an organising structure for the higher education system, on the one hand, and the need to maintain a flexible and adaptable system, on the other. Both objectives are important to reach, but there are risks related to each if one is not balanced by the other. If the NQF-HE is going to provide transparency in the education system, it is imperative that the levels established and described in the framework cover all higher education programmes, and that new programmes are only accredited if they fit into an already existing degree type. If this is not the case, the NQF-HE at best becomes irrelevant, and at worst misleading. Furthermore, the NQF-HE must be a useful tool for individual students, businesses and educational institutions to grasp the possibilities for, and barriers to, progression in the system, and must thus cover all recognised programmes and degrees. At the same time, the reference group stressed that the framework must not develop into a structural straitjacket that constrains the educational sector, for instance by forcing well-functioning existing programmes to change only for structural reasons. Likewise, the reference group reflected on the need to maintain the NQF-HE as a dynamic structure, and to avoid the risk that too strong an emphasis on maintaining a fixed structure might prevent the development of new educational programmes to match future societal needs.

Dissemination of the NQF-HE
The third theme, which took up most of the discussion in the reference group, concerned the need to raise awareness of the NQF-HE and its implications for higher education programmes and individual students. The NQF-HE has a dual purpose, as it serves to organise the higher education system and at the same time is a tool for the individual student to document and promote his or her achieved learning outcomes. There was consensus that this dual purpose needs to be clearly communicated to various stakeholders, and that targeted means of communication would be necessary to properly reach the wide spectrum of stakeholders in the education sector and the labour market. Thus, much of the discussion was aimed at identifying which stakeholders would be relevant to target, what kind of information they would benefit from receiving, and in which form and through which channels it should be communicated.

The overarching need for a common language and understanding regarding the NQF-HE was a central concern of the reference group. It was stressed that for the NQF-HE to be even further embedded in the higher education sector, it is crucial that the responsible ministries maintain an ongoing and constructive dialogue with the educational institutions and the rest of the sector. The reference group suggested that one way of starting such a dialogue could be to mark the completion of the self-certification process and the section of the NQF-HE covering the educational programmes under the auspices of the Ministry of Culture with a launch-conference. Such a conference could include presentations by politicians and experts from Denmark and abroad on the Bologna process and on the purpose and usefulness of qualifications frameworks. The reference group expressed even greater enthusiasm for the suggestion of a conference with workshops, where participants from educational institutions, quality assurance agencies, governmental agencies, ministries, social partners, etc. could gain hands-on experience of working with the NQF-HE and move towards a common understanding of the practical application of the framework in programme development, in promoting a dialogue with the various stakeholders in the labour market, etc.

All higher education institutions are by now acquainted with the NQF-HE and have, to a greater or lesser extent, gained experience in transforming level descriptors into tangible learning outcomes for individual programmes, modules and courses. However, many institutions find this exercise to be very demanding and difficult. Thus, the reference group suggested that it would be useful for the institutions to have a "toolbox" available with templates, inspirational tools, etc., to make the process of formulating specific learning outcomes for individual modules easier. A particularly useful tool would be examples and descriptions of how to describe final learning outcomes for a complete educational programme on just one page.

Such a brief summary of learning outcomes would also be of great value to individual enterprises who find it difficult to identify the specific skills and competences of graduates from lesser known or newly established educational programmes. A useful means of channelling information to these enterprises could be via the business units of the higher education institutions, who already have well-established links to the business sector, not least at the Academy Profession level where the largest proportion of graduates find employment in small businesses which, in turn, have limited resources for keeping up to date with developments in the broader education sector. Information about the NQF-HE and learning outcomes in general for the business sector could also help higher education institutions in their effort to explain to enterprises the important objectives and integrated role of work placement periods.

Finally, but not least importantly, individual students need to be made aware of the ways in which the NQF-HE can benefit them when moving across borders to continue their studies or find employment, especially in terms of making qualifications and competences comparable across educational systems in Europe. Thus, in addition to the Diploma Supplements already issued with all degree certificates, targeted information should be developed which explains the value of the NQF-HE in a way that is appealing to students, e.g. in the form of special web-based information that supplements the official NQF-HE homepages and which places less emphasis on the technical details. Instead, this information should focus on the practical usefulness of the NQF-HE and should be presented with an informal tone.

