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Qualifications at level 5: progressing in a career or to higher education



Qualifications at level 5: progressing in a career or to higher education

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Foreword

This study examines qualifications at level 5 of the European qualifications framework (EQF) ⁽¹⁾.

It shows that EQF level 5 qualifications play an important role in providing access to employment and career advancement, as well as enabling further learning and progression to higher education. This double function makes them attractive to learners and employers. Although the extent to which countries use qualifications at EQF level 5 differs, their importance is growing in all countries investigated for several reasons. First, they are developed as response to increased needs for advanced technical and/or management skills in a rapidly changing labour market and ageing workforce. Second, the data show that EQF level 5 qualifications are especially attractive to students with vocational education and training (VET) backgrounds and those already in employment. They contribute to lifelong learning by being accessible and attractive for adults and non-traditional learners. Third, they are seen as valuable and relevant by employers, as most include some form of work-based learning.

The development of comprehensive NQFs – including qualifications at all levels and of all types – in most European countries has shed new light on the potential of EQF level 5 qualifications. By acting as a bridge between education and training institutions and subsystems, these qualifications support permeability (vertically and horizontally), allowing learners to move more easily between different types of education (such as academic and vocational) and between different levels (such as VET and higher education), as they decide. The study also shows that EQF level 5 is increasingly being used as a platform for developing new types of qualifications, whether initial (IVET) or continuing vocational education and training (CVET) qualifications or short-cycle higher education (SCHE) qualifications.

⁽¹⁾ The study maps and analyses qualifications according to the level of learning outcomes in the 15 countries which had referenced their national qualifications frameworks (NQFs) to the EQF by June 2012. The countries are: Belgium (Flanders), the Czech Republic, Denmark, Estonia, Ireland, France, Croatia, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Austria, Portugal and the United Kingdom (England, Wales and Northern Ireland (EWNI) and Scotland).

The study aims to stimulate policy discussion on the types, purposes and potential of qualifications at EQF level 5 in contributing to and addressing current and future policy challenges, such as improving the relevance of qualifications for the rapidly changing labour market, workforce upskilling and reskilling, and helping people change or progress in their career or opening doors for further learning through validation of work experience and non-formal and informal learning.

Joachim James Calleja

Director

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Table of contents

Foreword	1
Acknowledgements	3
Table of contents	4
Executive summary	9
1. Aim of the study, conceptual framework and research questions.....	18
1.1. Background to the study.....	18
1.2. Key research questions	19
1.3. Conceptual framework.....	20
1.4. Description of methodology	21
1.4.1. Country overviews and analysis	22
1.4.2. Case studies	22
1.5. Outline of the report.....	24
2. Diversity of EQF level 5 qualifications.....	25
2.1. Bridging general education, VET and higher education	25
2.2. Qualifications and learning pathways: the learning contexts	27
2.3. Overview of level 5 qualification types	28
2.4. Country differences in level 5 use.....	32
2.4.1. Qualifications outside the formal system linked to EQF level 5	32
2.4.2. Countries with single qualification type linked to level 5	33
2.4.3. Higher education and VET qualifications linked to EQF level 5	34
2.4.4. Countries with a diversified landscape	37
3. Progress in EQF level 5 qualifications importance	42
3.1. Countries where EQF level 5 is important.....	43
3.2. Countries with EQF level 5 having average importance.....	46
3.3. Countries with EQF level 5 having some importance.....	47
3.4. Countries with EQF level 5 having little importance	48
3.5. Qualifications outside NQFs but relevant to EQF level 5	51
4. Access and progression for education and employment.....	53
4.1. Introduction	53
4.1.1. Qualifications as currency	53
4.1.2. Purposes of qualifications	53
4.2. Diverse routes to/from employment/education.....	55

4.2.1.	EQF level 5 as initial education qualification	55
4.2.2.	Employment-oriented routes, same/similar occupation	57
4.2.3.	Mixed education-employment routes for career switch.....	58
4.2.4.	Qualifications used for different routes	58
4.2.5.	Overview of different routes	60
4.2.6.	System permeability.....	62
4.3.	Perceived differences in labour market relevance	63
4.3.1.	No level 5 qualifications or only recently introduced	64
4.3.2.	A long tradition of level 5 qualifications	65
4.3.3.	Difficulty in assessing labour market relevance	69
5.	Heterogeneous learner group.....	70
5.1.	Education background.....	70
5.2.	Age	72
5.3.	Work experience	73
6.	Learning outcomes as work in progress	76
6.1.	Qualifications and learning outcomes	76
6.1.1.	Scope of learning outcomes descriptions	76
6.1.2.	Terminology used in describing learning outcomes	79
6.2.	Educational programmes: input variables and mode of delivery	85
6.2.1.	Study intensity/volume/duration	85
6.2.2.	Mode of delivery.....	86
7.	Assigning qualifications to the NQF and linking to the EQF	89
7.1.	Introduction	89
7.1.1.	Referencing national qualification levels to the EQF	89
7.2.	Cross-country analysis	89
7.2.1.	Qualifications, NQF levels and EQF referencing	90
7.2.2.	Quality assurance function of the NQF.....	91
7.2.3.	Allocating individual qualifications or types.....	93
7.2.4.	Level 5 descriptors and range of qualifications linked	96
7.2.5.	Identifying the appropriate level	97
7.2.6.	Other criteria used to allocate qualifications to levels	99
7.2.7.	Categories for level descriptors and qualifications.....	100
7.2.8.	Allocating qualifications from other learning contexts	101
7.2.9.	Allocation inconsistencies	104
8.	Conclusions and recommendations.....	106
8.1.	Key conclusions	106
8.2.	Policy messages	111

List of abbreviations	113
References	116
Bibliography	123
ANNEX 1. List of working definitions	139
ANNEX 2. List of interviewees.....	144
ANNEX 3. Available data on EQF level 5 qualifications	147
ANNEX 4. Key purposes and functions of qualifications	157
ANNEX 5. Further material on learning outcome descriptions of qualifications.	168
ANNEX 6. Duration and mode of delivery.....	172

List of tables, figures and boxes

Tables

1	Overview of qualifications examined in the case studies	23
2	Overview of qualifications	29
3	Overview of graduates in two studies in Austria.....	43
4	The evolution of BTS students within public and private providers from 2009/10 to 2011/12 in France.....	44
5	Overview of the evolution of DUT students by main sector of activity from 2009/10 to 2011/12 in France.....	45
6	Evolution of awarded DUT students by main sector of activities in the period 2009-10	45
7	Number of regular students and adult learners in SCHE programmes in Denmark.....	46
8	Overview of the number of higher, advanced higher, HNC or HND qualifications in Scotland	47
9	Programmes and students per area of study in Belgium (Flanders).....	48
10	Number of CET students and graduates in Portugal.....	49
11	Number of AD students and in the professional bachelor for full-time and part-time studies in the Netherlands	50
12	Education background of AD/bachelor students in the Netherlands.....	70
13	Participation in supplementary courses (for adult learners) at SCHE (level 5 EQF) by highest education completed and year in Denmark	71
14	Age distribution of HBO5 students in Belgium (Flanders)	72
15	Overview of previous activities of AD students	73
16	Core competences: professional profile management in health care and health care service in the Netherlands.....	82
17	HBO5 qualifications in Belgium (Flanders): type of teaching.....	87
18	Descriptors for levels and qualifications	102
19	UK statistics: all students by level and mode of study 2011/12	155
20	Assessment criteria for vocational competence	168
21	Programme learning outcomes for the higher certificate in culinary arts in Ireland	169

Figures

1	Overview of qualification types	11
2	Conceptual framework study qualifications at EQF level 5.....	21
3	Routes related to EQF level 5 qualifications	61

Boxes

1	Examples of qualifications linked to EQF level 5.....	31
2	Five qualifications frameworks used among the four jurisdictions of the UK	38
3	AD management in health care in the Netherlands.....	65
4	Vocational qualifications in the Czech Republic.....	66
5	Advanced certificate and higher certificate in Ireland	67
6	Colleges of business administration in Austria.....	68
7	DUT in management of enterprises and administrations in France.....	69
8	Examples of learners taking the CVET pathway to the VET colleges qualification in Austria.....	72
9	Students in the AD management in health care programme in the Netherlands.....	74
10	DUT-GEA core common competence.....	79
11	Indicators for allocating the Austrian qualification VET college of business administration to level 5.....	98
12	Procedures for allocating qualifications to levels in the Flemish qualifications framework	100

Executive summary

EQF level 5 qualifications play an important role in providing access to employment and career advancement, as well as enabling further learning and progression to higher education. They appeal to both learners and employers.

This is one of the main conclusions of the Cedefop study which explored the key functions and purposes of EQF level 5 qualifications in 15 countries ⁽²⁾. It also examined how learning outcomes and 'best fit' approaches have been applied for assigning qualifications to the EQF level 5 across countries.

The study is innovative in mapping and analysing qualifications according to the level of learning outcomes, not institutional type or education and training subsystems. As countries have been working to link comprehensive NQFs to the EQF, it became evident that qualifications at level 5 are very diverse and developing dynamically. The study provides an overview of the diverse landscape of qualifications operating at this level, analysing the roles they play in relation to the labour market and further learning. It offers an opportunity to understand better how the learning outcomes approach is applied in qualifications design and qualifications frameworks across Europe, using level 5 as a reference point. The study addressed the following specific questions:

- (a) which qualifications have been referenced to level 5 of the EQF; to what extent do countries differ in their use of level 5?
- (b) what are the key purposes and functions of qualifications assigned to EQF level 5? What is their 'currency' on the labour markets and/or in further learning?
- (c) what is the profile – expressed in terms of learning outcomes – of qualifications assigned to EQF level 5?
- (d) how have the learning outcomes and 'best fit' approaches been applied for assigning qualifications to EQF level 5 across countries? What were the main challenges and opportunities faced by countries? Which other criteria have been used for placing qualifications at level 5?

Desk research and interviews with relevant stakeholders were brought together to produce 15 country reports that paint a picture of qualifications linked via NQFs to EQF level 5. Their main functions and purposes were researched,

⁽²⁾ The 15 countries selected were those that had completed referencing their national qualification levels to the EQF by June 2012: Belgium (Flanders), the Czech Republic, Denmark, Estonia, Ireland, France, Croatia, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Austria, Portugal, the United Kingdom (EWNI and Scotland).

including how they help people progress to further learning and the labour market, along with overall characteristics and profiles in terms of learning outcomes. Six case studies ⁽³⁾ were also carried out, along with a series of interviews with learners/employees, employers and training providers linked to specific qualifications. These focused on how institutions, learners/employees and employers use qualifications linked to EQF level 5.

EQF level 5: bridging general education, VET and higher education

Traditionally, education and training systems have distinct subsystems – general, vocational and higher education (academic and professional) – which are organised and regulated separately. Usually they are related to one another in a hierarchical manner. EQF level 5 operates across these subsystems, with a heterogeneous mix of qualifications awarded by a wide range of VET and higher education institutions. Half of the qualification types ⁽⁴⁾ identified at level 5 are regulated by higher education or delivered under the responsibility of higher education institutions. Most are awarded through SCHE programmes.

When focusing on the learning outcomes of these qualifications, the distinction between VET and higher education is not always clear-cut: for instance, in Portugal, the technological specialisation diploma (*diploma de especialização tecnológica*) (DET) is registered as NQF/EQF level 5 VET qualification. However, the programme leading to this qualification, technological specialisation courses (*cursos de especialização tecnológica*) (CETs), is provided by public and private higher and non-higher education institutions.

Diversity of EQF level 5 qualifications

The study identifies 31 qualification types linked to EQF level 5 in the 15 countries (see Table 2); the extent to which level 5 is used also varies across countries. Lithuania currently has no qualifications at this level, but legislation is

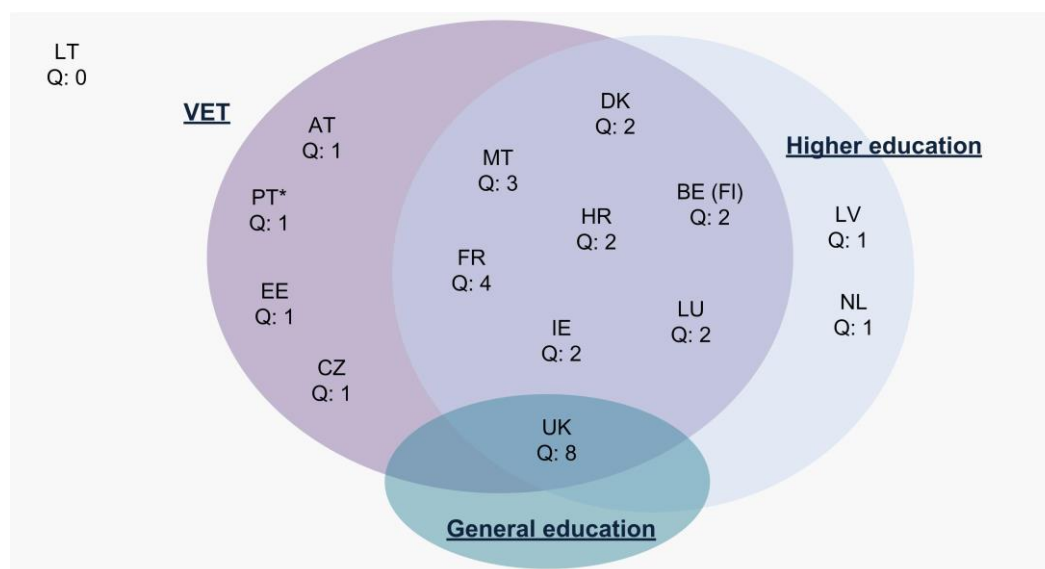
⁽³⁾ The case studies come from the Czech Republic, Ireland, France, Lithuania, the Netherlands and Austria.

⁽⁴⁾ A group or cluster of qualifications within a country that share specific characteristics (e.g. subsystem they belong to, legal regulations and regulatory body, objectives, duration of related programmes, access requirements or level of labour market entry). Within a qualification type, there can be many different individual qualifications in different fields (such as engineering, social and health care, business).

being prepared to introduce them. Two countries (the Czech Republic ⁽⁵⁾ and Estonia ⁽⁶⁾) currently link to EQF level 5 only those qualifications from outside formal education and training. Latvia and the Netherlands link only SCHE qualifications to EQF level 5. The Austrian qualification type allocated to this level is awarded in five-year upper secondary programmes or CVET. A number of countries such as Belgium (Flanders) ⁽⁷⁾, Denmark, Ireland, Croatia and Luxembourg, link (post-)secondary VET and SCHE qualifications to EQF level 5. In France, Malta and the United Kingdom, the EQF level 5 qualification landscape is even more diverse, as it includes sectoral, private and/or general education qualifications.

Figure 1 maps the countries and subsystems to which the qualification types belong in the 15 countries. More detailed information can be found in Table 1.

Figure 1 **Overview of qualification types**



Q: number of qualification types.

*: PT – the qualification is governed by the VET system, but programmes are provided by higher and non-higher education institutions.

Source: Cedefop.

⁽⁵⁾ In the Czech Republic, higher education qualifications at this level are foreseen within the qualifications framework for higher education.

⁽⁶⁾ In Estonia the new VET Act (adopted in 2013) provides the legal basis for IVET and CVET qualifications at NQF/EQF level 5.

⁽⁷⁾ In Belgium (Flanders) two types of qualifications are included: educational and professional. Professional qualifications are not only part of educational qualifications, but can be obtained independently, for example through validation of prior learning (Vlaams Ministerie van Onderwijs en Vorming, 2013).

Increasing importance of qualifications at EQF level 5

Countries differ significantly in the number of programmes, students enrolled and qualifications awarded at level 5. Numbers also vary in relation to different types of qualification within a country, as does availability of data across countries and types of qualifications and programmes, making comparisons difficult. However, two main groups of countries can be distinguished:

- (a) those where level 5 qualifications have a long tradition, are firmly embedded in the education and training system and attract an important number of students, as in France ⁽⁸⁾ and Austria ⁽⁹⁾;
- (b) those where level 5 qualifications have been established more recently, such as the Czech Republic, the Netherlands and Portugal.

The BTS in France continuously attracts more learners, in particular to qualifications for the service sector which made up about 75% of all awarded BTS in 2011. The number of students acquiring the university diploma of technology (*diplôme universitaire de technologie*) (DUT), which also focuses on the services sector, has been slightly decreasing, mainly due to the increased weight of the more labour-market-focused BTS.

Although still reaching only a limited number of students, the number of associate degrees (ADs) awarded in the Netherlands has been rising steadily. The corresponding programmes were introduced in 2006 via a pilot scheme: they are two-year higher education programmes within the four-year professional bachelor programmes. The aim is that 20% of the students at universities of applied sciences should be students enrolled in these AD programmes. In 2011, the share was 1.7%.

Access and progression for education and employment

EQF level 5 qualifications offer various access and progression routes from and to employment and to higher education. Among the 31 qualification types identified in the study, 14 are primarily oriented towards the labour market:

⁽⁸⁾ The number of students following their higher technician certificate (*brevet de technicien supérieur*) (BTS) studies has been increasing during the past three years, rising from 240 322 students during the academic year 2009/10 to 245 750 students during 2011/12. The number of awarded BTS qualifications has also increased from 113 505 in 2010 to 114 914 in 2011.

⁽⁹⁾ In Austria, 26% of all learners in their 10th year of schooling attend a VET college. In the school year 2011/12, more than 137 000 students attended a VET college. A total number of 24 471 students graduated from a VET college in 2011.

examples include the Czech Republic and Estonia, the vocational degree (*Erhvervsuddannelse*) (EUD) in Denmark, further vocational training certificates (*brevets de maîtrise*) (BM) in France, and master craftsman qualification in Croatia and Luxembourg. A total of 12 qualification types have a double function, valued as entry qualifications for both the labour market and higher education (in some cases with the possibility for credit transfer): these include the higher vocational education 5 in Belgium (Flanders), the VET college *Reifeprüfung* certificate and the VET diploma in Austria, the DUT in France, and the diploma of first level professional higher education in Latvia. Eight level 5 qualification types provide clearly articulated entry and progression opportunities into bachelor programmes, including the higher certificate in Ireland, the AD in the Netherlands and the higher education certificate or diploma in the UK. The explicit use of learning outcomes supports progression. Some qualifications at EQF level 5 are solely seen as a preparation for further higher education studies, as in the advanced higher certificate or baccalaureate in Scotland (see Annex 4).

Distinct professional profile and labour market relevance

Most EQF level 5 qualifications are clearly linked to occupations/professions. This is also the case for most of the qualifications awarded within higher education. They are not only considered an intermediate step towards a bachelor degree, but also independent qualifications with distinct professional profiles and labour market relevance. In countries where currently no qualification is linked to level 5, this is identified as an important gap, for instance by employers in the industrial sector in Lithuania.

Level 5 qualifications provide advanced VET skills and competences, potentially responding quickly to new labour market demands. Cedefop's analysis shows that qualifications are available for all major economic sectors with a strong focus on services in some countries, as is the case in France where DUT qualifications are predominately linked to the service sector. In Austria, level 5 curricula and qualifications are developed in a range of different economic sectors, including agriculture and forestry, material goods production, transport, tourism, and business-related services. VET colleges also have the opportunity to develop their own school specialisations to respond to regional needs.

In countries in which EQF level 5 qualifications have existed for a long time, such as France and Austria, they are more widely accepted by employers than in those in which they have been developed more recently. As newly developed qualifications sometimes compete with a range of others, gaining employer trust may take time; the example of the human resources (HR) generalist qualification in the Czech Republic demonstrates this.

Trust is built more easily when employers are involved in provision of the programme. As the Irish example shows, employers who offer internships as part of the programme leading to the advanced certificate are those who understand this qualification best. They appreciate the practical experience that learners acquire and tend to recruit graduates of the advanced certificate rather than those with a higher certificate placed at the same level.

Upskilling the employed

Many EQF level 5 qualifications are designed to upskill people already in employment and provide them with advanced technical and/or management skills, as is the case in the Netherlands management and health care AD programme. Almost all students seek to upgrade their management competences to enable them to perform team leader roles. The trend towards leaner organisation requires that an increasing number of people have operational management competences.

EQF level 5 qualifications can be obtained through validation of work experience, as is the case in the Czech Republic or in Estonia. Validation of non-formal and informal learning generally plays an important role at this level in many countries. It enables people to acquire a qualification or it shortens the duration of a programme that leads to the award of a qualification. In France, BTS and DUT qualifications can also be obtained through the validation of prior experiential learning (*validation des acquis de l'expérience*) (VAE). In 2010, 66% of higher education qualifications acquired through validation were at EQF level 5, most as BTS.

Progression to higher education

Level 5 qualifications can help progress to higher education. Many EQF level 5 qualifications are awarded through SCHE programmes, which in the Bologna process were dedicated to providing an intermediate step towards bachelor degrees. When the qualification is part of, or closely related to, a bachelor degree programme, progression (including credit transfer) is generally guaranteed. This is the case in Ireland, the Netherlands and the UK. However, the opportunity to progress is used differently, as the French example shows. DUT graduates are more likely to continue their studies than holders of a BTS degree.

The Austrian case is different as it is not a SCHE programme. It is a double qualification granting access to higher education and the labour market. Approximately 50% of VET college graduates progress to higher education.

In cases of CVET qualifications primarily oriented towards the labour market (as in the Czech Republic or Estonia), progression to higher education is not an explicit goal.

A heterogeneous group of learners

Learners enrolled in programmes leading to an EQF 5 qualification are a heterogeneous group as regards their education, age and/or work experience. However, in many countries, quantitative data on student background are unavailable. Indicative data show that EQF level 5 qualifications are especially attractive to students with a VET background and those already in employment. In the Netherlands, in 2009-10, 63% of students enrolled in the AD programme came from upper secondary VET, while 22% had general upper secondary education and 15% had started higher education before. The dominance of learners with vocational background clearly underlines the potential of short-cycle programmes to support further learning. In Denmark, one third of the participants in SCHE in supplementary courses (for adult learners) in 2011 already had a qualification higher than, or at the same level as, the EQF 5 qualification they want to acquire. This may indicate the potential of short-cycle programmes to offer specific competences desired by the labour market. It also suggests that people in their career feel the need to acquire a (new) qualification to change their career or to complement their skills. The other participants also include non-traditional learners with low formal qualifications who have acquired access through validation of working experience.

Learning outcomes as work in progress

Qualifications at EQF level 5 are progressively described in terms of learning outcomes. In some countries, for example Austria and Portugal, this is still work in progress. The way learning outcomes are used and structured differs across qualification types and countries. First, learning outcomes of a degree programme are rather broadly formulated while those in modules or units are more operationalised to guide the design of assessment. Second, the terminology used differs across qualifications and countries. Some of the qualifications include categories comparable with EQF (knowledge, skills and competence) through the use of NQF descriptors. In the case of SCHE, they need to reflect the Dublin descriptors ⁽¹⁰⁾. However, other learning outcome categories are also used. Evidence suggests that, in most cases, the learning outcomes described are developed from a professional/occupational profile

⁽¹⁰⁾ The Dublin descriptors, developed within the joint quality initiative, from 2001 and onwards, are part of the framework for qualifications of the European higher education area (EHEA). They include level descriptors for short-cycle qualification.

agreed on with labour market stakeholders and are therefore often related to or expressed in competences.