Appendix A

The Danish National Qualifications Framework for Higher Education

Academy Profession level	
	Persons obtaining degrees at this level
Knowledge and understanding	• Must possess knowledge of the practice and central applied theories and methodologies of the profession and the subject area. • Must be able to understand the practice and central applied theories and methodologies as well as the profession's application of theories and methodologies.
Skills	• Must be able to apply the central methodologies and tools of the subject area as well as be able to apply the skills related to work in the profession. • Must be able to evaluate practice-oriented issues as well as list and choose possible solutions. • Must be able to communicate practice-oriented issues and possible solutions to collaboration partners and users.
Competences	• Must be able to handle development-oriented situations. • Must be able to participate in discipline-specific and interdisciplinary collaboration with a professional approach. • Must be able to acquire new knowledge, skills and competences related to the profession in a structured context.
Bachelor's level	
	Persons obtaining degrees at this level
Knowledge and understanding	• Must possess knowledge of the theories, methodologies and practice of a profession or one or more subject areas. • Must be able to understand and reflect on theories, methodologies and practice.
Skills	• Must be able to apply the methodologies and tools of one or more subject areas as well as apply skills related to work within the subject area(s) or in the profession. • Must be able to evaluate theoretical and practical issues as well as explain the reasons for and choose relevant solution models. • Must be able to communicate academic issues and solution models to peers and non-specialists or collaboration partners and users.
Competences	• Must be able to handle complex and development-oriented situations in study or work contexts. • Must be able to independently participate in discipline-specific and interdisciplinary collaboration with a professional approach. • Must be able to identify their own learning needs and organise their own learning in different learning environments.
Master's level	
	Persons obtaining degrees at this level
Knowledge and understanding	• Must possess knowledge of one or more subject areas which, in selected fields, is based on the highest international research within a subject area. • Must be able to understand and, on a scientific basis, reflect on the knowledge of the subject area(s) as well as be able to identify scientific issues.
Skills	• Must master the scientific methodologies and tools of the subject area(s) as well as master general skills related to work within the subject area(s). • Must be able to evaluate and select among the scientific theories, methodologies, tools and general skills of the subject area(s), and set up, on a scientific basis, new analysis and solution models. • Must be able to communicate research-based knowledge and discuss professional and scientific issues with both peers and non-specialists.

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Competences	• Must be able to manage work situations and developments that are complex, unpredictable and require new solution models. • Must be able to independently initiate and carry out discipline-specific and interdisciplinary collaboration and assume professional responsibility. • Must be able to independently take responsibility for their own professional development and specialisation.
PhD level	
	Persons obtaining degrees at this level
Knowledge and understanding	• Must possess knowledge at the highest international level within the research field. • Must have made a significant contribution to the development of new knowledge and understanding within the research field based on scientific studies.
Skills	• Must master the scientific methodologies and tools as well as master other skills related to research and development tasks within the field. • Must be able to analyse, evaluate and develop new ideas, including design and develop new techniques and skills within the subject area. • Must be able to participate in international discussions within the subject area and disseminate scientific findings and progress to a wide audience.
Competences	• Must be able to plan and carry out research and development tasks in complex and unpredictable contexts. • Must be able to independently initiate and participate in national and international collaboration on research and development with scientific integrity. • Must be able to independently initiate research and development projects and, through these, generate new knowledge and new skills which develop the research field.