Assigning qualifications to NQF level(s)

As EQF level 5 qualifications exemplify, countries either assign individual qualifications (as in Belgium (Flanders) or the Czech Republic), or types of qualifications (as in Luxembourg and the Netherlands) to their NQFs. The latter approach is usually taken in the initial phase of the NQF. Newly developed or revised qualifications will be assigned to levels individually.

The appropriate level can be identified by comparing the descriptors of qualifications and levels (as in Denmark, Estonia or Luxembourg) and/or by taking into account how qualifications are regarded in society (as in Austria). Sometimes other (additional) criteria are used, such as the duration of a programme or the workload associated with it (as in Denmark, Malta or the Netherlands).

Comprehensive and learning-outcomes-based NQFs, which include all types and levels of qualification, provide us with the opportunity to understand better how different subsystems of education and training – and the qualifications awarded by them – interact with each other. This interaction is critical to the ability of education and training to promote lifelong learning and for learners to progress across institutions and systems.

Policy messages

The Cedefop study demonstrates that EQF level 5 qualifications play an important role; in particular, they help achieve a range of policy objectives in response to challenges EU countries are facing:

- (a) they allow people to acquire advanced technical and/or management competences improving their job prospects and helping them change or progress in their careers. This is in line with Cedefop skills forecasts (Cedefop, 2012c), demonstrating the increased demand for skills of this type;
- (b) their double function – combining labour market-orientation with progression opportunities to/within higher education – makes them attractive to learners;
- (c) they demonstrate the importance of vocationally- and professionally-oriented qualifications in tertiary, higher education and training;
- (d) qualifications at level 5 contribute to lifelong learning by being attractive and accessible to adult and non-traditional learners;

- (e) in many countries, access to programmes and qualifications at level 5 can be acquired through validation of work experience and non-formal and informal learning;
- (f) they are seen as valuable and relevant by employers, reflecting that most of them include some form of work-based learning;
- (g) they seem to be attractive for people who have already acquired some kind of higher education degree, offering possible labour market specialisation. This illustrates that progression can go in many directions, vertically as well as horizontally;
- (h) by acting as a bridge between education and training institutions and subsystems they can promote interaction (vertically and horizontally) between VET and higher education. This is important as it highlights the added value of VET at all qualification levels, contributing to the overall attractiveness and image of VET;
- (i) further exploring the different types and purposes of qualifications at EQF level 5 in European countries could help policy-makers identify gaps in their own qualifications landscape and use this level as a platform for developing new qualifications.

The Cedefop study of qualifications at EQF level 5 also provides important lessons for the implementation of learning outcomes and NQFs:

- (a) describing qualifications in learning outcomes is work in progress. The study suggests stimulating the use of the learning outcomes approach for describing individual qualifications and assigning them to NQF levels on the basis of this description;
- (b) the study evidence also identifies the need to improve the transparency of procedures for assigning qualifications – obtained in formal, non-formal and informal learning contexts – to NQF levels.

CHAPTER 1.

Aim of the study, conceptual framework and research questions

1.1. Background to the study

Education and training play a crucial role in Europe's economy and society because economic welfare strongly depends on the knowledge, skills and competences of the workforce. Implementation of the EQF, allowing for a systematic comparison of national qualifications from a learning outcomes perspective, has demonstrated the critical role played by qualifications operating at the crossroads of general, vocational and academic sectors. These qualifications, in many cases placed at EQF level 5, are growing in importance and provide interesting examples of how European education and training is adapting to changing labour market needs and requirements.

The EQF, adopted by the European Parliament and Council in April 2008 (European Parliament and Council of the EU, 2008), is a common European reference framework acting as a translation device to make qualifications acquired within different education and training systems in Europe more readable and understandable. The core of the EQF is its eight reference levels described in terms of learning outcomes ⁽¹⁾. This enables the EQF to serve as a bridge between national qualification systems and the different subsystems these build on (general, vocational or higher education) and learning contexts (formal, non-formal and informal learning) ⁽²⁾.

To use the EQF as a translation and comparison device, countries are asked to link the levels of their national qualifications systems or frameworks to the EQF

⁽¹⁾ Learning outcomes means statements of what a learner knows, understands and is able to do on completion of a learning process, which are defined in terms of knowledge, skills and competence (European Parliament and Council of the EU, 2008).

⁽²⁾ The establishment of the EQF and the development of NQF can be considered a global phenomenon. According to the ETF et al. (2013), frameworks are either established or being developed in 142 countries around the globe.

levels. By June 2012, 15 countries ⁽¹³⁾ had finalised this process and presented their EQF referencing report ⁽¹⁴⁾.

During this process it became evident that qualifications at level 5 play a more important role than previously understood. While not fully integrated into the three cycles of the Bologna-process, their position in relation to IVET is in many cases unclear and difficult to judge. This institutional ‘invisibility’ hides a landscape of diverse and dynamic qualifications playing (increasingly) important roles in relation to the labour market and further education and training.

The purpose of the study is to open up this landscape. Our initial assumption is that level 5 is used differently in national contexts. It might accommodate a variety of different qualifications since it operates at the crossroads of general, vocational and academic education and training. In some countries, EQF level 5 qualifications might be a very recent phenomenon.

1.2. Key research questions

The purpose of this study is to acquire better understanding of the roles and functions of qualifications referred to level 5 of the EQF, for further learning as well as for employment. The study also aims to strengthen our understanding of the way in which the learning outcomes approach is applied in the design of qualifications and qualifications frameworks across Europe, using level 5 as a reference point. The detailed research questions are listed below:

- (a) which qualifications have been referenced to level 5 of the EQF; to what extent do countries differ in their use of level 5?
- (b) what are the key purposes and functions of qualifications assigned to EQF level 5? What is their ‘currency’ on the labour markets and/or in further learning?
- (c) what is the profile – expressed in terms of learning outcomes – of qualifications assigned to the EQF level 5?
- (d) how have the learning outcomes and ‘best fit’ approaches been applied for assigning qualifications to EQF level 5 across countries? What were the

⁽¹³⁾ Belgium (Flanders), the Czech Republic, Denmark, Estonia, Ireland, France, Croatia, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Austria, Portugal, the United Kingdom (EWNI and Scotland).

⁽¹⁴⁾ By the end of 2013, 21 countries had linked their national qualification levels to the EQF. Referencing reports are available at: http://ec.europa.eu/eqf/documentation_en.htm [accessed 16.12.2013].

main challenges and opportunities faced by countries? Which other criteria have been used for placing qualifications at level 5?

1.3. Conceptual framework

The study's conceptual framework includes the following building blocks:

- (a) the context in which EQF level 5 qualifications play a role differs from country to country. This has many reasons, including the existing qualifications system and their organisation, traditions, cultural attitudes towards these types of qualifications, and labour market dynamics;
- (b) the level descriptors for EQF level 5 are the common reference for all countries and so provide a basis for comparison;
- (c) the NQF/national qualification system and NQF level descriptors related to EQF level 5. The qualifications are allocated to the national levels and the descriptors of these levels determine – *in abstracto* – the learning outcomes related to a level 5 qualification;
- (d) level 5 qualifications can be delivered in different subsystems and each subsystem can have different rules, regulations and rights attributed to the qualification. While the level of the qualification might be the same, its value (for further learning or at the labour market) can be different, and use of learning outcomes as a reference point for the development, quality assurance and provision of qualifications can also differ. Therefore, the characteristics of these qualifications and qualification types can be quite different;
- (e) the aim of the implementation of the EQF and NQFs is to foster (labour) mobility and lifelong learning. This is pursued through making qualifications systems more transparent, coherent and comparable.

A number of principles determine whether qualifications at EQF level 5 lead to better (labour) mobility, access to the labour market and lifelong learning:

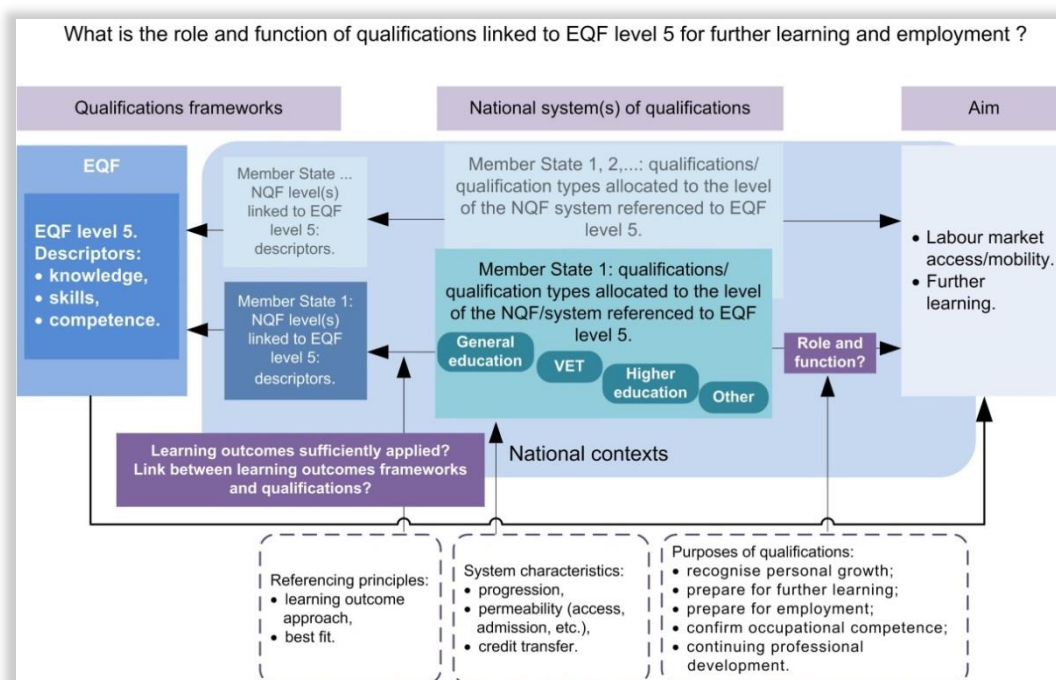
- (a) referencing (to the EQF) process and the principles applied. This includes the levelling of qualifications within a country, the methods applied and the factors that play a key role in this context (such as political factors and stakeholder perception of a specific qualification or qualification type);
- (b) the general characteristics of the qualifications system include that it is permeable, meaning that:
 - i. progression is possible;
 - ii. it includes validation of non-formal and informal learning procedures;
 - iii. credit transfer is stimulated.

The characteristics of the qualifications system and the employment regimes determine whether the qualifications at EQF level 5 indeed lead to better (labour) mobility, access to the labour market and lifelong learning; in other words, whether qualifications systems are indeed closely related to labour market needs and whether there is strong involvement of labour market stakeholders in education and training;

- (c) the qualifications/qualification types are described in terms of learning outcomes.

Through mapping and analysing the relationship between these building blocks questions on the role and function of EQF level 5 qualifications in the different countries are asked and answered. The use of learning outcomes in designing qualifications and assigning them to the NQF levels is also explored. Figure 2 provides an overview of the key concepts discussed.

Figure 2 **Conceptual framework study qualifications at EQF level 5**



Source: Cedefop.

1.4. Description of methodology

The methodology included several research activities carried out in two phases. The first phase provided an overview of EQF level 5 qualifications within national qualification systems, their characteristics and purposes, including how they help

progress to further learning and in the labour market. The 15 country reports create a picture of qualifications linked via NQFs to EQF level 5.

The second phase focused on six case studies and a series of interviews with learners/employees, employers and training providers linked to specific EQF level 5 qualifications. These focused on how institutions, learners/employees and employers use qualifications linked to EQF level 5.

1.4.1. Country overviews and analysis

The country reviews and analysis were prepared from desk research and semi-structured interviews conducted with at least four key stakeholders and experts in most of the countries examined (ministries of education, qualifications agencies, quality assurance bodies and social partners).

To ensure compatibility of information and analyse the data set, a common template was developed focusing on two aspects:

- (a) analysis at country level explored key characteristics of the context and national qualification system, conceptualisation of qualification levels and learning outcomes, implementation of the NQF and referencing to the EQF, and positioning of qualifications referenced to EQF level 5 within the national qualification system;
- (b) analysis at qualification/qualification type level focused on the qualifications linked to EQF level 5, their key design feature, purposes and functions, involvement of stakeholders in their design and governance features, plus relevance for labour market and further learning.

1.4.2. Case studies

The comparative overview is supported by six case studies, which analyse how specific qualifications linked to EQF level 5 are used by institutions, individuals and labour markets. Particular attention is paid to: whether and how qualifications are defined through learning outcomes; the principles according to which these definitions and descriptions of learning outcomes are made; and the extent to which these definitions point to problems in parity of esteem and equivalences.

The following countries were selected for more in-depth study: the Czech Republic, Ireland, France, Lithuania, the Netherlands and Austria. Several criteria supported selection: they represent different types/traditions of qualifications systems (e.g. Ireland, France, Austria); they provide geographical coverage (east European country, Anglo-Saxon country, western countries and the Baltics); and there are countries with and without frameworks for subsystems (the Czech Republic (with), the Netherlands (without)). The study includes not only those qualifications already assigned to the EQF level 5 but also some that could, or will be linked to level 5 (in Lithuania and the Netherlands). These are included to

gather information on the rationale for introducing level 5 qualifications as well as reasons why these qualifications are not (yet) linked to level 5 and on procedures for linking them.

Table 1 **Overview of qualifications examined in the case studies**

Country	Type (national language/English translation)	Name of specific example
CZ	Profesní kvalifikace/vocational qualification	Vocational qualification HR generalist
		Vocational qualification tour guide
		Vocational qualification bereavement counsellor
IE	Advanced certificate	Advanced certificate in professional cookery
	Higher certificate	Higher certificate in culinary arts
FR	Diplôme universitaire de technologie/university diploma of technology	University diploma of technology in the management of enterprises and administrations (DUT-GEA)
NL	Associate degree	Management in health care
AT	Reife- und Diplomprüfung der berufsbildenden höheren schule (BHS)/VET college <i>Reifeprüfung</i> certificate and VET diploma	VET college of business administration
		VET college of engineering (the electronics and technical computer science speciality is selected)
Qualifications currently not linked to level 5		
LT	Two potential level 5 qualifications – paramedic and sewing designer – planned to be provided in IVET school have been analysed.	
	Two potential short-cycle study qualifications – accountant and technician of mechatronics (automated operation) – planned to be provided by higher vocational education colleges have been studied.	
NL	The way a private provider is struggling to apply the learning outcome approach to get the qualification included in the Dutch qualifications framework at level 5: corporate account manager in one of the largest banks.	

Source: Cedefop.

The in-depth case studies were based on a combination of desk research and site visits. Desk research included policy documents, studies, evaluation reports, academic studies on the topic, brochures, curriculum plans of particular studies, descriptions of learning outcomes, statistics on job entry, and learning pathways (if available). Site visits included interviews with at least three groups of stakeholders:

- (a) graduates/employees having a qualification linked to level 5, those enrolled in study programmes leading to the qualification (or in case of validation of prior learning learners, those taking part in the respective procedure);
- (b) employers recruiting people with level 5 qualifications, encouraging employees to develop through taking up such qualifications;
- (c) providers/associations of providers that provide qualifications linked to EQF level 5 in different subsystems (general, vocational, higher and private sectors).

A total of 10 institutions were visited where qualifications linked to EQF level 5 are offered. Approximately 150 people contributed to the knowledge base of this study (see Annex 2).

1.5. Outline of the report

After the introduction of the study context, aims and methodological approach in Chapter 1, Chapter 2 provides a detailed overview of qualifications at EQF level 5 and how countries use this level. Quantitative data on students, qualifications, and programmes linked to EQF level 5 are presented in Chapter 3. Chapter 4 discusses purposes and functions of qualifications at EQF level 5 and provides a detailed account of diversity of routes to/from employment, from/to education. Although quantitative data on student background are unavailable in many countries, Chapter 5 provides some indicative data on the education background, age and work experience of learners at EQF level 5. Chapters 6 and 7 study the use of learning outcomes in describing qualifications and assigning them to NQF levels. The report concludes with Chapter 8, conclusions and key policy messages.

CHAPTER 2.

Diversity of EQF level 5 qualifications

2.1. Bridging general education, VET and higher education

Education and training systems traditionally have separate and distinct subsystems (general, vocational and academic/higher education) which are usually related to one another in a strict hierarchy of primary, secondary and tertiary education (Cedefop, 2012a). This works well as long as learners follow a predefined route in their chosen area and subsystem. However, the segmentation can also create institutional barriers to switching between subsystems and could introduce dead-ends. Countries differ as regards how permeable (not segmented or compartmentalised) their education and training systems are. This depends on the path of institutional development and actual reforms. Given the emphasis on lifelong and life-wide learning and learning/labour mobility, countries are increasingly addressing the need to build bridges and pathways across education and training subsystems.

As demonstrated by this study, EQF level 5 operates across VET, higher and general education, with a heterogeneous range of qualifications awarded by a wide range of VET and higher education institutions. Half of level 5 qualification types are regulated by the higher education system or delivered under the responsibility of higher education institutions (in Belgium (Flanders), Denmark, Ireland, France, Croatia, Latvia, Luxembourg, Malta, the Netherlands and the UK) ⁽¹⁵⁾. Most of the level 5 qualifications included in the higher education system are awarded through SCHE programmes. There are also countries that have assigned VET qualifications to level 5. This is the case in the Czech Republic, Denmark, Estonia, Ireland, France, Luxembourg, Malta, Austria, Portugal and the UK. In addition, there are general education qualifications linked to the EQF level 5 in the UK (Scotland).

As already indicated by the European Association of Institutions in Higher Education (Eurashe) study (Eurashe, 2011) qualifications at level 5 remain quite blurred. When focusing on the learning outcomes of these qualifications, the distinction between VET and higher education is not always clear-cut. Also ties between institutions and qualification types are becoming looser. For instance,

⁽¹⁵⁾ See Table 2 for full overview.

the Maltese VET higher diploma is increasingly offered by higher education as the basis of a(n) (undergraduate) degree programme. In Portugal, the DET is registered as NQF/EQF level 5 VET qualification. However, the CETs leading to the qualification are provided by public and private higher education and non-higher education institutions. Also, the mode of acquisition of EQF level 5 qualifications is, in many cases, very flexible. For instance, the French DUT-GEA qualification based on the learning outcomes approach can be acquired through very different routes:

- (a) mainly through the university institutes of technology (*institut universitaire de technologie*) (IUT) school-based system combining theoretical and practical educational and training courses, including internship periods within private enterprises and/or public institutions;
- (b) apprenticeship systems where students spend over two thirds of their time at the workplace as remunerated employees within the enterprises/organisations and the remaining time is devoted to their courses with the IUT;
- (c) continuing vocational training (CVT) for working students through the use, for instance, of the professionalisation contract scheme (*contrat de professionnalisation*) (CP);
- (d) through the VAE.

The varied use of EQF level 5 in Europe and the variety of qualifications linked to EQF level 5 suggest that this level has the potential to play a very significant role in bridging subsystems in the transferability of qualifications and the promotion of lifelong learning. EQF level 5 can, for instance, provide the opportunity to strengthen the connection between higher education and VET and adult education, as well as for widening access to higher education. However, EQF level 5 could also represent a second choice for students who do not have access to traditional academic routes or who have failed in it and so could appear to be at a dead end (European Commission and EUCEN, 2009, p. 32). The EQF PRO project has identified three different situations regarding the opportunities offered in countries for continuity and progression between levels 5 and 6 (EUCEN, 2009, p.3):

- (a) in some countries (France, Slovenia, UK) there are bridges between levels 5 and 6 and between institutions, so if students or learners holding qualifications at level 5 wish to have access to bachelor programmes, they are entitled to enrol without any additional conditions;
- (b) in other countries (Belgium, Germany) students and learners are allowed to enrol in bachelor programmes on the basis of their results in transition

- programmes (of varying length). However, this implies extending the learning process;
- (c) in a third category of countries (such as Poland) students and learners have to start bachelor programmes from the beginning, without recognition of what they have done in other programmes.

EQF level 5 is often considered as the zone of overlap between vocational and higher education, although all levels of the EQF (i.e. also levels 6 to 8) are supposed to be open to qualifications acquired outside the higher education context. In this role of zone of overlap, level 5 can provide a missing link between secondary and higher education (Eurashe, 2011).

Where previous studies focused on only one type of level 5 qualifications, namely the SCHE qualifications, this Cedefop study covers all types of level 5 qualifications governed by different subsystems.

2.2. Qualifications and learning pathways: the learning contexts

Learning-outcome-oriented level descriptors enable the EQF to connect different national systems and to serve as a bridge between qualifications systems, different segments and learning contexts. For learning contexts, a distinction is made between formal, non-formal and informal learning. The concepts of formal and non-formal learning can sometimes lead to confusion, especially when they are discussed in relation to qualifications.

Learning pathways can include different learning contexts but may lead to the same results: a qualification. The EQF indicates the levels of learning outcomes of qualifications obtained irrespective of the learning context. However, in many countries there are close links between qualifications and education pathways and input variables (such as duration or location of learning, teaching content or teacher and trainer qualifications) which are considered as important quality assurance aspects. Confusion arises when the concepts of formal and non-formal are used to indicate a characteristic of a qualification or when it is used to provide an indication of who governs the qualification: the publicly governed system (formal) or privately governed system (non-formal). According to the EQF recommendation, 'qualification means a formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards' (European Parliament and Council of the EU, 2008).

In this context, formal indicates that the qualification is issued by a competent body in relation to a given standard and has a social value (rights and

obligations) both in the labour market, education system and society at large. However, this formal qualification can be obtained through learning taking place in formal, non-formal and informal learning contexts.

The distinction between the qualification and the education programme related to it needs to be discussed. In many countries, the title of a qualification indicates both the qualification/title awarded and the education programme leading to this qualification: no distinction is made between the outcomes of the learning process and the learning pathway. This relates to the difference between qualifications framework (focusing on outcomes), and education system (focusing on organisational aspects). As in many countries, this is not clear-cut, blurring the distinction between qualification as proxy of someone's competences (focusing on outcomes) and qualification as an education programme (focusing on organisational aspects).

2.3. Overview of level 5 qualification types

The focus of this study is qualifications linked to EQF level 5. Individual qualifications, however, are grouped in qualification types.

A qualification type is a group of titles/diplomas and/or certificates within a country, sharing similar characteristics in terms of level, duration of related education pathway, and level of labour market entry. Within a qualification type, there can be many different qualifications according to content.

This is reflected in the titles included in the overview Table 2. Examples of qualification types are the advanced certificate (Ireland), the master craftsman diploma (in Luxembourg), and the AD (in the Netherlands). All types of qualifications consist of individual, specialised qualifications.

From Table 2, we can conclude that a diverse mix of qualifications is located at levels of NQFs referenced to level 5 of the EQF. Box 1 provides illustrative examples of specific qualifications from a number of countries.

Table 2 Overview of qualifications

Member States	Name (national language/English translation)	Subsystem (governance)
BE (FI)	Hoger Beroepsonderwijs 5 (HBO5)/higher vocational education 5	Higher education (SCHE)
	Beroepskwalificaties/professional qualification	VET
CZ	Profesní kvalifikace/vocational qualification	Subsystem for recognition and validation of the outcomes of continuing education
DK	Erhvervsakademiuddannelser/academy profession degree (AP)	Higher education (SCHE)
	Erhvervsuddannelse/vocational degree	VET
EE	Kutsed/occupational qualification	Occupational/professional qualification system
IE ⁽¹⁶⁾	Higher certificate	Higher education (SCHE)
	Advanced certificate	VET/further education and training
FR	Brevet de technicien supérieur/higher technician certificate	Higher education (SCHE)
	Diplôme universitaire de technologie/university diploma of technology	Higher education (SCHE)
	Certificats de qualification professionnelle (CQPs)/vocational qualification certificates	CQPs are sector-specific qualification integrating within related CVET system
	Brevets de maîtrise/master craftsman diploma	VET
HR	Majstorski Ispit/master craftsman exam	A form of post-secondary adult professional education (CVET)
	Stručni Studij/short-cycle professional study	Higher education (SCHE)
LV	Pirmā līmeņa profesionālās augstākās izglītības diploms/diploma of first level professional higher education	Higher education (SCHE)
LU	Brevet de maîtrise/master craftsman diploma	CVET
	Brevet de technicien supérieur/higher technician certificate	Higher education (SCHE)

⁽¹⁶⁾ There are also international qualifications (such as those from Microsoft) allocated to the NQF level that is referenced to EQF level 5; they are admitted to the NQF as special purpose awards. However, there are few private qualifications of significance coming forward for recognition in the framework.

Member States	Name (national language/English translation)	Subsystem (governance)
MT	Undergraduate diploma ⁽¹⁷⁾	Higher education (SCHE)
	Undergraduate certificate	Higher education (SCHE)
	VET higher diploma	VET ⁽¹⁸⁾
NL	Associate degree ⁽¹⁹⁾	Higher education (SCHE)
AT	Reife- und Diplomprüfung der BHS/VET college <i>Reifeprüfung</i> certificate and VET diploma	IVET/CVET
PT	Diploma de especialização tecnológica/technological specialisation diploma	Post-secondary non-higher education, but can be considered SCHE and are provided by higher education and non-higher education institutions
UK (EWNI)	Foundation degree	Higher education (SCHE)
	Professional qualification (government regulated) ⁽²⁰⁾	VET
UK (EWNI/Sco)	Certificate or diploma of higher education	Higher education ⁽²¹⁾
	Higher national diploma (HND) and higher national certificate (HNC)	VET
UK (Sco)	Advanced higher	General education
	Scottish baccalaureate	General education
	Professional development awards	VET
UK	Professional qualification (unregulated) (international) ⁽²²⁾	VET

Source: Cedefop.

⁽¹⁷⁾ Interchangeably used with foundation degree.

⁽¹⁸⁾ Increasingly offered by higher education as the basis of a degree programme. It can be classified as SCHE since it can provide exemption from some of the requirements of a three-year bachelor programme.

⁽¹⁹⁾ The name is in English.

⁽²⁰⁾ In EWNI, the national vocational qualification (NVQ) has now been made redundant. Instead there are unitised regulated occupational qualifications that cover the same occupational standards, included in QCF. In Scotland, however, the NVQ still exists and is called Scottish vocational qualification (SVQ).

⁽²¹⁾ This qualification is managed by universities, but is designed with employers and involves work placements and employer input to the assessment regime.

⁽²²⁾ These qualifications are awarded by the body concerned and not regulated by government (but by professions or professional bodies).

Box 1 Examples of qualifications linked to EQF level 5**Denmark**

A concrete example of the AP is the AP degree in logistics management, offered by the Lillebaelt Academy of Professional Higher Education in Vejle, which is directed at students who completed an equivalent of Danish upper secondary education or students with a previous vocational training programme within trade and office administration. The AP degree in logistics management is focused on several occupation-specific competences with regards to running a business in the logistics sector.

Ireland

The Higher certificate in business programme (Dublin Business School) is designed to equip students with a range of knowledge and practical skills, which will form the basis for commencing a career in general business or for progressing to higher-level academic qualifications.

The Irish course Advanced certificate in agriculture has been developed to provide the education and training needed by future farmers and skilled workers in the agri-industry. In addition to careers in farming, people completing this course can aspire to jobs in farm management, environmental management and monitoring, agri-industry, sales and marketing, and quality control.

Luxembourg

BTS (specialised) *assistant de direction* ⁽²³⁾ prepares learners as a secretary for the board, by providing general competences and competences specifically required for an administrative career in the private or public sector. Theoretical concepts are related to the perspective of the economic and legal position of Luxembourg. As such, it is primarily a preparation for employment.

The Netherlands

The AD Small business and retail management (dual), offered by Fontys Hogeschool, aims at employees working in retail and fast-food who would like to grow towards a managerial function within their work. The AD has more tactical-operationally directed content, aimed at implementing strategic plans (marketing, sales communication) towards working at the level of middle management (Fontys hogeschool, 2013).

Portugal

An example is the qualification DET in quality, environmental and safety management (*técnico/a especialista em gestão da qualidade, ambiente e segurança*). This qualification has recently been introduced (September 2012) into the national qualifications catalogue (NQC) ⁽²⁴⁾. The general description of this qualification includes the following competences: to be able to plan, coordinate, promote and ensure the implementation and continuous improvement of the management of quality systems, environment and safety, in accordance with the relevant standards and legislation, contributing to the efficiency and competitiveness of organisations.

⁽²³⁾ *Assistant de direction*, offered by the Technical High School of Business and Management (Lycée technique école de commerce et de gestion) (LTECG) (LTECG, 2013).

⁽²⁴⁾ <http://www.catalogo.anqep.gov.pt/Qualificacoes?Page=&Designacao=gestao+da+qualidade%2C+ambiente+e+seguran%C3%A7a&AreasFormacaoId=&CodigoArea=&Nivel=5&RVCC=false> [accessed 16.12.2013].

The UK (Scotland)

The Advanced higher chemistry is made up of four mandatory units. The course develops the underlying theories of chemistry and the practical skills used in the chemical laboratory. The study of chemistry at advanced higher level develops the candidate's knowledge and understanding of physical and natural environments. The course also develops the skills of independent study and thoughts that are essential in a wide range of occupations.

The Scottish baccalaureate in expressive arts, languages, science and social sciences consists of a coherent group of current higher and advanced higher units in science and languages. What makes a Scottish baccalaureate unique is the interdisciplinary project, which is an advanced higher unit in which subject knowledge is applied in realistic contexts. This is likely to involve working outside school in a college or university, or in a community or workplace setting. The Scottish baccalaureate is aimed at enabling academic school students who have a clear commitment to an area of study.

Source: Cedefop.

2.4. Country differences in level 5 use

Level 5 qualifications status differs across countries. Some have no qualifications linked to the equivalent level 5 of the EQF, others have recently introduced level 5-type qualifications, and a further group have a diversified landscape of level 5 qualifications. Table 2 provides an overview of the level 5 qualifications identified in this study.

2.4.1. Qualifications outside the formal system linked to EQF level 5

There are two countries with only qualifications from outside the formal system linked to EQF level 5: the Czech Republic and Estonia. In the Czech Republic, level 5 is currently not present within initial education. Level 5 does not constitute a distinctive degree of education, and cannot accommodate any form of comprehensive qualification. Upper secondary graduates with either general or VET qualification at level 4 (*maturita*) progress directly to level 6 programmes; these may be tertiary vocational programmes (or artistic programmes in conservatories) leading to the level 6 degree of certified specialist (*diplovaný specialist*), but not granting access to level 7 programmes, or university and college, though bachelor programmes are also linked to level 6 and grant access to the master cycle at level 7 ⁽²⁵⁾. The concept of SCHE has not yet been

⁽²⁵⁾ In certain educational fields, for example medicine, the bachelor cycle is missing and instead the students enrol in a long master programme (five to six years) at level 7 directly after graduating from a level 4 programme.

introduced in the Czech system. Its establishment is being considered as one of the next steps of higher education reform as the short-cycle has already been foreseen at level 5 of the national framework for higher education (Q-Ram). Therefore, the only Czech subsystem currently accommodating level 5 qualifications is continuing VET regulated by Act 179, aimed at the recognition and validation of non-formal and informal learning outcomes and implemented through the national register of qualifications (NSK). As of April 2013, the following six individual vocational qualifications have been referenced to NSK level 5 (linked to EQF level 5): agricultural advisor for plant production; HR generalist; project administrator; tour guide; tourist information centre manager; and bereavement counsellor. More qualifications are being developed.

In Estonia, there are currently only the so-called occupational/professional qualifications linked to EQF level 5. These are provided mainly by CVET providers and through in-service training in enterprises. There were discussions regarding the introduction of SCHE qualifications in Estonia in 2002 and 2003, but these did not develop into the introduction of such qualifications due to the absence of demand for them in the labour market. Most recently, the new VET Act (adopted in 2013) provides the legal basis for initial and continuing vocational qualifications and training at NQF/EQF level 5.

2.4.2. Countries with single qualification type linked to level 5

Latvia and the Netherlands link SCHE qualifications to EQF level 5. In Latvia, this is the case for the diploma of first level professional higher education, provided by the colleges of higher vocational education and regarded as a SCHE degree (a kind of introductory degree) of higher education. In the Netherlands, qualifications at level 5 have only recently been introduced. The Dutch AD was officially implemented in 2006, though a pilot phase was conducted first to set out exactly how this new qualification could be designed. Several pilot rounds have been organised since 2006-07 to gain experience with this new type of qualification. As of 1 September 2013 the AD is formally included in the legal framework as a new qualification based on the revised Law on Higher Education and Science. In total, 149 AD programmes are accredited by the Accreditation Organisation of the Netherlands and Flanders (Nederlands-Vlaamse Accreditatieorganisatie) (NVAO).

An AD programme is a two-year segment within a four-year professional bachelor programme. Despite being closely linked to a professional bachelor award, after completion of the AD programme, the AD and professional title AD is awarded: it is a complete programme allowing entry to the labour market. It also provides the right to further study in the related bachelor programme and to obtain a bachelor degree within two years. AD programmes are provided by the

universities of applied sciences (*hogescholen*). They are SCHE programmes, included in the higher education framework, according to the Dublin descriptors.

In Portugal, the DET is linked to level 5, which is a special modality of VET offering learners a double objective. While beneficiaries can update competences and develop new ones through practical training oriented to the labour market, DETs are an alternative gateway to higher education, particularly relevant for those who have been away from education and training for some time. Generally, it is a SCHE, though it is also considered a post-secondary non-tertiary education programme. Although, it is included in the NCQ for VET qualifications, programmes leading to the qualifications are provided by public and private higher and non-higher education institutions. The qualifications are also included in the qualifications framework for higher education.

There are also countries with VET qualifications linked to level 5, as is the case in Austria. Here, also due to the fact that so far no qualifications have been formally included in the Austrian NQF ⁽²⁶⁾, currently only one qualification type is linked to EQF level 5, the VET college *Reifeprüfung* certificate and VET diploma (hereafter called VET college qualification). This qualification comes in many different forms and with many different specialisations, relating to a range of different sectors. VET college programmes in their main form are provided as five year, full-time upper secondary education programmes. They are also offered as a post-secondary VET course and as a VET college for people in employment (CVET). VET colleges prepare their students both for employment (direct labour market entry) and for further learning. Graduates of VET colleges acquire a double qualification, the *Reifeprüfung* certificate, which grants them general access to higher education, and a VET diploma, which allows them to hold senior occupations in their respective fields. To date, and due to the development stage of the Austrian NQF, it is unclear whether any qualifications other than the VET college qualification, will be allocated to NQF level 5. However, some potential level 5 qualifications (e.g. from the non-formal learning context) are currently being discussed.

2.4.3. Higher education and VET qualifications linked to EQF level 5

There are countries where two types of level 5 qualifications exist. Usually, in these countries, a stricter distinction is made between VET and higher education qualifications at level 5.

⁽²⁶⁾ The Austrian EQF referencing report merely states a list of so-called reference qualifications which should, more or less, serve as a benchmark, i.e. selected qualifications from the Austrian qualification landscape which aim to illustrate the requirements connected with the levels and make them more easily understood.

In Belgium (Flanders), a distinction is made between educational ⁽²⁷⁾ and professional qualifications. The HBO5 programmes are the only educational qualifications that are linked to the Flemish qualifications framework/EQF level 5. Even though the HBO5 programmes are, in name, new in Flanders, only formalised by the recent 2009 Parliamentary act, the level already existed in the form of higher education for social promotion (HOSP). HBO5 has a double function; it can be seen as higher vocational education (*Hoger Beroepsonderwijs*), while it is also a SCHE. Currently, these level 5 qualifications are mainly acquired in adult education programmes offered in evenings and at weekends. There are also professional qualifications on this level. A professional qualification is a set of competences allowing an individual to exercise a profession. Individuals may acquire professional qualifications, both inside and outside education.

In Denmark, two types of qualifications are linked to EQF level 5. Denmark offers so-called AP degrees at EQF level 5, both in higher education and as part of adult learning. Vocational qualifications are also linked to EQF level 5. AP programmes are of varying length (90-150 European credit transfer and accumulation system (ECTS)) and comprise independent, rounded-off courses covering both theory and practice in a specialised field of study. Admission is conditional on a successfully completed general or vocational upper secondary education as well as the fulfilment of certain requirements related to the particular subject area. However, the programmes may offer an intake assessment to evaluate previously acquired competences, and so are relatively open to students. AP programmes are regulated as SCHE. Approximately 100 different programmes across the country are generally offered by academies of professional higher education and exist in administration, agriculture, biotechnics, building, business studies, catering and hospitality, information and communication technology (ICT), engineering, environmental/protection studies, leisure, recreation, mechanics, multimedia and product development. Some AP programmes are also offered as part of adult education (continued adult education, *Viderregående Voksuddannelse*), and are generally shorter in length than regular AP programmes. VET programmes leading to vocational qualifications linked to level 5 last approximately five years, and provide students with a thorough (often) technical vocational education. Other vocational

⁽²⁷⁾ An educational qualification is a set of competences an individual needs to participate in society, to start further education and/or to exercise professional activities. An individual can only acquire an educational qualification through education and only in institutions recognised by the Flemish authorities can grant certificates for these qualifications.

programmes linked to a lower level on the Danish qualifications framework last between one and a half and three years; these level 5 vocational programmes are longer and more demanding than other EUDs. These programmes are relatively spread across different sectors but often have a technical emphasis. Few individual programmes currently exist at this level but, given their relevance for the labour market, an increase in such programmes is expected.

Another country having two different types of qualifications linked to level 5 is Luxembourg. One type, the master craftsman diploma (*brevet de maîtrise*), is a specific VET programme, based on the German *meister* system. After gaining a vocational qualification (vocational aptitude diploma), it is possible to continue vocational education at the level of the master craftsman diploma. Holders of this qualification may set up businesses as self-employed persons in the crafts sector and may also take on apprentices. This VET certification is organised by both the Chamber of Crafts (*Chambre des Métiers*) and the Ministry of Education and Vocational Training. Even though the Ministry is formally responsible, in practice the Chamber organises the courses and examination leading to this certificate and so plays a crucial role in defining the standards of this qualification. Qualifications of this type are very diverse; some are technical in nature while others mainly focus on more managerial tasks. Economic sectors covered are: food, fashion and health, mechanical engineering, construction, communication and other professions (Centre de promotions et de recherche, 2011). A second type of qualification linked to EQF level 5 is the BTS. These programmes are organised as SCHEs (lasting between two and two and a half years) and are open to students who have finished secondary education. In contrast to the master craftsman diploma (*brevet de maîtrise*), this qualification falls under the competence of the Ministry of Higher Education and Research. BTS programmes generally offer technical and theoretical education at a higher level, while retaining a vocational focus.

Croatia has two different types of level 5 qualifications: a post-secondary non-tertiary education qualification (master craftsman qualification, *Majstorski Ispit*), and the SCHE qualification (*stručni studij*). The master craftsman qualification leads to the acquisition of 'additional competences compared to ones previously acquired' (Croatian Agency for Science and Higher Education, 2012, p. 29). Successful completion of the master craftsman exam is a precondition for running regulated trade businesses. This qualification is not part of university education and does not provide for progression into higher education. The situation is expected to change with the adoption of the Law on the Croatian NQF (March 2013). Holders of a master craftsman qualification (Croatian qualifications framework level 5) will have the opportunity to progress to Croatian qualifications framework level 6 if they pass the *matura* exam in

obligatory subjects (Article 7 of the Law). The master craftsman exam is a way of formally recognising acquired competences (through work experience). The SCHE qualification (*stručni studij*) is provided by higher education institutions (universities, university constituents such as faculties and academies, polytechnics and colleges). A general requirement to access this qualification is to have three or four year upper secondary education; specific requirements are defined by higher education institutions in accordance with the qualification profile. Following the completion of SCHE (which last a minimum of two years) students are able to access first cycle professional degree programmes or enter the labour market.

2.4.4. Countries with a diversified landscape

A more diversified landscape at level 5 can be found in Ireland, France, Malta and the UK.

In Ireland, the advanced certificate, the higher certificate, (including, for both, major, minor, special-purpose and supplementary awards) and the UK qualifications (designed in the UK and used in Ireland) are linked to EQF level 5. The advanced certificate is the most common qualification; its quality is assured by the Further Education and Training Awards Council (FETAC), subsequently Quality and Qualifications Ireland (QQI) ⁽²⁸⁾ and national standards are set. Programmes leading to the award are generally run by further education institutions. An advanced certificate enables learners to develop a comprehensive range of skills, which may be vocationally-specific and/or of a general supervisory nature and require detailed theoretical understanding. Modules include advanced vocational or occupational skills, enabling certificate holders to work independently or progress to higher education and training. Most certificate/module holders at national framework of qualifications (NFQ) level 6 (i.e. EQF level 5) move on to employment; some of these may be self-employed.

The higher certificate is normally awarded after completion of an accredited programme lasting two years (120 ECTS credits) in a recognised higher education institution. It is quality assured by HETAC/QQI. Entry to these programmes is generally for school leavers and those with equivalent qualifications. The higher certificate is an intermediate qualification within the Bologna first cycle; it is awarded in institutes of technology and is based on programme-specific standards within broad national field standards.

⁽²⁸⁾ In 2013, the National Qualifications Authority of Ireland (NQAI) and the quality assurance bodies (Higher Education and Training Council (HETAC) and FETAC) are merged into a single body for qualifications, the QQI.

There are also international qualifications (such as those from Microsoft) allocated to the NQF level that is referenced to EQF level 5; these are admitted to the NQF as special purpose awards (NQAI, 2010). However, there are few private qualifications of significance receiving recognition in the framework and some have chosen not to seek recognition in the NQF. For example, there is an accountant qualification that could be allocated to a level linked to EQF level 5, but the provider seeks alignment at a higher level and therefore sees little advantage in NQF alignment.

The UK situation is complex as several qualifications frameworks are in use. Before mapping and discussing the level 5 qualifications, the different qualifications frameworks are described in Box 2 in relation to EQF level 5.

Box 2 Five qualifications frameworks used among the four jurisdictions of the UK

In Scotland, the Scottish qualifications framework (12 levels and comprehensive) is evolving steadily, with recent developments in credit rating and the implementation of new level descriptors following a public review. It includes the framework for qualifications of higher education institutions in Scotland. The framework levels linked to EQF level 5 are Scottish qualifications framework levels 7 and 8.

In EWNI, the qualifications and credit framework (QCF) (9 levels and VET-based) is relatively new and supports a fully developed credit transfer system. It is not yet fully embedded, but there are about 40 000 units that form about 15 000 qualifications represented in the register of qualifications (Ofqual, 2012a). The original aim was for the QCF to become the main framework for qualifications in EWNI, but the current government took the view that changing key elements such as the school leaving qualifications, so that they could form part of the QCF, would damage public confidence in them. These qualifications now form part of the NQF (EWNI), which was to be replaced by the QCF. There is discussion about how these frameworks can be merged. The levels linked to EQF level 5 are QCF levels 4 and 5.

The NQF (nine levels and excludes higher education) is the oldest framework in EWNI and operates alongside the QCF. The NQF was broad in its scope and originally included all qualifications except those from higher education. The NQF has gone through a series of transformations, the latest dating back to 2002 when it became a nine-level framework. Its predecessor had 5 levels based on the NVQ/SVQ classification system. The level descriptors of the NQF have fallen into disuse.

The credit and qualifications framework for Wales (CQFW) (nine levels and comprehensive) is a broad framework that includes regulated general and VET qualifications, higher education qualifications and all quality assured lifelong learning. The CQFW includes the QCF, NQF and the framework for higher education qualifications (FHEQ). The level linked to EQF level 5 is CQFW level 5.

The FHEQ is a framework with five levels reserved for higher education qualifications. The FHEQ has been verified as compatible with the qualifications framework of the EHEA.

Source: Cedefop.

There are eight broad categories of qualifications linked to EQF level 5, each with a different rationale for their existence at this level ⁽²⁹⁾:

- (a) foundation degrees are designed to be closely related to labour market needs; they are largely managed by employment interests, but awarded by universities. They are generally two-year programmes aiming to lead people to employment or, less commonly, a full bachelor degree. These qualifications are not common in Scotland and not popular in Northern Ireland, where a publicity campaign is underway to support them. Currently, roughly 3% of awards in UK higher education are foundation degrees;
- (b) HNCs and HNDs are included in SCQF, QCF, NQF and CQFW. A HND is a work-related course provided by higher and further education colleges in the UK. A full-time HND takes two years to complete, or three to four years part-time. Generally, an HND is equivalent to the second year of university. A full-time HNC takes one year to complete or two years part-time. Many HNC courses cover the same subjects as an HND; an HNC can be topped up to an HND. The HNC is generally equivalent to the first year of university. These qualifications offer progression into work and career progression and, more commonly, in study to bachelor degrees;
- (c) certificates (FHEQ L4) and diplomas (FHEQ L5) of higher education, included in the FHEQ, are issued to recognise learning in the first cycle of the Bologna process. This learning might represent a foundation course for entrants, a stepping-stone *en route* to a bachelor degree, recognition of a smaller volume of learning, a business related specialist short programme (possibly a refreshment or upskilling in a profession). These certificates could be regarded as short-course recognition. Currently, roughly 13% of all higher education awards fall into this category;
- (d) the advanced higher and the Scottish baccalaureate (included in the SCQF) are both school-leaving qualifications that are equated to level 5 of the EQF. Both sit at the start of higher education levels of the SCQF and aim to recognise the highest level of achievement in matriculating from schools. For entry to higher education in Scotland, institutions typically make their decisions based on higher achieved at SCQF level 6;
- (e) SVQs, included in the SCQF, are qualifications that are wholly based on national occupational standards and learners, who are often workers, have their competence assessed directly against these standards. These qualifications exist at a range of SVQ-specific levels, including SVQ 4 that

⁽²⁹⁾ The status of level 5 in the UK is complex. The classification was discussed and agreed upon by principal stakeholders to create clarity of the situation in the UK.