Descriptions of ordinary higher education degrees in Denmark (degree type descriptors)

	Academy Profession Degree (Erhvervsakademigrad)	Professional Bachelor's Degree (Professionsbachelorgrad)	Bachelor's Degree (Bachelorgrad)	Master's Degree (Kandidatgrad)	PhD Degree (Ph.d.-grad)
Knowledge and understanding					
Knowledge field	Must possess development-based knowledge of the practice and central applied theories and methodologies of the profession and the subject area.	Must possess development-based knowledge of the practice and applied theories and methodologies of the profession and the subject area.	Must possess research-based knowledge of theory, methodology and practice within one or more subject areas.	Must possess knowledge of one or more subject areas which, in selected fields, is based on the highest international research within a subject area.'	Must possess knowledge at the highest international level within the research field.
Understanding and reflection level	Must be able to understand the practice and central applied theories and methodologies as well as the profession's application of theories and methodologies.	Must be able to understand the practice, applied theories and methodologies as well as reflect on the practice and application of theories and methodologies of the profession.	Must be able to understand and reflect on theories, scientific methodologies and practice.	Must be able to understand and, on a scientific basis, reflect on the knowledge of the subject area(s) as well as be able to identify scientific issues.	Must have made a significant contribution to the development of new knowledge and understanding within the research field based on scientific studies.

Skills

Type of skills	Must be able to apply the central methodologies and tools of the subject area as well as be able to apply the skills related to work in the profession.	Must be able to apply the methodologies and tools of the subject area as well as master the skills related to work in the profession.	Must be able to apply the scientific methodologies and tools of one or more subject areas as well as apply general skills related to work within the subject area(s).	Must master the scientific methodologies and tools of the subject area(s) as well as master general skills related to work within the subject area(s).	Must master the scientific methodologies and tools as well as master other skills related to research and development tasks within the field.
Evaluation and decision-making	Must be able to evaluate practice-oriented issues as well as list and choose possible solutions.	Must be able to evaluate practice-oriented and theoretical issues as well as explain the reasons for and choose relevant solution models.	Must be able to evaluate theoretical and practical issues as well as explain the reasons for and choose relevant analysis and solution models.	Must be able to evaluate and select among the scientific theories, methodologies, tools and general skills of the subject area(s), and set up, on a scientific basis, new analysis and solution models.	Must be able to analyse, evaluate and develop new ideas, including design and develop new techniques and skills within the subject area.
Communication	Must be able to communicate practice-oriented issues and possible solutions to collaboration partners and users.	Must be able to communicate practice-oriented and academic issues and solutions to collaboration partners and users.	Must be able to communicate academic issues and solution models to both peers and non-specialists.	Must be able to communicate research-based knowledge and discuss professional and scientific issues with both peers and non-specialists.	Must be able to participate in international discussions within the subject area and disseminate scientific findings and progress to a wide audience.

Competences

Action space	Must be able to handle development-oriented situations.	Must be able to handle complex and development-oriented situations in work or study contexts.	Must be able to handle complex and development-oriented situations in study or work contexts.	Must be able to manage work situations and developments that are complex, unpredictable and require new solution models.	Must be able to plan and carry out research and development tasks in complex and unpredictable contexts.
Collaboration and responsibility	Must be able to participate in discipline-specific and interdisciplinary collaboration with a professional approach.	Must be able to independently participate in discipline-specific and interdisciplinary collaboration and assume responsibility within the framework of professional ethics.	Must be able to independently participate in discipline-specific and interdisciplinary collaboration with a professional approach.	Must be able to independently initiate and carry out discipline-specific and interdisciplinary collaboration and assume professional responsibility.	Must be able to independently start up and participate in national and international collaboration on research and development with scientific integrity.
Learning	Must be able to acquire new knowledge, skills and competences related to the profession within a structured context.	Must be able to identify their own learning needs and develop their own knowledge, skills and competences related to the profession.	Must be able to identify their own learning needs and organise their own learning in different learning environments.	Must be able to independently take responsibility for their own professional development and specialisation.	Must be able to independently initiate research and development projects and, through these, generate new knowledge and new skills which develop the research field.