- equates to EQF 5. Progression from these qualifications is usually work-based (getting a job or career development). These qualifications are part of most apprenticeship frameworks;
- (f) professional development awards (included in the SCQF) exist at all of the advanced levels of the SCQF, including at EQF level 5. These are designed to develop and deliver high-level skills for young people, graduates and adult learners. Employers can use them for improving employee skills;
 - (g) professional qualifications (government regulated) included in the NQF and/or QCF; these qualifications are designed and supported by business sectors to meet recruitment needs for specific jobs in the labour market. They are often part of apprenticeship frameworks ⁽³⁰⁾;
 - (h) professional qualifications that are awarded by the body concerned and not regulated by government. These qualifications often carry the title associateship or licentiate. The goal here is to offer professional recognition of practice. These may or may not be part of NQFs.

Malta has several qualifications linked to level 5 of the EQF through the Malta qualifications framework levels. The undergraduate certificate and the undergraduate diploma types include higher education qualifications operated by the University of Malta and are best considered as SCHE. The VET higher diploma type is closer to the world of work and many of these qualifications are operated by the Malta College of Arts, Science and Technology (MCAST), such as the HND in engineering. VET higher diplomas are gaining in popularity. In the future, a training programme that is considered to be at level 5 could be developed by the employment training corporation in collaboration with MCAST before seeking accreditation with the National Commission for Further and Higher Education.

France currently has two dominant types of EQF level 5 qualifications, the BTS and the DUT. These were inherited from the old higher education system and retained within the new licence-master-doctorate system introduced and implemented in accordance with the qualifications framework of the EHEA during the first half of the past decade. Along with these two basic and dominant qualification types, the following vocational qualifications are linked to EQF level 5:

- (a) CQP, which are sector-specific qualifications created and updated under the responsibility of social partners by the Joint National Commission for Employment (Commission Paritaire Nationale pour l'Emploi) (CPNE);

⁽³⁰⁾ In EWNI, the NVQ has now been made redundant. Instead there are unitised, regulated occupational qualifications that cover the same occupational standards. In Scotland, however, the NVQ still exists and is called SVQ.

- (b) BM, created and updated by the permanent assembly of the chambers of trades and crafts (Assemblée permanente des chambres de métiers et de l'artisanat) (APCMA).

In countries with a diversified landscape, more qualification types at level 5, additional to SCHE, focus directly on the labour market; these include international qualifications, private and sectoral qualifications. General education qualifications are also placed at this level (the UK).

The reasons for the more diversified level 5 landscape in certain countries are not the same. Mostly historic, autonomous developments took place which caused the landscape to be diversified: the qualification types have already existed for a long time and have a proven added value in the education and qualification system. Having a longstanding tradition of qualifications at a level 5 prompts new developments and brings forward new qualifications. As many qualification types are more related to the labour market than the (higher) education system, there is a stronger incentive to develop qualification types suitable to the needs of different employers. Another related reason is that the qualifications frameworks are more inclusive, often including qualifications outside the formal system (i.e. occupational/professional or sectoral qualifications). A final factor is that the qualifications frameworks are generally more mature than others within Europe (except for Malta, though its qualifications system is very much attuned to the Anglo-Saxon model). While qualifications frameworks have existed longer, level 5 is more firmly positioned/acknowledged in the education and qualification system. This helps position it as a self-standing level at which higher education, VET and general education offer different types of qualifications.

CHAPTER 3.

Progress in EQF level 5 qualifications importance

Based on quantitative data on EQF level 5 qualifications, programmes and students enrolled ⁽³¹⁾ an overall qualitative assessment of the current importance of EQF level 5 qualifications is provided in this chapter. The following country clusters are identified:

- (a) countries in which EQF level 5 qualifications play an important role: France and Austria;
- (b) countries where EQF level 5 qualifications have average importance: Denmark, Ireland, Luxembourg and the UK;
- (c) countries where EQF level 5 qualifications have some importance: Belgium (Flanders), Estonia and Latvia;
- (d) countries where EQF level 5 qualifications have been established recently and so have currently little importance: the Czech Republic, Croatia, the Netherlands and Portugal.

In Lithuania, there are no qualifications linked to EQF level 5 and from Malta it appeared difficult to obtain quantitative data, hence this country is not included in the analysis.

Each level of importance is discussed below and illustrations of quantitative data from the countries is provided ⁽³²⁾.

⁽³¹⁾ Due to differing data availability and quality, it is difficult to provide a consistent, comparative overview of qualifications (programmes and students) at EQF level 5. However, existing data can illustrate the current numerical importance of the qualification type in the countries studied. To aid comparative assessment, the number of qualifications issued from and of students enrolled in programmes at level 5 is further compared to the number of students enrolled in programmes at ISCED (international standard classification of education) levels 5 and 6. While ISCED does not include all qualifications currently covered by EQF 5, it is useful as (a) it helps determine the relative weight of EQF level 5 qualifications compared to all higher education qualifications; and (b) it allows international comparisons.

⁽³²⁾ For more information see Annex 3.

3.1. Countries where EQF level 5 is important

In France and Austria the ratio between students enrolled in NQF/EQF level 5 programmes and those enrolled in programmes at ISCED levels 5 and 6 (as benchmark) is one to three; for each student enrolled in an EQF level 5 programme, there are three students enrolled in ISCED 5 and 6 programmes.

Austria has approximately 370 different VET college curricula. Providers offering VET college qualifications can be found at more than 300 different locations across Austria; most, approximately 250, are public schools (Statistik Austria, 2013a). Some 26% of all learners in their 10th year of schooling attend a VET college; in 2011/12, more than 137 000 students attended such a college. In 2011, a total of 24 471 students graduated from a VET college, grouped as follows (Statistik Austria, 2013b):

- (a) VET colleges for engineering, arts and crafts: 10 154;
- (b) VET colleges of business administration: 6 670;
- (c) VET colleges of management and service industries: 4 975;
- (d) VET colleges of nursery teacher training and social pedagogy: 1 968;
- (e) VET colleges of agriculture and forestry: 704.

VET colleges of business administration and VET colleges for engineering, arts and crafts are the two most important in terms of the number of participating students. Table 3 provides an overview of graduate numbers for these two types and for the different forms in which they are offered.

Table 3 **Overview of graduates in two studies in Austria**

	Engineering	Business administration
Five-year full-time VET college (IVET)	8 206	5 924
VET college for people in employment	724	314
Post-secondary VET course ⁽³³⁾	772	161
Add-on course ⁽³⁴⁾	452	271
Total number of graduates	10 154	6 670

Source: Based on figures from Statistik Austria, 2013b.

⁽³³⁾ Post-secondary VET courses may be offered as full-time courses or as courses for people in employment (i.e. evening courses).

⁽³⁴⁾ Add-on courses typically have a duration of three years and provide people who have completed VET school or apprenticeship training (plus a preparatory course for the latter) with the *Reifeprüfung* certificate. Add-on courses lead to the *Reife- und Diplomprüfung* certificate of the corresponding VET colleges. Due to their limited significance in terms of student numbers, they are not dealt with separately within this case study.

In France, level 5 qualifications have a long history, reflected in the quantitative importance of the qualifications. The number of students following their BTS studies has been increasing during the past three years, from 240 322 during the academic year 2009/10 to 245 750 during the past year. The public sector remains the dominant provider of BTS, although its relative weight in providing this type of qualifications has reduced slightly from 67.1% in 2009/10 to 66.5% during 2011/12 in favour of an increased share of private sector providers. Table 4 provides an overview of the evolution of BTS students within public and private providers in the period 2009/10 to 2011/12.

Table 4 The evolution of BTS students within public and private providers from 2009/10 to 2011/12 in France

	2009/10	2010/11	2011/12
Public sector BTS students	161 220	162 298	163 492
Annual evolution (%)	1.6	0.7	0.7
% of all BTS students	67.1	67.0	66.5
Private sector BTS students	79 102	79 949	82 258
Annual evolution (%)	4.8	1.1	2.9
% of all BTS students	32.9	33.0	33.5
Total BTS students	240 322	242 247	245 750
Annual evolution (%)	2.6	0.8	1.4
% of all BTS students	100	100	100

Source: Ministère de l'Éducation Nationale et al., 2012.

The number of BTS qualifications awarded has also increased from 113 505 in 2010 to 114 914 in 2011, in particular within the specialties connected with the activities of the service sector which represented about 75% of all awarded BTS qualifications in 2011.

By contrast, the number of DUT students and qualifications awarded has been decreasing during the same periods. This is basically due to the increased weight of more labour-focused BTS within the EQF level 5 qualifications. Also, DUT qualifications are predominantly awarded within the specialties connected with the dominant service sector activities. Table 5 provides an overview of the evolution of DUT students by main sector of activity in the period 2009/10 to 2011/12.

Table 5 Overview of the evolution of DUT students by main sector of activity from 2009/10 to 2011/12 in France

	2009/10	2010/11	2011/12
Production sector DUT students	48 743	48 118	47 502
Annual evolution (%)	0.7	-1.3	-1.3
% of all DUT students	41.5	41.6	41.3
Services sector DUT students	68 596	67 579	67 516
Annual evolution (%)	-0.5	-1.4	-0.1
% of all DUT students	58.5	58.4	58.7
Total DUT students	117 339	115 697	115 018
Annual evolution (%)	0.0	-1.4	-0.6
% of all DUT students	100	100	100

Source: Ministère de l'Éducation Nationale et al., 2012.

The total DUT qualifications awarded in 2010 was 47 331.

Table 6 Evolution of awarded DUT students by main sector of activities in the period 2009-10

	2009	2010
Production sector	19 404	18 619
Annual evolution (%)	2.8	-4.1
% of all awarded DUT	40.4	39.3
Services sector	28 580	28 712
Annual evolution (%)	2.7	0.5
% of all awarded DUT	59.6	60.7
Total of awarded DUT	47 984	47 331
Annual evolution (%)	2.7	-1.4
% of all awarded DUT	100	100

Source: Ministère de l'Éducation Nationale et al., 2012.

These qualifications can also be obtained through the VAE. Among 10 298 VAE beneficiaries at all levels of higher education pathways during 2010, 6 159 obtained full validation with an immediate certification of their prior acquired experiential informal and non-formal learning. Within these, 10 298 VAE beneficiaries, 63% obtained a qualification at EQF level 5 (predominantly BTS candidates). Among the 6 159 VAE beneficiaries obtaining full validation (with immediate certification) at all levels of higher education in 2010, 66% were at EQF level 5 (predominantly BTS) (Ministère de l'Éducation Nationale et al., 2012).

3.2. Countries with EQF level 5 having average importance

In Denmark, Ireland, Luxembourg and the UK, EQF level 5 is considered of average importance. In Denmark, the ratio between students enrolled in EQF level 5 programmes and students enrolled in programmes at ISCED levels 5 and 6 (as benchmark) is one to four; for each student enrolled in an EQF level 5 programme, there are four students enrolled in ISCED 5 and 6 programmes.

The only data available for Denmark are on SCHE programmes. Here it is relevant to distinguish between adult education (supplementary qualifications) and 'regular education'. In SCHE programmes there is clear predominance of social sciences, which includes programmes of an economic and business content. Table 7 provides an overview of the number of regular students and adult learners enrolled SCHE programmes (EQF level 5), by year.

Table 7 **Number of regular students and adult learners in SCHE programmes in Denmark**

	2007	2008	2009	2010	2011
Total regular students enrolled in SCHE	16 291	16 972	19 194	20 573	22 175
Total adult learners	35 873	26 071	36 165	34 740	30 949
Pedagogy	88	84	84	95	96
• Adult learners	1 343	1 161	1 354	1 694	1 907
Communication and applied language	1 673	2 052	2 453	2 494	2 720
• Adult learners	0	0	0	129	204
The arts	137	131	127	122	144
• Adult learners	0	0	4	0	0
Social science	7 292	7 844	8 922	9 956	11 034
• Adult learners	33 912	24 371	33 649	31 637	27 257
Technical	3 429	3 265	3 947	4 500	4 926
• Adult learners	159	120	429	645	853
Food industry and home economics	218	205	276	309	311
• Adult learners	71	11	44	32	30
Agriculture and fishing	339	359	389	431	445
• Adult learners	81	3	30	9	2
Transport, etc.	390	373	339	344	392
• Adult learners	306	405	626	474	369
Health care	962	1 003	990	676	715
• Adult learners	1	0	29	120	327
Public security	1 763	1 656	1 667	1 646	1 392

Source: Statistics Denmark, 2013.

Ireland has 174 advanced certificate qualifications and many hundreds of higher certificates. In 2012, advanced certificates in more than 80 specific fields were issued to 11 546 graduates.

Luxembourg has six different types of master craftsman diploma, one for each major crafts area, offering in total 34 individual master craftsman diploma (*brevet de maîtrise*) programmes. In 2011 there were 832 learners enrolled, 116 of which gained the qualification. In SCHE, 16 BTS (specialised) higher technician certificate) programmes were offered in the academic year starting 2012. Over recent years, roughly 230 students were enrolled in these programmes ⁽³⁵⁾.

There are data from the Scottish Funding Council, the main awarding body in Scotland, on the number of people achieving level 5 qualifications. In 2011/12 more than 100 000 students were candidates for higher, advanced higher, HNC or HND qualifications in Scotland. These figures can be broken down to show that approximately two thirds were Scottish highers (not linked to EQF 5); the remainder were (roughly) evenly spread across advanced highers, HNCs and HNDs.

Table 8 **Overview of the number of higher, advanced higher, HNC or HND qualifications in Scotland**

Level	2009/10	2010/11	2011/12
Higher	63 582	64 516	65 195
Advanced	12 664	13 074	13 128
HNC	18 696	20 113	19 443
HND	16 173	17 366	18 374

Source: Scottish Funding Council, 2011, p 40.

3.3. Countries with EQF level 5 having some importance

Belgium (Flanders), Estonia and Latvia see EQF level 5 qualifications as of limited importance. In Belgium (Flanders) the ratio of students enrolled in EQF level 5 programmes to those in programmes at ISCED levels 5 and 6 (as benchmark) is one to eight; for each student enrolled in an EQF level 5 programme, there are eight students enrolled in ISCED 5 and 6 programmes. Table 9 presents an overview of the number of students and programmes

⁽³⁵⁾ 2009: 224 students; 2010: 231 students; 2011: 225 students.

currently in the nursing programme and the former HOSP programmes that are named HBO5 programmes for Belgium (Flanders). The number of HBO5 programmes is slightly reducing each year, as most providers are waiting to design new programmes after relevant professional qualifications have been linked to the Flemish qualifications framework (Vlaams Parlement, 2011). Table 9 provides an overview of the number of programmes and student numbers per area of study (2011) (Vlaams Ministerie van Onderwijs en Vorming, n.d.).

Table 9 **Programmes and students per area of study in Belgium (Flanders)**

Area of study	Number of programmes	Number of students
Biotechnology	3	259
Health care (not nursing)	6	110
HBO5-nursing	1	6 255
Commercial and corporate sciences	21	9 565
Industrial sciences and technology	18	1 638
Social pedagogy	10	6 663
Total	59	24 490

Source: Vlaams Ministerie van Onderwijs en Vorming, n.d.

In Estonia, according to data from the Estonian Qualifications Authority (Kutsekoda), there are 113 occupational standards, with professional qualifications/certificates for 45 occupational fields at level 5. In 2012, 1 124 certificates at EQF/NQF level 5 were issued.

Latvia, in the academic year 2011/12, in its public higher education institutions had 116 diplomas of first level professional higher education (*pirmā līmeņa profesionālās augstākās izglītības diploms*) programmes (both full and part-time) enrolling 4 175 new students. The total student number was 9 866. Of these, 3 908 students received a diploma. Overall, the enrolment in full-time studies is higher than in part-time studies.

3.4. Countries with EQF level 5 having little importance

In the Czech Republic, Croatia, the Netherlands and Portugal, EQF level 5 has little importance, with ratios between students enrolled in EQF level 5 programmes and students enrolled in programmes at ISCED levels 5 and 6 (as benchmark) above one to 10; for each student enrolled in an EQF level 5 programme, there are 10 students enrolled in ISCED 5 and 6 programmes. In Portugal, the NQC currently includes 36 level 5 qualifications, which is 13% of the

total registered qualifications in the catalogue. The ministry in charge of the higher education website presents level 5 qualifications through a list of accredited CET, a total of 556 currently registered. A total of 330 are offered by public polytechnics, 50 by public universities, 114 by private universities and 62 by private polytechnics (DGES, 2013). Many of these courses are related to industry and informatics; personal and social services also feature ⁽³⁶⁾. Table 10 shows learners studying towards gaining a diploma in technical specialisation for the academic years quoted, along with the number of graduates (DGEEC, 2013).

Table 10 **Number of CET students and graduates in Portugal**

Academic year	Number of students towards CET	Number of graduates in CET
2004/05	294 learners	
2005/06	1 259 learners	233 graduates
2006/07	2 253 learners	878 graduates
2007/08	4 811 learners	1 782 graduates
2008/09	5 832 learners	2 022 graduates
2009/10	6 214 learners	2 648 graduates
2010/11	7 177 learners	

Source: DGEEC, 2013.

Following the adoption of Decree-Law No 88/2006, there was a significant increase in the number of learners enrolled in CETs (academic year 2007/08). 'With the introduction of ECTS and its applicability to CETs, these courses have become a valuable tool to raise the level of qualifications of the Portuguese population and to expand access to higher education to an important number of youngsters and adults that had not concluded the upper secondary education' (Cedefop, 2011a).

In the Netherlands, the AD was introduced via a pilot scheme. In each pilot round a number of new AD programmes were initiated. In total, 149 AD programmes are accredited. The applications, however, which were submitted for evaluation by the NVAO during the different pilot rounds, were a few hundred. The applicants faced difficulties proving the labour market relevance of the

⁽³⁶⁾ Courses per field of study: arts, 25; humanities, two; social and behavioural sciences, three; business studies, 92; law, five; life sciences, seven; physical sciences, two; informatics, 89; engineering and related techniques, 89; manufacturing, 37; architecture and construction, 42; agriculture, forestry and fisheries, 34; veterinary science, seven; health, one; social services, 31; personal services, 66; transportation services, one; environmental protection, 17; security services, six.

programme, one of the key criteria for accreditation. The AD programmes can be offered by state-funded and private providers. They can be offered in different modalities: full-time, part-time or in dual mode. The total number of individual AD programmes is only a fraction of all regulated qualifications classified in the Dutch qualifications framework. If counting only the full-time professional bachelor degrees offered by the universities of applied sciences and private providers, the number of qualifications and underlying education programmes is over 1 300 (DUO, 2013). Data on the numbers of students and graduates are presented in Table 11 and shows the number of AD students, and those in the professional bachelor for both full-time and part-time studies (Vereniging Hogescholen, 2012).

Table 11 **Number of AD students and in the professional bachelor for full-time and part-time studies in the Netherlands**

	Period	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
AD	Number		11	276	807	991	1026
Bachelor	Number	59 489	60 036	60 057	61 703	62 204	61 494
% AD			0.02%	0.46%	1.29%	1.57%	1.64%

Source: Vereniging Hogescholen, 2012.

Roughly half of the AD students study part-time. Of the bachelor students, fewer than one sixth study part-time. As indicated, the AD has only recently been implemented in the Netherlands as a two-year higher education programme within the professional bachelor programme (four-year). The number of students in the AD programmes is currently low but increasing. The ambition is to have 20% of the population of the universities of applied sciences enrolled in the AD programme. In 2011, the percentage was 1.7%.

According to the by-Law on associated trades and crafts (Official Gazette No 42/08), there are 61 master craftsman qualifications in the Republic of Croatia. According to the database of the Croatian Chamber of Trades (data provided by national experts), the number of candidates who passed the exam increased from 729 in 2003 to 1 195 in 2012. In 2008, 1 474 candidates passed the exams.

The Czech Republic has six vocational qualifications at level 5 in the NSK. Five of them were introduced only recently and have no or few authorised persons who have passed exams. In contrast, the vocational qualification tour guide has higher numbers and currently holds the ninth place among all vocational qualifications present in the NSK, according to the number of exams taken and passed. There are 11 training courses available for this tour guide qualification and in total 172 individual exams have been passed (data provided by national experts).

Lithuania has no qualification types linked to EQF level 5.

Comparable quantitative data are difficult to obtain from the countries and does not allow a quantitative assessment on the importance of the EQF level 5 qualifications across them. There is a need for information systems across Europe on student numbers, graduates and holders of qualifications, to assess better the use of EQF level 5 qualifications in comparison to other levels.

3.5. Qualifications outside NQFs but relevant to EQF level 5

The country studies report on a number of potential level 5 qualifications which, for various reasons, are not (yet) allocated to equivalent NQF levels. Examples are provided below.

In Lithuania, the level 5 is currently left empty. However, there are two candidates that fit this level:

- (a) qualifications provided/acquired in programmes offered at high technical schools (*technikums*) before 1991 and in the further vocational technical schools established on the basis of *technikums*;
- (b) CVET qualifications acquired in the workplace or through informal and non-formal learning.

It is important to note, that qualifications described in case (a) could be linked to the Lithuanian qualifications framework/EQF level 5 according to the correspondence of their descriptors with the level descriptors. However, they have not been officially included in the Lithuanian qualifications framework, as currently these qualifications are no longer provided by any training institution. There are holders of such qualifications but the providers have ceased to exist. Before 1991, studying in *technikums* took three to four years and covered the last two years of secondary education and vocational training. These schools offered more than 450 qualifications in 1991. Graduates from secondary schools were accepted for studies at further vocational schools and the studies lasted two to four years. Graduates of these schools acquired qualifications as technicians, middle-level managers and other skilled specialists.

Part of the CVET qualifications acquired in the workplace or through informal and non-formal learning (case b), could also be linked to the Lithuanian qualifications framework/EQF level 5, but such inclusion is yet to start. The reform and transformation of further vocational schools into colleges of higher vocational education (*kolegijos*) implied absence of the formal provision of some qualifications that are increasingly needed in different sectors of economy (technicians, supervisors, masters, middle-level managers). This shortage of

qualifications is partially satisfied through CVET, informal and non-formal learning in enterprises but this is non-systematic and there are no empirical and statistical data on the types of qualifications acquired or the number qualified.