Formal matters

ECTS	90-150[1]	180-240[23]	180[4]	120[5]	180
Admission require-ments	Completion of upper secondary education or rele-vant vocational training	Completion of upper secondary education with specific require-ments for subjects and level or voca-tional training supplemented with requirements for completion of specific upper secondary school subjects and levels or Academy pro-fession degree or Diploma degree	Completion of upper secondary education	Qualifying Bachelor's De-gree	Master's Degree
Further education	Professional Bachelor and Di-ploma study pro-grammes	Some Master's study programmes (kandidat), possi-bly via entrance courses, Master and Diploma study programmes	Master's (kandi-dat)), Master and Diploma study programmes	PhD and Master study pro-grammes	-
Main insti-tution type[6]	Academy of Pro-fessional Higher Education	University Col-leges	Universities	Universities	Universities
Knowledge base	Business and pro-fession-based as well as develop-ment-based	Business and pro-fession-based as well as develop-ment-based	Research-based	Research-based	Research

[1] The study programme comprises a period of work placement of at least three months.

[2] The study programme comprises a period of work placement of at least six months.

[3] A Professional Bachelor's study programme may also be planned as an independent extension to one or more Academy Profession study programmes with a duration of at least 90 ECTS, including a period of three-month work placement.

[4] Propaedeutics courses may be approved in connection with the Bachelor's study programme corresponding to a maximum of 60 ECTS. In connection with some study programmes, it may be approved that the scope of the study programme exceed 180 ECTS due to a paid work placement.

[5] For Master's study programmes (kandidatuddannelse) organised with a view to teaching at upper secondary school, it may be approved that the study programme be extended with 30 ECTS when the elective course is outside of the scope of the central study programme. Some Master's study programmes are approved to have a scope correspond-ing to up to 180 ECTS.

[6] Specifies the type of institution which generally offers the type of degree in question. There are exceptions to the main rule, as, e.g., an Academy of Professional Higher Education may be approved to offer Professional Bachelor's study programmes, in the same way as the Diploma study programme in Economics and Business Administration is offered by universities.

Descriptions of the higher education degrees of the further adult education system in Denmark (degree type descriptors)

	Academy Profession Degree (VVU-grad)	Diploma Degree (Diplomgrad)	Master Degree (Mastergrad)
Knowledge and understanding			
Knowledge field	Must, within a specialised area or in a wider perspective within the subject area, possess development-based knowledge of the practice and central applied theories and methodologies of the profession and the subject area.	Must, within a specialised area or in a wider perspective within the subject area, possess development-based knowledge of the practice, applied theories and methodologies of the profession and the subject area.	Must, within a specialised area or in a wider perspective of a subject or an interdisciplinary area, possess knowledge and understanding which, in selected areas, is based on the highest international research.
Understanding and reflection level	Must be able to understand the practice and central applied theories and methodologies as well as the profession's application of theories and methodologies.	Must be able to understand the practice, applied theories and methodologies as well as to reflect on the practice and application of theories and methodologies of the profession.	Must be able to understand and, on a scientific basis, reflect on the knowledge of the subject area(s) as well as be able to identify scientific issues.
Skills			
Type of skills	Must be able to apply central methodologies and tools as well as be able to apply the skills related to work in the area selected.	Must be able to apply methodologies and tools and master the skills related to work in the area selected.	Must be able to apply the scientific methodologies and tools of the subject area as well as master general skills related to work in the area selected.
Evaluation and decision-making	Must be able to evaluate practice-oriented issues as well as list and choose possible solutions.	Must be able to evaluate practice-oriented and theoretical issues as well as explain the reasons for and choose relevant solution models.	Must be able to evaluate theoretical and practical issues as well as set up, on a scientific basis, new analysis and solution models.
Communication	Must be able to communicate practice-oriented issues and solution proposals to collaboration partners and users.	Must be able to communicate practice-oriented and academic issues and solutions to collaboration partners and users.	Must be able to communicate and discuss academic issues and solution models with both peers and non-specialists.
Competences			
Action space	Must be able to handle development-oriented situations within the specialisation selected.	Must be able to handle complex and development-oriented situations in work contexts.	Must be able to handle and develop work situations that are complex, unpredictable and require new solution models.
Collaboration and responsibility	Must be able to participate in discipline-specific and interdisciplinary collaboration with a professional approach.	Must be able to independently participate in discipline-specific and interdisciplinary collaboration and assume responsibility within the framework of professional ethics.	Must be able to independently initiate and carry out discipline-specific and interdisciplinary collaboration and to assume professional responsibility.
Learning	Must be able to develop their own practice in a structured context.	Must be able to develop their own practice.	Must be able to independently take responsibility for their own professional development.

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Formal matters

ECTS	60	60	60
Admission re-quirements	Completion of upper secon-dary education, vocational training or basic training for adults as well as two years' relevant work experience	Academy Profession Degree or completion of special preparatory course as well as two years' relevant work experience	Bachelor's Degree, Profes-sional Bachelor's Degree or Diploma Degree as well as two years' relevant work experience
Further education	Diploma study programmes	Master study programmes	
Main institution type[7]	Academies of Professional Higher Education	University Colleges	Universities
Knowledge base	Business and profession-based as well as development-based	Business and profession-based as well as develop-ment-based	Research-based

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[7] *Specifies the type of institution which generally offers the type of degree in question. There are exceptions to the main rule, as, e.g., an Academy of Professional Higher Education may be approved to offer Professional Bachelor study programmes, in the same way as the Diploma study programmes in Economics and Business Administration is offered by universities.*

Appendix B

Alignment of the descriptors of the NQF-HE and the QF-EHEA

The Framework of Qualifications for the European Higher Education Area	The Danish National Qualifications Framework for Higher Education
Short cycle qualification - within or linked to the first cycle	Academy Profession level
Qualifications that signify completion of **the short cycle - within or linked to the first cycle** are awarded to students who: • have demonstrated knowledge and understanding in a field of study that builds upon general secondary education and is typically at a level supported by advanced textbooks; such knowledge provides an underpinning for a field of work or vocation, personal development, and further studies to complete the first cycle • can apply their knowledge and understanding in occupational contexts • have the ability to identify and use data to formulate responses to well-defined concrete and abstract problems • can communicate about their understanding, skills and activities, with peers, supervisors and clients • have the learning skills to undertake further studies with some autonomy	Persons obtaining degrees at this level **Knowledge and understanding** • Must possess knowledge of the practice and central applied theories and methodologies of the profession and the subject area • Must be able to understand the practice and central applied theories and methodologies as well as the profession's application of theories and methodologies **Skills** • Must be able to apply the central methodologies and tools of the subject area as well as be able to apply the skills related to work in the profession • Must be able to evaluate practice-oriented issues as well as list and choose possible solutions • Must be able to communicate practice-oriented issues and possible solutions to collaboration partners and users **Competences** • Must be able to handle development-oriented situations • Must be able to participate in discipline-specific and interdisciplinary collaboration with a professional approach • Must be able to acquire new knowledge, skills and competences related to the profession in a structured context

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First cycle qualification	Bachelor's level
Qualifications that signify completion of **the first cycle** are awarded to students who: • have demonstrated knowledge and understanding in a field of study that builds upon their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study; • can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study; • have the ability to gather and interpret relevant data (usually within their field of study) to inform judgments that include reflection on relevant social, scientific or ethical issues; • can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences • have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy.	Persons obtaining degrees at this level **Knowledge and understanding** • Must possess knowledge of the theories, methodologies and practice of a profession or one or more subject areas • Must be able to understand and reflect on theories, methodologies and practice **Skills** • Must be able to apply the methodologies and tools of one or more subject areas as well as apply skills related to work within the subject area(s) or in the profession • Must be able to evaluate theoretical and practical issues as well as explain the reasons for and choose relevant solution models • Must be able to communicate academic issues and solution models to peers and non-specialists or collaboration partners and users **Competences** • Must be able to handle complex and development-oriented situations in study or work contexts • Must be able to independently participate in discipline-specific and interdisciplinary collaboration with a professional approach • Must be able to identify their own learning needs and organise their own learning in different learning environments