In the UK (but used internationally), the professional qualification (unregulated) ⁽³⁷⁾ was identified as linked to EQF level 5. There are qualifications available from private providers that are not part of the government regulated system in the UK and so are not linked to the national frameworks; these are relatively easy to sell to users who are not clear on the qualifications system and are often called private qualifications or professional awards. In the process of using these qualifications to support mobility it becomes clear that many of them make claims for their value that cannot be substantiated. They confuse citizens and fail recognition processes. The free market for qualifications, where the best get better and the worst are eliminated by forces of the market, is not working in a satisfactory manner and there is pressure to bring these qualifications into the regulated sector in some way. These sectoral qualifications – placed outside the formal system – help to progress in a specific subject; qualifications are primarily oriented to the labour market.

Other countries, such as the Netherlands, have privately provided qualifications outside the formal (accredited) system which can be positioned at level 5. Currently, the Dutch qualifications framework is opened for filing applications to be included.

In Austria to date, and due to the development stage of the Austrian NQF, it is unclear whether any qualifications from outside the formal system will be allocated to NQF level 5. However, there are discussions focusing on specific qualifications acquired in non-formal contexts.

⁽³⁷⁾ These qualifications are awarded by the body concerned and not regulated by government (but by professions or professional bodies). In Scotland and Wales they may be included in the frameworks, especially Scotland where the Scottish qualifications framework is not regulated.

CHAPTER 4.

Access and progression for education and employment

4.1. Introduction

4.1.1. Qualifications as currency

A qualification can be understood as a currency – something which can be ‘exchanged’ into further education, employment or social status (Cedefop, 2010b). This exchange value depends on a number of factors:

- (a) whether the qualification is open to everybody or only to a few;
- (b) how easily the qualification can be ‘exchanged’ into employment;
- (c) whether the qualification is linked to highly paid employment;
- (d) the reputation of the education and training institution and/or sector awarding the qualification;
- (e) relevance of the qualification’s learning outcomes to the needs of society and economy;
- (f) whether the qualification is well-known in society, for example among parents, pupils and employers.

Not only is the value of different level 5 qualifications determined by all these challenges but it also seems to be particularly influenced by the following facts:

- (a) the concept of level 5 qualifications is relatively new in many countries; potential users are therefore unclear about how they can be ‘exchanged’ into employment, further education or status;
- (b) level 5 qualifications sometimes operate in a grey zone between the VET system and higher education, making it more difficult to attribute reputation and status to the education and training institutions offering them.

To understand the value of level 5 qualifications we will look closer at their purposes and functions and how these are promoted in differing institutional settings.

4.1.2. Purposes of qualifications

Cedefop (2010b, p. 38) identified five core purposes: qualifications can recognise personal growth and engagement in learning; they prepare for further learning or training and/or develop knowledge/skills in a subject area; qualifications prepare for employment; they confirm occupational competence and/or licence to

practise; and qualifications are used for updating and continuing professional development ⁽³⁸⁾.

From these five core purposes, two broad forms of orientation are identified by which qualifications at level 5 can be distinguished; a labour market orientation (i.e. prepare for employment, confirm occupational competence and/or licence to practise) and a further learning orientation. The core purpose of recognising personal growth is considered transversal. The role and function a qualification has is reflected in the routes it provides from education to employment. However, as discussed later, there are multiple possible routes to and from education and employment.

EQF level 5 qualifications offer various access and progression routes from and to employment and to higher education. Among the 31 qualification types identified in the study, 14 are primarily oriented towards the labour market: these include the Czech Republic and Estonia, the EUD in Denmark, BM in France, and master craftsman qualification in Croatia and Luxembourg. Some 12 qualification types have a clear hybrid character, valued as entry qualifications for both the labour market and higher education (in some cases with the possibility for credit transfer): these include the higher vocational education 5 qualification in Belgium (Flanders), the DUT in France, the diploma of first level professional

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- ⁽³⁸⁾ Cedefop (2010b, p.38) further developed these five purposes in subpurposes:
- (a) recognise personal growth and engagement in learning:
 - (i) recognise development of skills for life;
 - (ii) recognise development of knowledge and/or skills to operate independently and effectively in life, learning and work;
 - (iii) recognise development of personal skills and/or knowledge;
 - (iv) recognise development of employability skills and knowledge;
 - (b) prepare for further learning or training and/or develop knowledge/skills in a subject area:
 - (i) prepare for further learning and/or training;
 - (ii) develop knowledge and/or skills in a subject area;
 - (c) prepare for employment:
 - (i) prepare for employment in a broad occupational area;
 - (ii) prepare for employment in a specific occupational area;
 - (d) confirm occupational competence and/or licence to practise:
 - (i) confirm competence in an occupational role to the standards required;
 - (ii) confirm the ability to meet a licence to practise or other legal requirements;
 - (iii) made by the relevant sector, professional or industry body;
 - (e) updating and continuing professional development:
 - (i) update knowledge and/or skills relating to legal, technical, process or best practice changes/requirements;
 - (ii) develop knowledge and/or skills to gain recognition at a higher level or in a different role;
 - (iii) develop knowledge and/or skills relevant to a particular specialisation within an occupation or set of occupations.

higher education in Latvia and the VET colleges qualification in Austria. Eight level 5 qualification types provide clearly articulated entry and progression opportunities into bachelor programmes, including the higher certificate in Ireland, the AD in the Netherlands and the higher education certificate or diploma in the UK. The explicit use of learning outcomes supports progression. Some qualifications at EQF level 5 are solely seen as a preparation for further higher education studies, as in the advanced higher certificate or baccalaureate in Scotland. For a detailed overview of key purposes and functions see Annex 4.

4.2. Diverse routes to/from employment/education

The currency the qualifications represent is articulated in the diversity of routes from and to employment and education in which the EQF level 5 qualification types play a role. Before presenting an overview of all possible routes level 5 qualifications facilitate to/from employment/education, illustrations are provided of:

- (a) qualifications used as initial education qualification;
- (b) qualifications used in an employment-oriented route (within the same/similar occupation);
- (c) qualifications allowing mixed, education-employment routes (to enforce a career switch);
- (d) qualifications which are used for very different routes.

The illustrative examples are provided of qualifications either designed or used for the identified route. It needs to be emphasised that qualifications can be used for different purposes and that many allow different routes. The reason to provide examples of how the level 5 qualifications are used within a route is to illustrate the diversity and variety of ways level 5 qualifications are used. Most qualifications (also the examples provided) allow all routes.

4.2.1. EQF level 5 as initial education qualification

EQF level 5 qualifications can be obtained through initial education (i.e. general or VET carried out in the initial education system, usually before entering working life (Cedefop, 2008a); this also includes higher education before entering working life). There are two possible routes, the first being to use the qualification to enter a level 6; in this case the level 5 qualification is used, for instance, to continue studying a bachelor programme. The second possible route is to enter the labour market with a level 5 qualification.

Examples of the education progression route can be found in France and the UK. In the UK (Scotland), the Scottish baccalaureate is primarily seen as a

preparatory qualification for higher education. This qualification is based on a group of higher and advanced higher qualifications in a certain subject (e.g. sciences or languages) and has an interdisciplinary character; it prepares for higher education entry. In the UK, the certificate or diploma of higher education is equivalent to the first year of the bachelor degree programme. In Scotland, 42% of those with a HNC went into year two (bachelor programme) in a higher education institution and 75% with HND went into year three (Scottish Funding Council, 2011). Data from a Scottish study of progression of students a few months after they had completed their HNC/D qualification showed that 57% of the sample progressed to some form of further study, while only roughly one third proceeded to, or continued in, employment with no further study involved (Gallacher and Ingram, 2012). Part-time students were much less likely to proceed to further study (35%) when compared with full-time students (61%). Many students, particularly full-time, use HNC/HNDs primarily as transitional qualifications, which enable them to progress to further studies; most of these (77%) progress to bachelor degrees. By contrast, for the majority of part-time students these qualifications are still part of a VET process. The same study showed that only one third of HND students (in Scotland) did not gain full credit on progressing to bachelor degree courses (Gallacher and Ingram, 2012).

In France, in spite of its labour market focus, the DUT-GEA has the advantage of providing its holders with the opportunity to continue their further formal learning through different higher education pathways. On average, 80% of graduates continue their studies. The more professionally specific EQF level 5 qualifications, such as the BTS, also allow access to bachelor programmes; here only 30% to 50%, on average, go on to further higher education studies such as professional or academic bachelors and masters (Baeslé et al., 2011). Vertical and horizontal learning mobility of DUT-GEA graduates through different further higher education pathways is also supported through possible use of exemptions and credit transfers in certain study units or modules. Also, further higher education qualifications, in particular professionally-oriented bachelors and masters, allow their holders access to senior positions within the enterprises, financial institutions and public administrations.

Almost all EQF level 5 qualifications (except general education qualifications in the UK (Scotland)) illustrate the education route preparing for employment. One such is the Dutch AD. From a Dutch qualifications framework level 4 qualification (upper secondary vocational education (*middelbaar beroepsonderwijs*) (MBO) 4), a graduate can access an AD programme and obtain a qualification in two years and afterwards enter the labour market. Often, during the two years students follow a dual route combining learning and working.

4.2.2. Employment-oriented routes, same/similar occupation

Qualifications can be used to increase the level of operation in a current occupation (promotion) via accreditation of prior experiences. An example of where the EQF level qualification is used for this purpose is the occupational qualification in Estonia, which confirms occupational competence and/or licence to practise and is obtained via work-based learning. Qualifications can mostly also be acquired via validation of non-formal and informal learning. The main users of this route are employees with the work experience and participating in the CVET.

Another example of EQF level 5 qualifications having this role can be found in Portugal. Here, the CETs lead to a DET which gives access to higher education and also partial credit or exemption from some requirements of first cycle (*licenciatura*) degrees (MCTES, 2011, p. 25). The professional aptitude certificate, issued within the scope of the national system of professional certification, allows individuals over 25 years old, and with at least five years of proven professional activity in the specific area of a CET, to receive a diploma based on the assessment of their professional skills.

Another example can be found in the Czech Republic. Here, it is not expected that vocational qualification will lead either to educational progression (level 6 is accessible with a comprehensive level 4 qualification) or to an accumulation strategy (one cannot add-up vocational qualifications to arrive at a comprehensive qualification at level 5, which does not exist). Vocational qualifications at level 5 are not designed for that reason and so the notion of further learning beyond the completion of a vocational qualification at level 5 is not embedded in the architecture of the qualifications. Nevertheless, some sectors tend to distribute the different levels of complexity of work activities among different, but hierarchically-related, vocational qualifications assigned to subsequent levels⁽³⁹⁾. Vocational qualifications, therefore, are primarily used for labour market access and further development within employment.

⁽³⁹⁾ This would be the case of the level 5 vocational qualification titled project administrator (approved in February 2013) that can be seen as an initial step to the level 6 vocational qualification project manager, followed further by a level 7 vocational qualification complex programme manager. A growing level of autonomy and responsibility in the description of learning outcomes is identified in the qualification standards of these qualifications and so the principle of further learning can be expected to play an important role there. In this context it is interesting to note that in the tourism sector there is another vocational qualification linked to level 5: tourist information centre manager. The title would imply a more supervising role, yet inspection of the qualification standard shows that most of the learning outcomes are shared by these two qualifications in the tourism sector.

4.2.3. Mixed education-employment routes for career switch

There are two routes (with variations) for using EQF level 5 qualifications to enforce a career switch. First is while continuing working at the same level (or working on a higher level) obtaining a qualification based on validation of prior experiences. This route allows the holder of the qualification to make a switch in his/her career as the competences at level 5 are formally recognised. This can mean horizontal progression, as the holder acquires a second level 5 qualification. The second route is while continuing operating at the same level (or higher/lower level) and obtaining a qualification from an education programme. In this route, an employee with a level 5 qualification and operating at the equivalent of a level 5 qualification, can choose to enrol in an education programme at level 5 to obtain his/her second level 5 qualification.

Examples of the first can be found in the vocational qualifications in the Czech Republic (see earlier) and the occupational qualification in Estonia.

An example of the second type can be found in the Netherlands where there is significant coherence in both the content and depth of the AD and the related professional bachelor, making the transition from the first to the latter appear easy. The AD students join the same courses as professional bachelor students; only a few have a tailor-made programme though a distinction can be made between the full-time and the part-time AD studies. Often the part-timers have separate courses from the bachelor. For instance, the AD management in health care is designed to be an education programme within a related bachelor programme. Progression in the bachelor is, therefore, not a problem. After the AD, students can progress into the bachelor programme and subsequently obtain a bachelor qualification within two years (120 ECTS). There are no additional requirements. The only – perceived – restriction is that another two years will have to be spent on education, something that indeed affects graduates in this specific group of working learners. Few students start in the bachelor programme immediately after AD graduation; most prefer to have time of not combining work and studies.

4.2.4. Qualifications used for different routes

Level 5 qualifications can be attained by different routes and it is not possible to determine exactly whether a qualification type is restricted to one or two possible routes only. Below is an example is provided of how qualifications can be used in different routes.

The VET college qualification in Austria is neither an SCHE qualification, nor is it mainly targeted towards the labour market. Due to its double qualification (higher entrance examination and VET diploma) it provides access to higher education programmes at universities of applied sciences: graduates of VET

colleges might even receive credits for their previously achieved competences, allowing them to enter a study programme in the second or third semester. VET colleges, together with secondary academic schools, represent the most important pathways to higher education in Austria. At the same time, the qualification allows graduates to hold senior occupations in their respective field and VET colleges can provide the basis for later self-employment (see Cedefop ReferNet Austria, 2011, p. 37). Depending on the specialisation of the respective VET college, graduates have access to certain regulated trades.

In Austria, approximately 50% of VET college graduates pursue further education. Within 18 months of receiving the *Reifeprüfung* certificate, 32% of VET college graduates (on average) enrol in higher education studies at a public university (compared to 68% of graduates from secondary academic school), while 10% of VET college graduates enrol in higher education studies at a university of applied sciences (Statistik Austria, 2011; Statistik Austria et al., 2012a; 2012b).

Composition of first-year students at Austrian universities (see Bruneforth and Lassnig, 2012) ⁽⁴⁰⁾:

- (a) 37% graduates from VET colleges, which can be further divided into: 12% from colleges of business administration; 13% from engineering colleges; 12% from other VET colleges;
- (b) 54% graduates from secondary academic school;
- (c) 3% graduates from the *Berufsreifeprüfung* exam;
- (d) 6% other.

Composition of first-year students at Austrian universities of applied sciences (*Fachhochschulen*):

- (a) 49% graduates from VET colleges, which can be further divided into: 14% from colleges of business administration; 20% from engineering colleges; 15% from other VET colleges;
- (b) 35% graduates from secondary academic school;
- (c) 7% graduates from the *Berufsreifeprüfung* exam;
- (d) 9% other.

The VET college qualification grants universal access to higher education, i.e. there are no additional requirements to enrol at universities or universities of applied sciences, aside from entrance examinations in several specific disciplines.

⁽⁴⁰⁾ Figures refer to the school year 2010/11. The *Berufsreifeprüfung* exam provides access to higher education for skilled workers and graduates of three- and four-year full-time VET schools.

Evidence suggests that the general academic aptitude of VET college graduates may be lower than that of graduates from secondary academic school. VET college graduates who pursue higher education studies often do so in a field related to previous education and training. Qualifications obtained in VET colleges require a longer period of study (five years) than those obtained in secondary academic schools (four years), though the intensive VET provided implies a reduced number of weekly lessons in general education subjects. This might make it more difficult for VET college graduates to enter certain higher education programmes. In medical studies, for example, in which applicants are required to pass an entrance exam, studies show that only 8% of first-year students graduated from a VET college, which is significantly lower than the average participation of VET college graduates in higher education studies (Lassnigg, 2010; Fortmüller, 2007).

As for graduates from colleges of business administration, half of all those who enrol in university studies do so in economic sciences, i.e. in a related field. This gives them an undisputed head start in various economic subjects. On the other hand, those graduates of colleges of business administration who reported experiencing difficulties during the initial phase of study frequently identified insufficient maths skills as the source of the problem (Schneeberger and Nowak, 2010, p. 64).

4.2.5. Overview of different routes

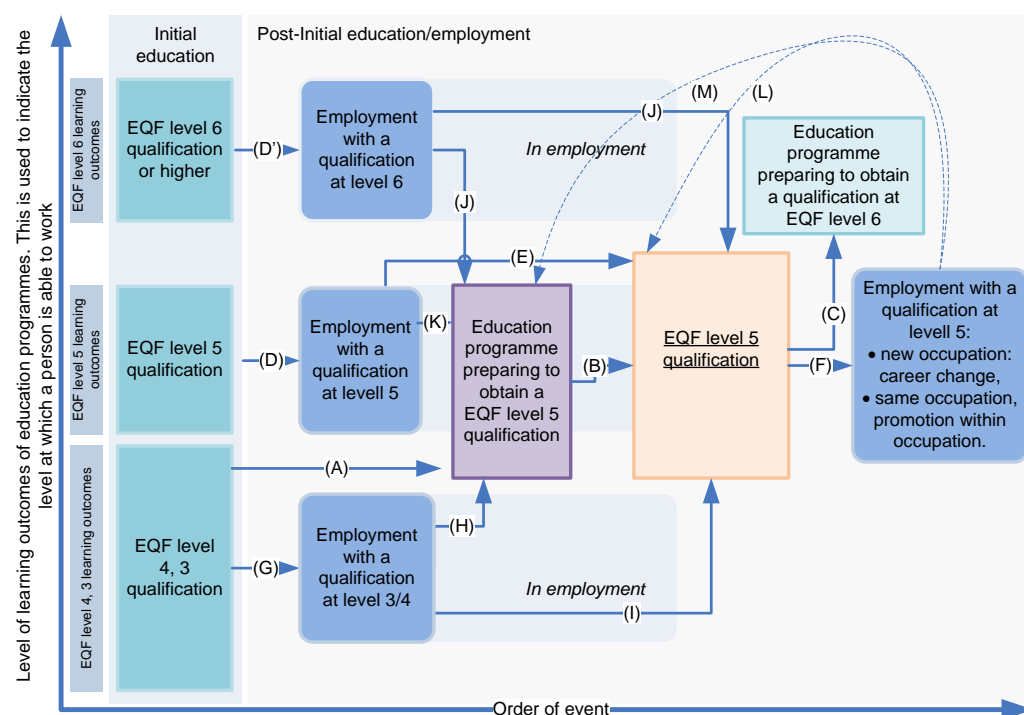
As well as qualifications being reached by different routes, the key purposes and functions differ across the types of qualifications linked to EQF level 5. Despite the diversity, an often-occurring characteristic is that the EQF level 5 qualifications are labour-market-oriented and are directed to up-skill people already in employment. Level 5 qualifications 'as a bridge to higher education' is a function stated in relation to SCHE, but is significantly less of a key purpose than obtaining skills for the labour market. In that sense, the level 5 qualifications have the position of a self-standing qualification, with their own profile and labour market relevance, as opposed to being only the short-cycle variant of another qualification without integral labour market value.

Most countries combine labour market and higher education entry orientations (access to bachelor programme) in the same qualification: Belgium (Flanders), Denmark, Ireland, France, Croatia, Malta, the Netherlands, Austria, Portugal and the UK (EWNI). However, there are also qualifications that are primarily oriented to the labour market: the Czech Republic, Denmark, Estonia, France, Croatia, Luxembourg, Malta and the UK (EWNI, Scotland). Some of these labour market-oriented qualifications provide a route into higher education (Ireland, Latvia and

Luxembourg) and others are solely seen as a preparation for further studies at higher education level (Malta, the UK and the UK (Scotland)) ⁽⁴¹⁾.

Figure 3 provides a schematic overview of the routes to and from education and employment in which level 5 qualifications play a role. Vertically, an indication is given of the level of qualifications defined in learning outcomes and corresponding occupations; horizontally, an order of events is presented. A distinction is made between qualifications, the education programmes leading to the qualifications and periods in employment. The lines between the boxes indicate routes to progress from obtaining a qualification towards employment (e.g. D), employment to education programmes (e.g. H), employment to qualifications (e.g. E), and education programmes to qualifications (e.g. B). The letters (L) and (M) indicate that the process can be repeated.

Figure 3 Routes related to EQF level 5 qualifications



Source: Cedefop.

- The routes identified in the previous sections can be situated in Figure 3:
- (a) education progression (A-B-C);
 - (b) education route preparing for employment at EQF level 5 (A-B-F);

⁽⁴¹⁾ Annex 4 provides an overview of the stated purposes of the qualifications studied.

- (c) occupation promotion (vertical labour mobility) via accreditation of prior experiences (G-I-F);
- (d) horizontal career switch based on accreditation of prior experiences (D-E-F and D'-E'-F), i.e. while continuing working at the same level (or working on a higher level) obtaining a qualification on the basis of accreditation of prior experiences;
- (e) horizontal career switch based on an education programme (D-K-B-F), (D'-J-B-F (higher)), and (G-H-B-F (lower)), i.e. while continuing operating at the same level (or higher/lower level) obtaining a qualification from an education programme.

4.2.6. System permeability

The permeability of the education system as a whole can be discussed in terms of the diversity of routes identified. System permeability can be described, i.e. the extent to which learners can move easily between different types of education (such as academic and vocational) and between different stages (such as upper secondary, or apprenticeship, up to higher education), as they so decide (Cedefop, 2012a). Permeability can be understood more broadly as an individual's potential to transfer from one education programme, subsystem or learning pathway to another. Increasing permeability means bridging distinct education subsystems and reducing dead-ends. This issue is particularly felt in providing possibilities to enter higher education via VET qualifications, so EQF level 5 qualifications play an important role in developing more permeable education systems when they allow progression from VET qualifications to further learning opportunities at higher education level. Permeability can be described in terms of progression routes, access requirements, credit transfer and recognition of prior learning.

In discussing the value of the EQF level 5 qualifications (and their currency) for providing opportunities for further learning, it is necessary to take into account the possibilities offered for progression, credit transfer and validation, and recognition of prior learning. The focus in the country information gathered is on whether the EQF level 5 qualifications provide access to higher levels of qualifications (i.e. bachelor programmes).

Many qualifications have a double function, one of which is to prepare for further learning at higher education level. The Netherlands allows individuals the option to reduce study volume when transferring to a bachelor degree. In Portugal, certain units undertaken by the learner in the CET can be credited in a higher education course through the use of ECTS. As in the Netherlands, in the UK, the certificate or diploma of higher education is equivalent to the first year of the bachelor degree programme, easing progression to the bachelor programme.

In Ireland, higher certificate graduates can progress to an ordinary bachelor degree in a related discipline, if they achieve grades of a particular standard, supported by explicit use of learning outcomes. However, some CVET qualifications are not designed with the intention of providing progression routes to a bachelor programme, as with the vocational qualification in the Czech Republic.

In general, level 5 qualifications allow multiple progression routes. However, there are clear splits between countries in progression routes within the education systems. Czech Republic vocational qualifications are not designed to provide progression routes, while VET college graduates in Austria are responsible for a considerable share of university students. This progression route is more obvious for the SCHE, such as in Ireland, France, the Netherlands, Portugal and the UK. Within formal systems, when the level 5 qualification is closely related to higher education programmes, progression to further studies at higher education level is guaranteed and access is easy. Where the level 5 qualification is more related to the VET sector and delivers competences specific for a profession, progression to higher education is often less direct.

4.3. Perceived differences in labour market relevance

An important influence on the extent to which level 5 qualifications have labour market relevance is whether the qualifications are recognised by employers as being valuable. This concerns both the way employers feel themselves involved in determining the learning outcomes of the qualifications (feedback-loops and governance structure), plus the tradition within which the qualification is embedded and the role qualifications play in a country. A qualification is an indication of trust in someone's personal capabilities (Cedefop, 2012b). An employer needs to be familiar with what a qualification expresses in order to trust the qualification. This is easier when the qualification type exists for a long time. A main indicator for perceived labour market relevance is whether there is a long-standing tradition in relation to level 5 qualification types and what is the involvement of employers in designing the qualifications.

A distinction is made between situations: countries having no qualifications at level 5 or having only introduced (new) level 5 qualifications recently; countries having a long tradition of level 5 qualifications; and countries where it is difficult to assess the labour market relevance, due to lack of data and a diversity of qualifications related to EQF level 5.

4.3.1. No level 5 qualifications or only recently introduced

Some countries not having qualifications at level 5 estimate that they are very relevant to labour market demands. This is the case in Lithuania, where currently no qualification is linked to level 5; employers claim that there is an important gap in the provision of qualifications for master craftsmen, technicians, and supervisors, especially in the industry sector. These gaps are currently filled by the CVT and upskilling of IVET schools graduates (level 4), retraining of the holders of (professional) bachelor qualifications (level 6) and, to a lesser extent, even master qualifications (level 7) degrees.

Other countries, reforming their structures and introducing new types of level 5 qualifications, base their assessment of the labour market relevance on the role and function of existing, similar, qualifications. This is the case on Belgium (Flanders) which seems to have a specific need for level 5 graduates. Employers have stressed that they look for highly qualified and flexible workers that can meet the need for skills on the labour market (Vlaams Parlement, 2008). HBO5 programmes (especially the former HOSP programmes) offer specialised knowledge and skills to people who already have work experience. To illustrate, recent data from HOSP programmes show that 95% of graduates of the former HOSP programmes are working within two to four months (Eurashe, 2011, p. 106). In the transition phase of the reforms, before HBO5 programmes incorporate professional qualifications by definition, the macro-efficiency in terms of employability is assessed by the HBO commission for existing HBO5 programmes. This commission evaluates the needs of the local labour market, the existence of similar courses and the needs of target audiences, and the availability of infrastructure and equipment.

In the Netherlands, level 5 qualifications were only recently introduced. Most AD graduates enter a job with which they are satisfied; starting salary is between that of a VET graduate and a professional bachelor graduate. One issue is that they more often get a temporary contract, which will become an indefinite contract later. Employers unfamiliarity with the AD seemingly caused some hesitation in offering indefinite contracts right away. Those graduates studying alongside their regular work mention that their productivity has increased. Approximately 50% mentioned that they received a promotion in their work, others reporting that the chance of getting promoted has increased. Employees appear to be satisfied by what the graduates have learned, both in theory and in practice (de Graaf and van den Berg, 2011). Box 3 provides an example of a specific AD qualification.

Box 3 AD management in health care in the Netherlands

Most AD management in health care students are already employed and seek to upgrade their competences to fulfil team leader tasks within their employer organisation. Students generally indicate that the AD has a positive effect on their career prospects, with the next step (e.g. changing from nurse to team leader) effecting wages as well. Employers value this particular AD. There is a tendency within health care institutions to make the organisations less managerial, less hierarchically structured. Although this sounds contradictory, a reduction in (strategic) managerial staff requires an increase in people competent in operational management. This tendency is reflected in the flow of students into the AD and the bachelor programmes. The AD is becoming increasingly important as it provides the sector with people educated in team management. The fact that most employers pay the course fee is a clear indication that they value the programme.

Source: Cedefop.

The labour market relevance does not only depend on the type of qualifications, but also (perhaps even more) on the subject or professional domain the qualification is aimed at. When looking at three individual vocational qualifications in the Czech Republic, large differences in labour market access become clear.

4.3.2. A long tradition of level 5 qualifications

Countries with a long tradition of level 5 type qualifications include Denmark, where such qualifications have become central to the Danish education system. The EUDs at level 5 deliver laureates with a specialised technical background and strong labour market relevance. Similarly, those from academy professions have a combination of theoretical and practical knowledge for a particular type of profession. These qualifications are highly valued and many adult learners are enrolled in the programmes leading to a level 5 qualification.

In Ireland, level 5 type qualifications (advanced certificate and higher certificate) existed before the NFQ was developed and the level of learning was an important part of the qualification system. VET (advanced certificate) and the higher education (higher certificate) qualifications are regarded as critically important both for supporting individuals to enter the labour market directly and for encouraging further learning. In Box 5 qualifications from the two types are discussed.

Box 4 Vocational qualifications in the Czech Republic

Labour market access:

- (a) HR generalist: the HR sector in the Czech Republic has seen an overabundance of training courses and certificates of varying quality in the past decade. In consequence the vocational qualification HR generalist is welcomed by employers as trustworthy but employers, as well as providers, expressed doubts whether it can be distinguished clearly enough from the plethora of commercial training provision ⁽⁴²⁾;
- (b) tour guide: the vocational qualification tour guide was seen as the much-needed competence standard in the sector and is hoped to become the condition for obtaining a trade licence for practice as tour guide. Employers agreed that a person possessing the vocational qualification tour guide is much more likely to be hired by major agencies in the tourism sector. Some of them even consider making the vocational qualification an explicit qualification requirement when filling vacancies, and motivating their current staff to apply for the exam;
- (c) bereavement counsellor: this vocational qualification is used by people already active in funeral services, typically employees and practising owners of funeral firms, to broaden their services ⁽⁴³⁾. The qualification was also reported to be relevant for research and scholarly purposes ⁽⁴⁴⁾.

Source: Cedefop.

⁽⁴²⁾ It was reported that, given the approval of this vocational qualification occurred only in June 2012, it is still too early to assess its effects on graduate opportunities on the labour market.

⁽⁴³⁾ A bereavement counsellor is seen as a person qualified to guide the bereaved through all stages of the process from funeral arrangements to the period of mourning. A specific combination of practical (even technical or administrative) skills and psychological, spiritual and therapeutical competences are expected of the person holding the qualification. This qualification is pursued not to prepare graduates for a single new job, but rather to enable them to provide specific guidance services in addition to the activities performed within a more comprehensive occupation, mostly that of a funeral services provider. With the largely atheist population of the Czech Republic, the duties and responsibilities that come with the death of a close person are often reduced to the necessary technical arrangements for funeral or cremation. In some cases, families even decline to take responsibility for the deceased altogether and a funeral must be organised by municipal authorities instead.

⁽⁴⁴⁾ Some of the respondents interviewed as holders of the qualification were higher education students focusing their diploma research on the sociological and/or psychological aspects of funerals, mourning, family loss, etc. The qualification was seen as a good way to bring the research into relevant empirical settings as well as to enhance their own knowledge in the area. Similar views were reported by general psychotherapists who applied for the qualification to augment their counselling competence when working with clients who experienced loss of a close person.

Box 5 Advanced certificate and higher certificate in Ireland

There are differences in how people perceive the two qualifications at EQF level 5 (advanced certificate and higher certificate, both related to cookery). Despite the current challenging economic environment, employers report that they find it difficult to source high quality employees who hold relevant qualifications in cookery. They also express a preference to recruit at entry level and to provide in-house training. Employers express the view that, if all other attributes of two potential candidates were equal, they would place greatest value on practical experience and would tend to prefer candidates holding the advanced certificate over alternative qualifications. The employers' understanding of the advanced certificate was greatest where they had engaged with the internship programme or knew of colleagues who had done so. Where they have had this experience, they appreciated the relationship between learners' skills, as demonstrated in the workplace, and the specified learning outcomes. Employers indicated their satisfaction with the work-based programme and the quality of graduates. There are numerous examples of employers sponsoring multiple employees to pursue the internship programme over time, indicating their satisfaction with the experience and the qualification. Employers also recognise the higher certificate in culinary arts and appreciate that the levels of skills and competences are broadly similar to the advanced certificate. However, there is less understanding of the qualification and, arguably, some confusion about two similar qualifications placed at the same NFQ level ⁽⁴⁵⁾. According to employers, one of the challenges facing graduates at the EQF level 5 (and at other levels) is gaining relevant work experience in a competitive employment environment. Programmes leading to the advanced certificate meet this need in an effective manner; however, most places are currently only available to those in employment.

Source: Cedefop.

VET colleges in Austria have had a long-standing tradition within the education system. With the first technical and commercial VET colleges dating back to the second half of the 19th century, they generally enjoy a high reputation in Austria, both among students and within the labour market. Graduates generally have good job prospects when entering the labour market. This holds particularly true for engineering graduates (quite often they hold senior occupations with a high degree of responsibility). In several fields, VET college graduates compete with bachelor degree graduates in the labour market and are often favoured by employers as they are considered less costly, more flexible

⁽⁴⁵⁾ There are no national statistical data available at sufficient detail to analyse employment patterns. Anecdotal and local evidence is available, for example employers of graduates from particular institutions. One institution was able to provide names of 70 individual employers who had engaged with learners or graduates of the advanced certificate in professional cookery over a number of years. This appears to confirm the view that employers hold this programme and the qualification in high regard.

and more malleable employees (Aff et al., 2011). VET college graduates – together with university graduates – have the highest share of people in employment. A total of 85% of male VET college graduates and 80% of female graduates are considered to be in employment. Unemployment statistics confirm the value of VET college qualifications in the labour market, with unemployment among at 3.6% in 2012 for graduates, significantly lower than the national average of 7.0% ⁽⁴⁶⁾. The rate is slightly higher than that for higher education graduates (at 2.6% in 2012), and significantly lower than that for graduates from apprenticeship training (at 6.0% in 2012). As seen in Section 4.2.4., 18 months after graduation from a VET college, 50% of graduates are pursuing further education, while 41% have entered the labour market. The double qualification provides a fall-back option: if individuals pursue university studies, but drop out before graduation, they still have a VET diploma and, therefore, good prospects of obtaining senior-level positions in the labour market. Box 6 offers an example of the type of position graduates hold.

Box 6 Colleges of business administration in Austria

During the initial years of employment, graduates typically work as clerks, in team-based project work or as management assistants. Most vacancies are in accounting/finance/business and sales/distribution/customer support. According to the results of a survey held among graduates, 60% agreed that the requirements of their first job corresponded to the training they had received. After acquiring professional and practical experience over a number of years, individuals can move up to management positions, especially in small and medium-sized businesses. Nevertheless, university graduates have better chances of being offered a managerial position than their VET college counterparts.

Source: Schneeberger and Nowak, 2010.

In France, longstanding level 5 qualification types include two SCHE qualifications (DUT and BTS). These were initially introduced in reform of technical and vocational education, during 1959-65, with the aim of meeting an increased labour market need for professionally-focused and practically operational high-level technicians and supervisors in different fields of activity (Brucy, 2005). They are the two basic and dominant EQF level 5 qualifications

⁽⁴⁶⁾ These figures are based on national calculations of the unemployment rate, which was an average of 7% in 2012. Please note that this differs from EU calculations; the unemployment rate according to Eurostat calculations was 4.3% in 2012 (AMS, 2013).

preserved from the previous higher education system after the introduction of the new three-cycle licence-master-doctorate scheme, based on the implementation of the outcomes and requirements of the Bologna process. They continue to provide their holders with the most effective and rapid access to the labour market, including offering them the best progress opportunities through further higher education. Box 8 provides an example of a specific DUT qualification.

Box 7 DUT in management of enterprises and administrations in France

The DUT-GEA is much appreciated by employers within the labour market. Its holders have easy access to employment after graduation at an average access rate of 93%; this is even higher for those who acquired it through the system of apprenticeship and professionalisation contract (Ministère de l'Enseignement Supérieur et de la Recherche, 2012). A wide range of employment possibilities in different service sector professions is open to the holders of the DUT-GEA due to the many specialisation options, particularly within sectors such as small and medium enterprises and industries, finance and accounting, banking and insurance, commerce and distribution, estate management, HR management and development, public administrations, etc. Most of the DUT-GEA holders possessing five years of working experience after their graduation occupy senior management positions within different private and public companies and organisations or institutions.

Source: Cedefop.

4.3.3. Difficulty in assessing labour market relevance

There are countries where it is difficult to assess relevance due to a lack of data. In Estonia, for instance, no statistical or other data could be found that could confirm the demand for such qualifications in the labour market. Although different rights and obligations are attached to qualifications, enterprises are often not aware of the essential differences between the qualifications of the Estonian qualifications framework/EQF level 5 and the level 4 or 6.

It is clear that in countries where the level 5 qualifications have existed for a long time, acceptance by employers and hence labour market relevance is higher than in countries where these qualifications have only recently been developed. The tradition is a more likely explanatory factor than the subsystem to which the qualification belongs in explaining the labour market relevance: SCHE-oriented towards further learning and labour-market-oriented qualifications can be equally relevant.

CHAPTER 5.

Heterogeneous learner group

Learners enrolled in programmes leading to an EQF 5 qualification are a heterogeneous group as regards their education, age and/or work experience. However, in many countries quantitative data on student background are unavailable.

5.1. Education background

Development of the AD programmes in the Netherlands is closely monitored; the following can be reported on the education background of those participating (de Graaf and van den Berg, 2011).

Table 12 Education background of AD/bachelor students in the Netherlands

Education programme	Associate degree			Bachelor
	2007/08	2008/09	2009/10	2008/09
Hoger algemeen voortgezet onderwijs (HAVO) (higher general secondary education) (Dutch qualifications framework/EQF level 4)	21%	21%	19%	48%
Vorbereidend wetenschappelijk onderwijs (pre-university education) (Dutch qualifications framework level 4+/EQF level 4)	3%	3%	3%	10%
Lower than MBO-4 (Dutch qualifications framework/EQF level 3)	8%	7%	6%	3%
MBO-4 (Dutch qualifications framework/EQF level 4)	56%	50%	57%	28%
Diploma higher education (<i>propedeuse</i>)	12%	19%	15%	7%
Other				4%

Source: de Graaf and van den Berg, 2011.

Table 12 shows many students continue the VET-oriented route, from MBO-4 to the AD (as was the purpose). A sharp contrast exists between the MBO-4 students who continue their higher education studies in the AD and in the professional bachelor programmes (50% vs 28% in 2008/09).

Table 13 indicates the type of learners that enrol in Danish SCHE programmes for adult learners (called supplementary qualifications), with data on

educational background (highest obtained qualification). The dominance of learners with a vocational background clearly underlines the potential of SCHE qualifications to support further learning. At the same time, a relatively large number of learners have already obtained some kind of higher education degree, which may signify the potential of these SCHE to offer specific competences desired by the labour market.

Table 13 Participation in supplementary courses (for adult learners) at SCHE (level 5 EQF) by highest education completed and year in Denmark

	2007	2008	2009	2010	2011
Total	35 873	26 071	36 165	34 740	30 949
Preschool education	0	0	0	0	0
Basic school 8-10 grade	2 941	2 056	3 650	2 816	2 118
Preparatory education	0	0	0	0	0
General upper secondary school	2 109	1 788	2 462	2 119	1 773
Vocational upper secondary school	2 423	1 603	1 915	1 842	1 693
Vocational education	15 435	11 105	14 585	13 310	12 176
SCHE	4 351	4 059	5 042	5 601	5 188
Medium-cycle higher education	3 759	2 293	3 288	3 665	3 347
Bachelor	930	617	1 014	1 020	927
Long-cycle higher education	2 630	1 775	2 633	3 326	2 735
PhD degree	71	57	63	86	80
Unknown	1 224	718	1 513	955	912

Source: Statistics Denmark, 2013.

Over the years, between 2 000 and 4 000 students enrolled on the basis of basic school grades 8 to 10 as the highest completed education, suggesting that there are alternative entry routes based on the recognition of prior/working experience. In addition, around one third of the total enrolments already have a qualification which is higher than or equivalent to the SCHE. This suggests that people in their career, for some reason, feel the need to take a step aside or even a step down, for a career switch or to update skills and competences after being in employment for some time.

In Austria, in the progression from secondary level I to II, three out of 10 students on average will attend a VET college, three out of 10 a part-time vocational school (apprenticeship training), two out of 10 a secondary academic school, one a VET school and one another type of school (Bruneforth and Lassnigg, 2012).

Box 8 Examples of learners taking the CVET pathway to the VET colleges qualification in Austria

Examples:

- (a) bfi VET college of business administration for people in employment: students include individuals who already hold a professional qualification; individuals without a professional qualification; dropouts from other education pathways; unemployed individuals; immigrants (who may already hold a school-leaving certificate from another country). The student cohort is heterogeneous and a large proportion of students are not employed;
- (b) TGM engineering VET college for people in employment: student cohort is also quite heterogeneous, although not to the same extent as at the bfi college. Students include graduates from VET schools who wish to obtain their *Reifeprüfung* certificate and also dropouts from a full-time VET college in a related field. Although, students are usually younger than 30, there are also students who are older than 40. There is also the possibility of having prior learning accredited.

Source: Cedefop.

5.2. Age

Table 14 illustrates the type of learners enrolled in the current HBO5 programme in Belgium (Flanders), with quantitative data on their background characteristics. The data are for the academic year 2009/10 and exclude students enrolled in HBO5 nursing. This is important because these programmes are generally populated by generation students (coming immediately from secondary education) and are normally full-time programmes. The age distribution as displayed in Table 14 shows that most learners range from 23 to 34 years old (Vlaams Parlement, 2011).

Table 14 Age distribution of HBO5 students in Belgium (Flanders)

Age distribution	Students	%	Age distribution	Students	%
Younger than 25	4 089	25.5%	18	161	3.94%
25-34 years	6 875	42.87%	19	259	6.33%
35-44 years	2 957	18.44%	20	437	10.69%
45-54 years	1 660	10.35%	21	616	15.06%
55-64 years	411	2.56%	22	759	18.56%
65+ years	46	0.29%	23	927	22.67%
			24	930	22.74%

Source: Vlaams Parlement, 2011.

The five-year programmes at full-time Austrian VET colleges are typically undertaken by 14 to 19 year-olds pursuing IVET. However, this is not the case in the special forms of VET colleges:

- (a) post-secondary VET courses (*Kollegs*) are targeted towards graduates from secondary academic schools who have already passed the *Reifeprüfung* exam, but have no IVET qualification;
- (b) VET colleges for people in employment are targeted towards individuals who have successfully completed compulsory schooling and wish to obtain this VET qualification while continuing in employment.

The student cohort is significantly more heterogeneous in post-secondary VET courses and VET colleges for people in employment. In previous decades the prototypical student was an individual who had already completed some vocational training (e.g. apprenticeship training or VET school) and in their mid-20s sought to obtain the *Reifeprüfung* certificate while maintaining full-time employment. According to the interviewees, the number of such students has been decreasing for years and they now account for only a small share of the total.

5.3. Work experience

The educational background of AD students in the Netherlands only indicates the highest education programme completed before enrolling in the AD programme. A more interesting question to ask is what the students were doing (or are still doing) just before they enrolled. Table 15 provides an overview of the previous activities of the AD students (de Graaf and van den Berg, 2011).

Table 15 Overview of previous activities of AD students

Activity	2007/08	2008/09	2009/10
Directly from HAVO (Dutch qualifications framework/EQF level 4)	9%	6%	5%
Directly from MBO (Dutch qualifications framework/EQF level 4 or level 3)	29%	20%	24%
Failed in the bachelor	21%	17%	20%
Worked (shorter than three years)	13%	13%	11%
Worked (longer than three years)	28%	41%	37%

Source: de Graaf and van den Berg, 2011.

In 2008/09 and 2009/10 the largest group students had already been working for three years and a significant number enrolled directly from the IVET programme (MBO). A considerable share of students also failed in the bachelor programme.

Box 9 Students in the AD management in health care programme in the Netherlands

Students in the AD management in health care programme are already within working life. Most have a MBO-4 qualification and have already worked for some years in the health care sector, often as a nurse or pharmacy assistant. Other students were enrolled in bachelor programmes, but dropped out after two years, started working and after some years commenced studying in the AD programme. Most, if not all, students were given the opportunity to enrol in the AD by their employer. In most cases this means that the fees were paid by the employer as well, or that the employer supported students by having them study during working hours.

Source: Cedefop.

In Ireland, most learners in programmes leading to the advanced certificate in professional cookery are employed within the sector. A wide age and experience profile is evident among learners, with individuals who have recently entered employment learning alongside individuals with many years of work experience; these can range from an individual who has worked in a restaurant for one year to one who has worked in a hospital kitchen for more than 11 years. Many learners chose to reskill after planned or unplanned changes in employment direction. For example, one learner wished to specialise in cookery after gaining a higher NQF level qualification in hospitality management. Another expressed the desire to return to an employment field of personal interest after a number of years of working in a different discipline. For most, the ability to continue in paid employment was a key factor in the choice of programme and qualification to pursue. In many cases, the discussion on pursuing the qualification was originally initiated by the employer. This indicates that employers regard the qualification, and specifically the delivery model, as a solution that meets the need of providing continuing professional development for employees.

Learners undertaking programmes leading to the higher certificate in culinary arts represent a different profile. The cohort of learners includes two identifiable subgroups with a mix of school leavers and mature learners. There was a common view that some of the school leavers may have selected the programme for a wider variety of reasons than simply a focused career choice. Programmes leading to the higher certificate are included in the collective set of

options presented to students who are about to conclude their (general) school education as part of a national common application process for entry into higher education. There were some perceptions that a minority of these learners had chosen the programme with less consideration than others, who had actively sought opportunities to continue or restart their studies with programmes leading to this qualification. However, most learners were able to explain that they had particular reasons to seek this qualification and indicated that the ability to enter the programme without existing employment in the sector was a key factor in their choices.

Typically, the learners had a number of years of employment experience, having been recruited at an early stage in their working life. They sought opportunities to gain acknowledgement and accreditation of their skills and identified this qualification as suitable.

Three categories of candidate for exams in vocational qualifications at level 5 can be distinguished at a general level in the Czech Republic:

- (a) people in employment who seek validation and formal recognition of their specialised vocational skills and competences gained via work experience;
- (b) people who seek requalification or re-specialisation to enhance their employability and/or enter new economic sectors;
- (c) candidates for jobs with legally regulated access, where formal validation of specific vocational competence is required either to obtain an employment contract or to obtain a trade licence (case study of the Czech Republic).

CHAPTER 6.