Second cycle qualification	Master's level
Qualifications that signify completion of **the second cycle** are awarded to students who: • have demonstrated knowledge and understanding that is founded upon and extends and/or enhances that typically associated with the first cycle, and that provides a basis or opportunity for originality in developing and/or applying ideas, often within a research context • can apply their knowledge and understanding, and problem solving abilities in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study • have the ability to integrate knowledge and handle complexity, and formulate judgments with incomplete or limited information, but that include reflecting on social and ethical responsibilities linked to the application of their knowledge and judgments • can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non specialist audiences clearly and unambiguously • have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous	Persons obtaining degrees at this level **Knowledge and understanding** • Must possess knowledge of one or more subject areas which, in selected fields, is based on the highest international research within a subject area • Must be able to understand and, on a scientific basis, reflect on the knowledge of the subject area(s) as well as be able to identify scientific issues **Skills** • Must master the scientific methodologies and tools of the subject area(s) as well as master general skills related to work within the subject area(s) • Must be able to evaluate and select among the scientific theories, methodologies, tools and general skills of the subject area(s), and set up, on a scientific basis, new analysis and solution models • Must be able to communicate research-based knowledge and discuss professional and scientific issues with both peers and non-specialists **Competences** • Must be able to manage work situations and developments that are complex, unpredictable and require new solution models • Must be able to independently initiate and carry out discipline-specific and interdisciplinary collaboration and assume professional responsibility • Must be able to independently take responsibility for their own professional development and specialisation

Third cycle qualification	PhD level
Qualifications that signify completion of **the third cycle** are awarded to students who: • have demonstrated a systematic understanding of a field of study and mastery of the skills and methods of research associated with that field • have demonstrated the ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity • have made a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, some of which merits national or international refereed publication • are capable of critical analysis, evaluation and synthesis of new and complex ideas • can communicate with their peers, the larger scholarly community and with society in general about their areas of expertise • can be expected to be able to promote, within academic and professional contexts, technological, social or cultural advancement in a knowledge based society	Persons obtaining degrees at this level **Knowledge and understanding** • Must possess knowledge at the highest international level within the research field • Must have made a significant contribution to the development of new knowledge and understanding within the research field based on scientific studies **Skills** • Must master the scientific methodologies and tools as well as master other skills related to research and development tasks within the field • Must be able to analyse, evaluate and develop new ideas, including design and develop new techniques and skills within the subject area • Must be able to participate in international discussions within the subject area and disseminate scientific findings and progress to a wide audience **Competences** • Must be able to plan and carry out research and development tasks in complex and unpredictable contexts • Must be able to independently initiate and participate in national and international collaboration on research and development with scientific integrity • Must be able to independently initiate research and development projects and, through these, generate new knowledge and new skills which develop the research field

Appendix C

The reference group

Higher education sector representatives:
- Association of Danish Business and Technical Colleges: Søren Clemmensen
- Rector's Conference - Danish Ministry of Culture: Torben Holm
- Rectors' Conference - University Colleges Denmark: Randi Brinckmann
- Universities Denmark: Berit Eika

Student representative:
- The National Union of Students in Denmark: Nils Wiese

Labour market representatives:
- FTF - Confederation of Professionals in Denmark: Erik Schmidt
- DI – the Confederation of Danish Industry: Sarah Gade Hansen
- AC – The Danish Confederation of Professional Associations: Birgit Bangskjær

Appendix D

Glossary of abbreviations

ACE Denmark The Danish Accreditation Institution
AP   Academy Profession Degree
CIRIUS   The national agency for internationalisation of education and training in Denmark
ECTS   European Credit Transfer and Accumulation System
EHEA   European Higher Education Area
ENIC   European Network of Information Centres
ENQA   the European Association for Quality Assurance in Higher Education
EQAR   European Quality Assurance Register for Higher Education
EQF   European Qualifications Framework for Lifelong Learning
ESG   European Standards and Guidelines for quality assurance in higher education
EVA   The Danish Evaluation Institute
NARIC   National Academic Recognition Information Centre
NOKUT   the Norwegian Agency for Quality Assurance in Education
NQF   Danish Qualifications Framework for Lifelong Learning
NQF-HE   The Danish National Qualifications Framework for Higher Education
QF-EHEA   The Framework of Qualifications for the European Higher Education Area