Learning outcomes as work in progress

6.1. Qualifications and learning outcomes

The EQF calls for a learning outcomes approach in describing qualifications. This entails an outcome rather than an input orientation to differentiate between the level of a qualification and the learning pathway followed to acquire it. In the previous chapters, the focus was more on qualifications than on education programmes leading to the qualification. However, this distinction is in many cases/countries difficult to make.

In this section, qualifications are analysed from the perspective of how the learning outcomes are described⁽⁴⁷⁾; there is much variety in this. First, what is described differs (the scope of the description, whether it applies to units or a full programme); second, how the learning outcomes are described differs. This includes differences in terminology, the level of detail and the approach to descriptions (whether learning outcomes are described at a generic/holistic, or a very detailed level or which categories are used for structuring the descriptions). These differences are illustrated below.

6.1.1. Scope of learning outcomes descriptions

This section concerns what is actually described in terms of the size of the qualification and whether it consists of different units, described separately.

Differences here can range from qualifications related to full education programmes of two to four years to small unitised modules included in a broader

⁽⁴⁷⁾ The following qualifications were analysed:

- (a) the Czech Republic: vocational qualification HR generalist;
- (b) Ireland:
 - (i) advanced certificate in professional cookery,
 - (ii) higher certificate in culinary arts;
- (c) France: DUT-GEA;
- (d) Latvia: diploma of first level professional higher education in engineering/machinery specialist;
- (e) Malta: VET higher diploma: MCAST-Business and Technology Education Council (BTEC) HND in business;
- (f) the Netherlands: AD management in health care;
- (g) Austria:
 - (i) VET college of business administration,
 - (ii) VET college of engineering (the electronics and technical computer science speciality is selected).

qualification. It also depends on what exactly is included in the NQF; does the NQF only allow full qualifications or unitised qualifications as well? The vocational qualification HR generalist in the Czech Republic includes eight vocational competences of which three are linked to level 4 and the rest to level 5 ⁽⁴⁸⁾. The NQF (NSK) includes vocational competences directly, which make up the vocational qualification and the scope of the description is the work tasks the holder of the vocational qualification should be able to conduct, based on the occupational standard.

Another qualification linked to EQF level 5 and described in a unitised approach can be found in Malta: the VET higher diploma such as the MCAST-BTEC HND in business ⁽⁴⁹⁾. This qualification comprises 16 core units, all described in terms of learning outcomes. For example, a unit on business strategy will show the following outcomes (London School of Business and Management, 2011): 'on successful completion of this unit a learner will:

- (a) understand the process of strategic planning;
- (b) be able to formulate a new strategy;
- (c) understand approaches to strategy evaluation and selection;
- (d) understand how to implement a chosen strategy.'

Each unit is further described in four or five specific elements. For instance, in relation to understanding the process of strategic planning, a learner understands 'strategic contexts and terminology: role of strategy; missions; visions; strategic intent; objectives; goals; core competences; strategic architecture; strategic control' (London School of Business and Management, 2011).

⁽⁴⁸⁾ The vocational competences of the vocational qualification HR generalist:

- (a) orientation in the labour code and related legislation (level 5);
- (b) usage of ICT (level 4);
- (c) creation and management of documents in HR administration (level 5);
- (d) maintenance of records of mandatory medical examinations, work safety and fire protection in organisation (level 4);
- (e) organisation of staff education and training (level 5);
- (f) organisation of recruitment (level 5);
- (g) creation and administration of systems for evaluation and remuneration of staff (level 5);
- (h) organisation of collective negotiation (level 4).

Each vocational competence is linked to assessment criteria and modes of assessment (case study of the Czech Republic).

⁽⁴⁹⁾ This qualification is licensed from BTEC (a brand name of Edexcel in London, UK). Since in Malta foreign qualifications can also be level-rated, this qualification is also included in the Malta qualifications framework.

In other qualifications learning outcomes are conceptualised and described more holistically and are not task-oriented. The French DUT qualifications include a distinction between core common competences and specific competences connected with a speciality option. The DUT qualification is designed by the National Education Commission (Commission Pédagogique Nationale) which structures its standards and contents at the required NQF level 3 (EQF level 5). The DUT is considered as SCHE and has 25 specialties, the most important and well-established of which is the DUT-GEA. The programme determines both core common and specific competences that the enrolled students in the concerned study programme need to master to obtain the DUT-GEA in its three specialisation options: finance and accounting, management of small and medium organisations, or HR management. The DUT-GEA includes nine broadly defined core common competences (such as mastering internal and external communication tools, ability to communicate in foreign languages, building-up a project, understanding the economic and legal environment of organisation, understanding the business and its organisations) and three more specific competences related to the three specialisation options of specific learning outcomes (competences) in finance and accounting, the management of small and medium organisations, human resource management (Ministère de l'Enseignement Supérieur et de la Recherche, n.d.). An example of a description of a core common competence is provided in Box 10.

The French example shows that learning outcomes expressed in terms of competences in the educational programme are broadly formulated. A broad and overarching concept of competence includes knowledge, skills, attitudes and abilities to master professional challenges and tasks. In the case of the Czech NVQ, competences are more task-oriented and derived directly from the occupational standard. These competences are then directly linked to assessment criteria (see Annex 5).

Learning programmes designed as preparatory courses for NVQ must strictly follow the structure of the qualification standard to be accredited by the Ministry of Education.

Box 10 DUT-GEA core common competence

Understanding the economic and legal environment of organisations:

- (a) acquiring the ability to read and interpret the results of economic activity and to understand the functioning of economic systems through the use of national accountancy tables;
- (b) discovering the legal system, its functioning and involved stakeholders;
- (c) understanding the general mechanisms of contractual commitments and responsibilities, including the ability to analyse justice court decisions and manage related practical simple cases;
- (d) understanding the French political system and the EU institutions and their functioning;
- (e) understanding the function of money, the nature of the instruments of monetary policy and their impact on the real economy of different funding systems and financial markets;
- (f) acquiring an understanding into the individual behaviour of economic agents and their role in the determination of:
 - (i) the terms of trade as well as market structures and mechanisms;
 - (ii) the key criteria for income distribution;
 - (iii) the functioning of the system as a whole;
- (g) ability to identify, in practical situations, the different levels of organisation and public administration roles, including understanding the specificity of administrative actions and their legal impacts;
- (h) understanding relationships between the economic, cultural, geopolitical general problems and the real life of different organisations;
- (i) understanding the impact of economic thought and policy on the governance of companies within the framework of a national, regional and international governance system;
- (j) understanding the international dimension of trade issues, circuits and tools.

Source: Cedefop, adapted from *Programme Pédagogique National: DUT Gestion des Entreprises et des Administrations*⁽⁵⁰⁾.

6.1.2. Terminology used in describing learning outcomes

The terminology used differs across qualifications and countries, as does the level of detail at which learning outcomes are described. The latter may be as short and rather general statements or as a longer list of specific, detailed described learning outcomes in which reference is made to concepts related to knowledge, skills and attitudes/competences. The diploma of first level professional higher education in engineering/machinery specialist (*mašīnbūves speciālista*) in Latvia comprises a long list of competences such as ability to plan and organise an engineering company or its subsidiary bodies or prepare the necessary technical documentation or to use the official language. These

⁽⁵⁰⁾ http://media.enseignementsup-recherche.gouv.fr/file/DUT_-_Programmes_pedagogiques_nationaux/82/2/Gestion_des_Entreprises_et_des_Administrations_157822.pdf

competences are not further operationalised. In contrast, the learning outcomes for the higher certificate in culinary arts in Ireland are described with a high level of detail. Concerning 'demonstrate comprehensive range of specialised skills and tools; knowledge – know-how and skill range', the learner is expected to be able to:

- (a) satisfy customer expectations by demonstrating, with confidence and creativity, best practice in technical skills;
- (b) practice with competence and creativity, skills in the following areas: culinary skills, culinary knowledge food and beverage and personal development to include reflective and experiment practice;
- (c) employ ICTs relevant to the tourism and hospitality industry, including the following: e-mail, internet, Word processing, PowerPoint, Excel, Access, property management and reservations systems, for example Fidelio, EPOS, Calc Menu.

The Irish description has more emphasis on words that indicate a certain level of competence, such as doing something 'with confidence and creativity', or 'with competence and creativity'. These words provide more guidance to differentiate a qualification at EQF level 5 from a similar qualification at level 4 or 6. These signal words are absent in the Latvian description.

The description of a qualification in terms of learning outcomes is mostly conducted on the basis of general guidelines, prescribing the concepts and terminology used and the structure of the descriptions. These instructions can either be developed at national level for all similar qualifications (as in Austria) or for this particular qualification on the basis of a professional/occupational profile agreed on with labour market stakeholders (in the Czech Republic, Ireland, France, the Netherlands). This is illustrated in the examples below.

Each programme of the AD management in health care in the Netherlands focuses on the same occupational profile (team leader) and the related core competences. Each individual higher education institution has the freedom to develop the curriculum and assessment methods. In determining the core competences (learning outcomes of the programme), a distinction is made between three key fields of action for managers in health care institutions: organising, changing and developing (⁵¹). These three core fields of action take place in three distinct situations/contexts: in relation to a wider environment

⁵¹) The core task area organisation refers to the present: running the organisation effectively and efficiently; change refers to the future: sustaining the organisation's success; development refers to the road from the present to the future, by making use of HR management and HR development.

(internal and external); within partnerships, and in relation to individual employees. By combining key fields of action and situations, a matrix can be compiled including the relevant core competences for this occupation. In addition to the nine core competences, two more personal-related competences are added (competences (j) and (k), see Table 16). For each of the 11 competences, detailed descriptions are provided including descriptions of the occupational context and what the effect is of this competence on the context (in what way will the manager exercise its competence on the organisation that he manages).

In the example of the Netherlands, it is noticeable that neither the NQF descriptors, nor the Bologna short-cycle descriptors are used to describe the learning outcomes of the qualification. The description is completely operationalised on the basis of occupational-specific core tasks and roles. Within the studied institution, there are discussions on how to differentiate between the learning outcomes of the AD and bachelor qualification ⁽⁵²⁾.

In Austria, VET college curricula are gradually moving to a competence-oriented approach through the development of VET standards for describing curricula. This standard is based on a competence model (with one or more competence areas), which is developed for each subject or subject area. Each competence model is characterised by two dimensions:

- (a) the content dimension describes the subject, knowledge area or field referred to by the competence;
- (b) the action dimension specifies five different levels of performance expected: remember, understand, apply, analyse and create.
- (c) The competences to be acquired are indicated by the descriptors, specified at the intersection of content and action dimensions. For example, the VET standard entrepreneurship and management is related to all commercial, economic and judicial subjects of the curriculum of the VET college of business administration (such as business economics, accounting and controlling, business-management practice and project management, business-training, project and quality management, training firm and case studies, political education and law) (BMUKK, 2010a). The competence model for the VET standard entrepreneurship and management includes, among others, the following competence areas: entrepreneurship, management, personal management, financing and accounting. The descriptor at the intersection of the content dimension entrepreneurship and

⁽⁵²⁾ The development of NQF in the Netherlands triggered closer examination of what makes an AD distinct from either MBO-4 programme and a bachelor programme.

the action dimension creating is formulated as: 'I am able to develop and analyse a business plan'.

Table 16 **Core competences: professional profile management in health care and health care service in the Netherlands**

Content core task areas			
	In relation to surroundings (internal and external)	In partnerships	With individual employees
Organisation	(a) The manager fine-tunes demand and supply within the policy context (role characterisation: fine-tuning).	(b) The manager takes care of effective and efficient use of (human) resources to achieve goals (role characterisation: organisation).	(c) The manager focuses on adequate task fulfilment, optimal use of qualities of individual employees and on building sustainable contexts (role characterisation: management).
Change	(d) The manager makes use of opportunities for the development and implementation of the organisation's policy on innovation and strategy (role characterisation: entrepreneurship).	(e) The manager initiates, facilitates, implements and steers processes of change (role characterisation: change).	(f) The manager stimulates individual employees to contribute to the change process (role characterisation: encouragement).
Development	(g) The manager creates a (learning) climate enabling the organisation to anticipate changing (international) contexts (role characterisation: creating).	(h) The manager encourages cooperation and development of partnerships (role characterisation: team building).	(i) The manager facilitates and supports the development of individual employees (role characterisation: coaching).
Personal core task areas			
Personal leadership	(j) The manager develops his/her skills and competences of personal leadership, based on self-assessment (role characterisation: self-management).		
Professional development	(k) The manager develops a personal vision on the management of health care and health care service, contributing to the (international) professionalisation of management in health care and health care service (role characterisation: management).		

Source: Cedefop, adapted from AD management in health care and health care service (Rotterdam Academy).

To illustrate the descriptors and to assist in the process of translating them into practice, teaching and learning examples that can be used during instruction have been developed and are being tested in pilot schools (BMUKK, 2012a).

All future and newly-designed VET college curricula are being based on competence models which were defined in the VET standards. The descriptors of the individual educational standards are included in a concise form in the education and teaching objectives of the individual subjects in the curricula. The basis for the preparation of curricula is the 'guidelines for the preparation of competence and learning-outcome-oriented curricula' for all school types in VET (BMUKK, 2010b).

Since the shift towards the learning outcomes approach and the integration of learning outcomes in all curricula is continuing, VET college curricula currently only include partly systematic formulations with learning outcomes orientation. Learning outcomes are generally described in curricula in the general educational objectives section of a certain type of VET programme. Here, the legal educational mission (*Bildungsauftrag*) is presented along with the competences that are imparted to graduates of the respective VET programme: the *Bildungsauftrag* for VET colleges is to prepare students for access to higher education and for access to specific regulated professions and senior professional activities. Further, learning outcomes are presented within the more detailed descriptions of educational and teaching tasks of the single subjects. However, they are typically rather abstract, unsystematic and largely do not relate to assessment criteria. Information on the subject matter (teaching content) is also provided in detail for each subject.

There are already some examples of the new generation of curricula, such as the curriculum of the VET College of electronics specialising in technical computer science. In these curricula, the general educational objectives implicitly reflect the descriptors of the respective NQF level (for VET colleges NQF level 5) although the learning outcomes are defined as professional, methodical, social and personal and communication competences rather than as knowledge, skills and competence. The educational and teaching tasks described for each individual subject are based on the descriptors for the respective subject or subject field. These learning outcomes descriptions are written holistically; they do not distinguish between knowledge, skills and competence, though these categories are implied. The teaching content for each subject and each year is still presented in detail for each competence area ⁽⁵³⁾.

⁽⁵³⁾ See Annex 5 for more detailed information.

There can also be differences within a country in how qualifications allocated to the same level are described in terms of learning outcomes. In Ireland, the two types of qualifications that are linked to EQF level 5 are of different origin and have different purposes. The advanced certificate has evolved from the craft tradition and is considered a VET qualification; the higher certificate is generally available in a wide variety of fields of learning, of vocational and academic origin, and is regarded as a SCHE qualification. Qualifications belonging to these different types can have quite a similar profile of learning outcomes, although they are used for different purposes. Analysis of the learning outcomes descriptions for each qualification type reveals only minimal differences (more emphasis on knowledge in the higher certificate) and thus clearly suggests that both qualification types fit the NQF level 6/EQF level 5. This also shows that the classification of qualifications in the Irish NQF is strongly based on learning outcomes; other criteria, such as learning context, purpose of the qualification or type of institutions offering the qualification seem to be of little relevance in this context. Learning outcomes for the higher certificate in culinary arts are structured according to the descriptor domains of the Irish NFQ ⁽⁵⁴⁾, while the advanced certificate in professional cookery only reflects them implicitly.

In defining learning outcomes for the vocational qualification HR generalist in the Czech Republic, one respondent mentioned that the basic set of competences agreed upon leans too heavily towards the side of HR administration skills and legal activities and tends to neglect more inter-personal, psychological and soft competences and people skills. Consequently, the vocational qualification in its current definition may be applicable in larger companies and multinationals where an HR generalist is only concerned with the administrative agenda related to, for example, remuneration or staff planning and other HR activities are carried out by specialists. However, the qualification might turn out to be less applicable in SMEs and very small companies where a person responsible for HR performs all related tasks including recruitment, training, coaching, talent management, and conflict resolution. The descriptions in terms of learning outcomes led to a focus on more technical, task-oriented competences, while reducing the focus on more generic, transversal competences. This is reflected on the profile the vocational qualification has on the labour market.

There is little evidence that the NQF level descriptors are actually being used to describe the qualifications in terms of learning outcomes. Some qualifications include categories comparable with EQF descriptors (knowledge,

⁽⁵⁴⁾ See Annex 5 for more detailed information.

skills and competence) through the use of NQF descriptors, such as in Ireland and Latvia (although the NQF makes use of competences instead of competence (EQF)). Other countries, such as the Czech Republic and Austria, only implicitly reflect the descriptors of the NQF in the specific qualifications. However, many other learning outcome categories are used besides the concepts expressed in the level descriptors of the NQFs.

Comparing qualifications offered by VET and qualifications offered by higher education, no noticeable differences are encountered. The reason for this is that although the qualifications are offered by different subsystems, they are mostly labour-market-/vocationally-oriented. This is also true for the higher education qualifications linked to level 5. The learning outcomes are generally described in terms of competences required to carry out work tasks or based on occupational profiles. In Ireland, two distinct qualification types have different objectives, but appear to be comparable in competences. Therefore, the way qualifications are described in terms of learning outcomes depends more on the general orientation of the qualification than on the governance model behind the qualification.

6.2. Educational programmes: input variables and mode of delivery

6.2.1. Study intensity/volume/duration

The way the study intensity/volume⁽⁵⁵⁾ or duration of the course leading to the level 5 qualification is expressed, is largely dependent on the subsystem it inhabits. Expression of the workload related to a programme/course leading to an EQF level 5 qualification can be in terms of credit points, study hours, years, or otherwise. Also, whether the qualification is the result of an initial education trajectory or of a largely work-based trajectory affects the way the volume of the qualification is indicated.

Most higher education qualifications detail the duration of a programme in terms of ECTS (some UK qualifications are an exception). The number of ECTS credits varies from 60 to 180 and the average is 120. For example the Luxembourgish (specialised) BTS has a study load of 120 to 135 ECTS, the same as the French BTS and DUT. The Latvian diploma of first level professional higher education (*pirmā līmeņa profesionālās augstākās izglītības diploms*) has a study load of 80 to 120 CP (120-180 ECTS credit points).

⁽⁵⁵⁾ See Annex 6 for detailed information.

When assessing the study duration/volume of a course related to obtaining VET-governed qualifications, more diversity is noticeable and it is not evident that the European credit system for vocational education and training (ECVET) system is used to indicate this volume. Sometimes the duration is expressed in hours such as for the Luxembourgish master craftsman: 80 hours (year one) + 80 hours (year two) + 84 hours (year three) = 244 hours for the common courses that are similar for all students. Between 100 and 400 hours of occupation-specific courses is also required, in very diverse programmes ranging from Traiteur (+/- 100 hours) to optician-optometrist (+/- 400 hours). In the case of the Estonian occupational/professional qualification, the workload depends on the profession and the prior experience. There is no description of study-volume available as the qualification is not linked to an education programme. In the Czech Republic the vocational qualifications are not programme-based and so are not defined by workload or ECTS/ECVET volume either. A NVQ examination can be taken by candidates who have acquired the prescribed vocational competence through non-formal and/or informal learning. For other VET qualifications, the volume is expressed in ECTS, as in the Maltese VET HND. Sometimes a number of years is indicated, as in Denmark, where obtaining the EUD takes four and a half to five years or in Austria, where the VET college qualification can be obtained in five years of full-time and school-based education or via alternative routes: these include a post-secondary two-year full-time VET course for holders of the *Reifeprüfung* exam or three-year evening course or in VET colleges for people in employment for two to four years. The duration for obtaining a French CQP is dependent on the trainee's profile (prior educational qualifications and work experiences) and the type of CVT instruments used. In the case of CP, meant for the professional inclusion of young school leavers and adults wishing to return to work, the duration goes from six to 24 months.

6.2.2. Mode of delivery

Mode of delivery is the way the programme is organised to obtain the learning outcomes related to the qualification to which the programme is oriented. This can be school-based, work-based or dual (combination of both). Distinction can also be made between full-time and part-time education. The mode of delivery depends on the subsystem.

Predominantly, the higher education-governed qualifications are school-based including a considerable work-based part. The AD programmes in the Netherlands can be full-time, part-time (learning alongside work) or dual programmes (where the work of the student is valued within the education programme). Approximately half of the students are enrolled in a dual programme. Often these students are already in employment. All providers have

exemption systems in place to let students enrol in tailor-made programmes based on their prior experience, learning and certifications. In France, the DUT and the BTS qualifications are usually obtained through formal schooling tracks, but can also be acquired fully or partially through the VAE, having accumulated at least three years of relevant working experience in the field of the concerned qualification.

For VET-governed qualifications at the EQF level 5, the focus is more on gaining practical experience while learning. Professional qualifications often include procedures for validation of prior experience. Occupational/professional qualification in Estonia is entirely based on non-formal and informal learning and can be acquired via validation of this learning. In Croatia, the master craftsman exam essentially recognises informal and non-formal competences acquired through work experience, though the student can follow preparation courses, which are not compulsory. In Ireland, the higher certificate, which is a formal programme, can be acquired through the validation of non-formal and informal learning.

VET qualifications in Denmark (EUD) and Austria (VET college) differ in that training is school-based but includes practice and work placements.

The level 5 qualifications linked to general education are generally school-based and are unlikely to be achieved through the validation of non-formal and informal learning.

The data on the Belgium (Flanders) HBO5 qualifications (Table 17) clearly show the character of current HBO5 programmes. Most programmes are offered (at least partly) during the evenings for working adults. Table 17 shows the number of classes per type of teaching and the percentage of the total number of classes given in this type of education.

Table 17 **HBO5 qualifications in Belgium (Flanders): type of teaching**

Type of teaching	# classes	%
Evenings (during the week)	2 224	47.21%
Day-time (during the week)	1 763	37.42%
Weekends	132	2.8%
Combined daytime and weekend	216	4.59%
Combined evenings and weekend	185	3.93%
Combined daytime and evenings	58	1.23%
Combined daytime, evenings, weekends	133	2.82%

Source: Vlaams Parlement, 2011.

To conclude, qualifications in formal higher education are often more uniformly described in terms of mode of delivery and volume of the programme. This is, however, often more related to input factors than learning outcomes. The more the qualification takes into account a specific profession (as in CVET qualification types), both the mode of delivery and the volume become less clear. This is related to the importance of integrating work-based learning and prior experiences in assessing whether the student can perform at the required level.

What can be seen in relating the learning outcome descriptions and the mode of delivery is that, in the higher education, qualifications are more intrinsically linked to education programmes than in the VET sector. In the latter, there is generally more room for non-formal and informal learning (work-based learning) contexts and more attention to assessment procedures to obtain qualification independently from the education programme (validation of prior learning). France has a longstanding tradition in validation of prior learning for both the DUT and BTS (higher education) qualifications.

CHAPTER 7.

Assigning qualifications to the NQF and linking to the EQF

7.1. Introduction

7.1.1. Referencing national qualification levels to the EQF

Qualifications are classified at national level and allocated to NQFs, which are then referenced to EQF levels. To generate trust in the referencing process, a clear and demonstrable link between the qualification levels in the NQF or system and the level descriptors of the EQF has to be established. EQF descriptors are written in a rather general way to accommodate qualifications from diverse national systems and from different learning contexts, NQF descriptors are designed to reflect the specific national context with its values and traditions. Therefore, the matching national and EQF levels is not always a straightforward process and usually some approximation is necessary. This requires a common judgement from a range of stakeholders on the value of national levels against the EQF levels, so that there can be confidence in the outcome of the approximation. In the EQF context this approximation is called 'best fit' and the wide application of the best fit principle reflects acceptance that perfect-fit is usually not considered feasible ⁽⁵⁶⁾.

7.2. Cross-country analysis

Differences and similarities can be identified in the approaches taken by the countries included in this study in assigning qualifications to levels. These similarities and differences refer to:

- (a) the extent to which the allocation of qualifications to NQF levels and the EQF referencing processes were done in two separate processes or in one;
- (b) the extent to which allocating qualifications to NQF levels is used as part of the quality assurance function of the NQF;

⁽⁵⁶⁾ While 'best-fit' is used in the context of the EQF referencing process, in the Bologna self-certification process (linking levels of national higher education qualifications frameworks to the qualifications framework-EHEA) the term substantial difference is used (Council of Europe, 1997).

- (c) the way qualifications are linked to the national level referenced to EQF level 5: based on the type of qualification or on individual qualifications;
- (d) the extent to which level 5 descriptors are designed to accommodate a range of different qualifications;
- (e) the approaches and methods used for identifying the appropriate level;
- (f) the use of other criteria (in addition to learning outcomes) for allocating qualifications to levels;
- (g) the extent to which categories used for structuring level descriptors are different from those used for describing qualifications;
- (h) the possibility to allocate qualifications from non-formal and informal learning contexts to the NQF level linked to EQF level 5;
- (i) potential inconsistencies when allocating specific qualifications to the NQF level linked to EQF level 5.

7.2.1. Qualifications, NQF levels and EQF referencing

From a historical perspective, the countries analysed in this study can be classified into two main groups: first, the countries with NQFs that were developed before the EQF was introduced; second, the countries with NQFs that were developed in close connection with EQF implementation.

In countries with mature frameworks, such as Ireland, France and the UK, the development of the NQF (including the allocation of qualifications to NQF levels) and the EQF referencing process are clearly separate processes. The number of levels, and the categories used for structuring learning outcomes descriptors of NQF levels, differs from those of the EQF. Criteria and procedures for classifying qualifications in the NQF had already been in place and qualifications (or types of qualifications) had already been allocated to NQF levels before the EQF referencing process was conducted. These criteria and procedures are usually well embedded in the system and are important elements in qualifications design.

The second group comprises those countries that started NQF development around the time of the development and implementation of the EQF: it comprises the 12 other countries covered by this study. In many cases, classification of qualifications in the NQF is closely linked to the EQF referencing process, done within one process and not in two clearly distinguished processes ⁽⁵⁷⁾: examples

⁽⁵⁷⁾ Implicit hierarchies within formal qualifications systems as well as procedures and legal regulations for including qualifications in these systems were already in place prior to the development of NQFs. Since most countries developed NQFs with a communication function, these procedures and regulations were not changed but respected and integrated. However, some countries have clear plans for using the

are the Netherlands, Austria ⁽⁵⁸⁾ and Portugal). Many of these countries have developed their NQFs based on the EQF for classifying the existing system. Most of them use the eight-level structure (Belgium (Flanders), the Czech Republic ⁽⁵⁹⁾, Denmark, Estonia, Latvia, Lithuania, Luxembourg, Malta, Austria, Portugal); sometimes there is also a level below level 1, the entry level (the Netherlands), or sublevels are used (Croatia, the Netherlands). Several countries also use the same categories or dimensions of learning outcomes for the level descriptors as the EQF (Denmark, Latvia, the Netherlands) – but with varying definitions or subcategories – or in some cases they use the EQF level descriptors for their NQF (Estonia, Austria ⁽⁶⁰⁾ and Portugal ⁽⁶¹⁾). Some of these countries already have explicitly described criteria and procedures for allocating qualifications in the NQF (Belgium (Flanders), the Netherlands) ⁽⁶²⁾. However, there is only limited experience available on how they are used in practice and to what extent they actually have an impact on the design process of qualifications.

7.2.2. Quality assurance function of the NQF

Frameworks generally have the potential for playing an important quality assurance role in the qualifications system. In many countries, NQF level descriptors were closely designed in relation to the existing (formal) system of qualifications, so NQF level descriptors reflect key qualifications or key types of qualifications linked to this level (and vice versa). In countries with mature frameworks, level descriptors are considered as a natural basis for designing qualifications. They are used as references that are (and have to be) explicitly or implicitly reflected in the description of qualifications, and the fundamental part of

NQF as a tool for reforming their system and therefore also see a need for amending and further developing these procedures and regulations (Croatia, Lithuania).

⁽⁵⁸⁾ Currently, the only qualifications linked to NQF levels in Austria are reference qualifications (selected qualifications from the Austrian qualifications landscape which aim to illustrate the requirements connected with the levels and make them more easily understood) and Bologna qualifications.

⁽⁵⁹⁾ The eight-level structure is used in the NSK, the framework for vocational qualifications gained via non-formal and informal learning.

⁽⁶⁰⁾ In Austria, additional descriptors are used specifying the EQF descriptors for the national context.

⁽⁶¹⁾ In Portugal, the title of the third descriptor (competence) was modified to attitude, arguing that this meaning is more understandable. In the Portuguese context, as in many other countries, the concept of competence covers the combination of the knowledge, skills and attitudes and not one separate dimension.

⁽⁶²⁾ Sometimes different procedures are developed for allocating qualifications from non-formal learning contexts (see Section 7.2.8).

the levelling of a qualification is the matching of the learning outcomes related to a qualification against the level descriptors of the framework. Procedures and criteria for allocating (new) qualifications to NQF levels are used as guidance material for designing and allocating new qualifications. These procedures are already well known and trusted, and often used by quality assurance bodies; therefore, NQFs are considered to be a kind of gateway for quality assured qualifications ⁽⁶³⁾.

In Ireland, the NFQ was developed as a reforming tool which, in the first instance, would accommodate current qualifications but, in the long term, would influence these and transform their shape and title. Thus, the NFQ was designed broadly to fit the major qualifications and the learning outcomes and describing levels took account of qualifications descriptors. Therefore, the descriptors of the level linked to EQF level 5 reflect the learning outcomes of the key qualifications assigned to this level.

For new qualifications, or describing older ones, there is a well-established practice of linking learning outcomes to the NFQ descriptors. The owner of the qualification is required to make a case to the quality assurance agency and show that learning outcomes for the qualification meet the descriptors for a specific NFQ level (using best-fit if necessary) and that the quality arrangements that underpin the qualifications meet specific expectations of the quality assurance body. Therefore, each awarding body (accreditation agency) demonstrates that their qualifications comply with the relevant qualification-type description and that appropriate quality assurance processes are in place. In turn, providers demonstrate to awarding bodies that their programmes and processes meet particular requirements and that delivery and assessment satisfy quality assurance requirements. The NQAI has produced guidance for allocating qualifications to levels of the NFQ ⁽⁶⁴⁾.

It can be expected that all new (or revised) qualifications that are planned to be included in the NQF will reflect the respective level descriptors by design. This can already be observed for SCHE qualifications linked to level 5. Level 5 descriptors are often designed to (also) reflect Dublin descriptors for SCHE (as explicitly stated in Malta and the Netherlands) and the matching of learning outcomes is already taken into consideration through the accreditation of these qualifications. Accreditation procedures usually evaluate whether the qualification descriptors reflect the Dublin descriptors for SCHE sufficiently. This is so in Denmark, Malta and the Netherlands ⁽⁶⁵⁾.

⁽⁶³⁾ Qualification databases or registers have been developed for storing the qualification included in the NQF (e.g. Ofqual, 2012a; SCQF, 2009; RNCP, 2012).

⁽⁶⁴⁾ See <http://www.nqai.ie/applications.html> [accessed 20.12.2013] for details of a classifications system used by NQAI.

⁽⁶⁵⁾ In Austria, Bologna qualifications are also automatically linked to the NQF; however, there are no SCHE qualifications in Austria and therefore this is not relevant for level 5.

The main criteria for allocating qualifications to NQF levels are usually the level descriptors of the NQF. However, depending on the subsector of the qualifications system, additional regulations or requirements have to be taken into account. Such regulations or requirements do not necessarily have to be integrated in the NQF, though they can have an impact on the process of including qualifications in the NQF. In Denmark, for example, the principle of ‘full-fit’ is used for higher education qualifications because these have to comply fully with the Dublin descriptors used for describing levels 6 to 8 in the Danish NQF. In many countries different procedures exist for different levels of the framework. Although the HBO5 programmes are considered as higher education qualifications (SCHE) in Belgium (Flanders) and need to be accredited by the NVAO, they still have to fulfil other requirements compared to the Bologna qualifications linked to levels 6 to 8. They will have to comply also with requirements defined for VET qualifications, so they have to be based on competence profiles of professional qualifications⁽⁶⁶⁾ that have to be structured using the descriptor elements of the Flemish qualifications framework. The situation is even more complicated in Portugal, where the qualification linked to level 5 has to comply with regulations in VET and in higher education.

7.2.3. Allocating individual qualifications or types

Countries can be distinguished by what is actually allocated to NQF levels: individual qualifications or types of qualifications? Classifying individual qualifications separately means that the learning outcomes of each qualification need to be analysed and compared with the level descriptors of the NQF to identify the relevant level. This applies in Denmark (except for higher education qualifications) and in those countries where new qualifications are developed based on NQF descriptors, as in Belgium/Flanders, the Czech Republic and Estonia (regarding occupational qualifications).

⁽⁶⁶⁾ In Flanders, a professional qualification is a set of competences allowing an individual to exercise a profession.

Level 5 is particularly interesting in the Portuguese context: first, it is included in both the comprehensive NQF and in the FHEQ-Portugal; second, it currently includes only one type of qualification, the post-secondary non-higher level qualification with credits to pursue higher level studies (DET obtained after a combination of CET) which has to be based on both higher education and VET regulations and is considered a specific case of shared regulation under the responsibility of different Ministries.

CET can be offered by higher and non-higher education establishments, with considerable differences in curriculum organisation: they may be organised by learning outcomes (competences) or by thematic area/content, described in terms of input-related variables and governed by the ministry responsible for higher education;

- (a) CET courses offered by entities that are not part of the higher education system are designed using the NQC standards: a professional profile and a training standard organised into short training units for each of the areas (general, scientific and technological) that have to be described in terms of competences;
- (b) CET offered by higher education institutions are designed in a similar way: 'they are based on competence references which describe the expected outcomes in terms of competences to be acquired for each curricular unit. However, they do not have to follow the NQC as the higher education institutions have scientific and pedagogical autonomy' (ANQEP, 2011, p.66).

Level 5 qualifications are registered in the NQC, but the process for including them in the NQF goes beyond the NQC in regulatory terms because the standards set by higher education also have to be met (e.g. in terms of ECTS credits).

Most countries include qualifications developed prior to the establishment of the NQF as clusters in the first phase, i.e. qualifications are allocated to levels not based on individual learning outcomes descriptions but on the type of qualification they belong to. This approach applies in the Netherlands (in relation to formal education/accredited qualifications; non-state regulated, privately provided qualifications are linked on the basis of an individual assessment) and Luxembourg. Qualifications that belong to a certain type share specific characteristics (they might belong to the same subsystem, might be based on the same law and regulated by the same body, or might have the same general educational objectives as well as duration or access requirements). However, the specific learning outcomes they include can be quite different because they are linked to different fields (such as different technical fields, social and health care, business). Therefore, countries sometimes see a need to select individual qualifications of a certain type and check whether they really match the level descriptors, as occurred in Luxembourg.

In Luxembourg, the classification of qualifications was done in a two-step-approach:

- (a) first, a committee of civil servants from both the Ministry of Education and Vocational Training and the Ministry of Higher Education and Research reviewed all skills acquired and documented by diplomas issued in Luxembourg. Based on this review, these diplomas were linked to a level on the Luxembourg qualifications framework (*cadre Luxembourgeois des qualifications*) (CLQ) on the basis of a 'best-fit' procedure. Even though the descriptors may not necessarily match completely, this 'best-fit' procedure places qualifications at the level in the framework at which it best corresponds to an average. The proposed levels of qualifications were subsequently open for review by stakeholders;
- (b) a second check was conducted by three national experts. For each qualification level, the experts selected a limited number of individual qualifications and checked their classification in the national framework, based on the formulation of the learning outcomes. Since learning outcomes descriptions are already developed for the BTS, their comparison with CLQ level descriptors was possible. Although the experts identified one particular competence to be underrepresented for this type of qualifications (management and training of subordinates), they concluded that this qualification is correctly positioned at level 5 according to the best-fit principle. However, for the master craftsman diploma this was not yet possible, due to insufficient documentation of learning outcomes and, more important, due to the diverse nature of the different individual master craftsman qualifications. This referencing process will be repeated; if necessary to meet referencing demands, the curricula of some individual qualifications will be rewritten in consultation with all relevant stakeholders.

This example shows that where differences were identified, it was suggested to rewrite the qualifications descriptors to achieve a better fit. Therefore, the decision was taken to change the qualifications and not the respective level descriptors. Another option – chosen by the Netherlands – was to allocate qualifications by type, but to allow for changes at a later stage if – based on an application – it could be proven that a qualification of the same type would actually fit another level better ⁽⁶⁷⁾.

It can be argued, however, that this distinction – classifying qualification types or individual qualifications in the NQF – is generally only relevant for the establishment or initial phase of the NQF. As the examples from the countries with more mature frameworks show, once existing qualifications are linked to the NQF, newly-developed or revised qualifications will be assigned to levels on an individual basis. This is done based on their type (and the fulfilment of requirements connected to this type, such as quality assurance or accreditation

⁽⁶⁷⁾ However, the possibility to change the NQF level on the basis of an individual assessment for qualifications automatically linked to the NQF has recently been put on hold for VET qualifications on NQF level 4.

requirements), but also on the basis of the level descriptors of the established NQF, as these are already taken into account in the design of individual qualifications.

7.2.4. Level 5 descriptors and range of qualifications linked

Assigning qualifications to the national level referenced to EQF level 5 based on learning outcomes, supports countries in making relationships between qualifications visible. This is particularly relevant for countries which have diverse types of qualifications (VET, higher education and from outside the formal system) allocated to this level or that are planning to do so in the future; frameworks are seen as an opportunity to improve linkages between subsystems. However, there is also evidence that linking different types of qualifications to the same level can lead to confusion among stakeholders. This is the case in Ireland, where both the advanced certificate and higher certificates are linked to EQF level 5.

The two types of qualifications (advanced certificate and higher certificate) linked to the Irish NFQ level 6 are of different origin and serving different target audiences. The award-type advanced certificate has evolved from the craft tradition and is firmly of the 'VET stable'. The award-type higher certificate is generally available in a wide variety of fields of learning, of vocational and academic origin and is regarded as a SCHE qualification. Qualifications belonging to these different types can have a quite similar profile of learning outcomes, although they are used for different purposes. Both are divided into a series of modules, each of which has defined learning outcomes that can be related to the learning outcome descriptions used by the NQF itself. An analysis of the learning outcomes descriptions for each qualification-type (advanced certificate in professional cookery and higher certificate in culinary arts) reveals only minimal differences and therefore, clearly suggests that both qualification types fit NFQ level 6/EQF level 5. This also shows that the classification of qualifications in the Irish NFQ is strongly based on learning outcomes; other criteria, such as learning context, purpose of the qualification or type of institutions offering the qualification seem to be of little relevance in this context.

Linking both qualification types to EQF level 5 can be seen as an example of how one level can accommodate qualifications from different subsystems (VET and higher education) signalling parity of esteem between qualifications from these subsystems. However, there is evidence that signals that other factors than the positioning of the qualifications at the same level influences their relative standing. These other factors (such as their origin in different institutional arrangements) seem to be more important in establishing parity than levels in the NFQ. Experience also shows that the existence of two major qualification types at the same NFQ level continues to generate confusion among wider stakeholders in Ireland.

The descriptors of NQF levels that accommodate a variety of qualifications from different segments of the qualifications system – as in some of the countries included in this study – have to be written in a rather broad manner. In the UK, there are even two levels from national frameworks linked to EQF level 5. In

several cases, level 5 descriptors are developed also to reflect Dublin descriptors for allocating SCHE qualifications (Denmark and Malta). This could be seen as an opportunity to link different subsystems and to present qualifications that, before the introduction of the comprehensive NQF, were considered as very different at the same level. However, it could also be considered a challenge because rather abstract descriptors could be considered as meaningless and the relationship between qualifications linked to the same level could be vague.

7.2.5. Identifying the appropriate level

Two approaches can be distinguished in the process of allocating qualifications to NQF levels: comparison of qualifications descriptors with level descriptors and allocating qualifications based on this linguistic matching (technical approach) or – usually in addition to this – basing the levelling decision on how a qualification is currently regarded on a national level (social approach) (European Commission and BMUKK, 2010).

Linguistic matching is found in Denmark (VET qualifications), Estonia and Luxembourg, but seems to be the core of the procedures for classifying qualifications in the NQF applied in several countries. This approach is easier in those cases where qualifications are sufficiently described in terms of learning outcomes or are based on occupational standards that specify the requirements to perform specific roles or tasks in the labour market (as in Estonia, the Netherlands or Portugal). In Luxembourg, limitations of the technical approach were highlighted by experts who checked the classification of selected qualifications based on the formulation of learning outcomes. Sometimes they deemed it difficult to state the exact degree of assimilation of a learning outcome that constitutes acquisition of the corresponding skill (Gouvernement du Grand-Duché de Luxembourg, 2011, p. 44). It turned out to be very rare for learning outcomes of various qualifications to have been drafted in the exact same terms, so comparison of qualification descriptors and CLQ level descriptors was sometimes problematic.

However, linguistic matching is, in many cases, possible only to a certain extent because qualifications are only partly described in terms of learning outcomes. In Luxembourg, for example, the fact that the learning outcomes related to the master craftsman diploma are not documented sufficiently and that individual qualifications of this type are diverse, has led to the decision to repeat the classification of this qualification in the near future.

Broad stakeholder involvement can be observed in several countries analysed in this study since the allocation of qualifications is often closely linked to the development of NQFs, which usually involves stakeholders from different subsystems. Therefore, in addition to linguistic analyses, the allocation of

qualifications to NQF levels is based on stakeholder judgement and other indicators. In Austria, the currently discussed procedure for classifying qualifications in the NQF suggests not only taking qualification learning outcomes into account, but also including other information, which can be used as indicators for justifying the assignment (such as importance of the qualification at the labour market or results of graduate surveys, such as job positions of graduates).

Box 11 Indicators for allocating the Austrian qualification VET college of business administration to level 5

The fact that the level of knowledge and skills attained by learners at the end of the training programme is assessed in the final exam and in the diploma project, is a strength of the system. However, the fact that the statements related to responsibility and autonomy (competence descriptor) can only reflect the expectations and potential of graduates, and that whether or not students have actually acquired these competences cannot be directly observed, is a challenge which must be addressed. Evidence can only be collected via graduate surveys. For example empirical evidence shows that the most common entry-level positions for graduates of VET colleges of business administration are clerks, project members, and assistants. Some graduates are able to obtain project manager positions as their first role in the labour market. After approximately three (sometimes more) years of employment, group or team management positions become increasingly available to VET college graduates, and after four more, leadership positions become increasingly accessible. However, it is clear that the professional level of a project manager (the requirements associated with this occupational position) corresponds very closely to EQF level 5 in terms of descriptors, and that clerk and assistant roles also correspond to level 5, particularly with regards to the descriptors knowledge and skills.

Source: Schneeberger and Nowak, 2010.

The use of such indicators for identifying the appropriate level for a specific qualification or type of qualification actually provides the opportunity for a kind of reality-check of learning outcomes descriptions, and additional evidence for underpinning the classification decision. However, since such indicators (such as labour market positions of holders of qualifications) are often closely linked to sectoral, regional or national structures and traditions, they can only be used to a limited extent for comparing qualifications across economic sectors or countries.

Classification of level 5 qualifications can also be based (perhaps additionally) on interplay with other qualifications in the system (as in Austria). The reason for this approach is that countries that do not want to reform their system want to keep the implicit hierarchy in the qualifications system. However, in some cases specific qualifications are deliberately allocated to a higher level

that is compared to the implicit hierarchy in order to emphasise certain aspects and policy priority (as with VET qualifications in Portugal ⁽⁶⁸⁾).

In some cases, specific methods are developed and used to identify the appropriate qualification level. In Estonia, for example a weighting approach with a two-point scale (important/very important) is used and in Belgium (Flanders), the so called Flemish scaling method was developed to determine the level of a qualification for classifying professional qualifications.

Dependent on the stage of NQF implementation, several countries among the 15 analysed in this study have plans and procedures developed (and sometimes first experiences already exist), but there is no evidence on how qualifications are actually allocated in practice because the NQFs have not yet reached operational stage (as in Croatia, Latvia and Austria).

7.2.6. Other criteria used to allocate qualifications to levels

All countries covered by this study claim that learning outcomes are the heart of the process for assigning qualifications to the NQF level linked to EQF level 5. However, there are differences in the approaches countries have taken or are planning to take in this regard. In some cases criteria other than learning outcomes are also used to locate the position of qualifications in the NQF. Duration of a programme or associated workload are examples of such criteria (used in Denmark, Croatia, Malta, the Netherlands). In Croatia, NQF levels are also explicitly determined by additional descriptors/requirements for full qualifications indicating the total volume of learning outcomes within the qualification (minimum volume/workload or duration) and the entry requirements. For example, for level 5, the total volume of all units of learning outcomes is a minimum of 120 ECTS/ECVET credits, with a minimum of 60 ECTS/ECVET credits at level 6 or higher.

⁽⁶⁸⁾ In Portugal, secondary school leaving qualifications giving access to higher education are allocated to level 3 of the NQF (linked to EQF level 3) secondary education obtained through double certificated pathways or secondary education aimed at further study plus a professional internship of at least six months are allocated to level 4. This decision is based on the policy aim to give value to double certified pathways and professional certification and to reinforce the attractiveness of the vocational route.

Box 12 Procedures for allocating qualifications to levels in the Flemish qualifications framework

In Belgium (Flanders) the following procedure has been developed for allocating qualifications to level 5:

- (a) the first step of allocating a qualification to level 5 of the Flemish qualifications framework is a proposal for a professional qualification profile which reflects the Flemish qualifications framework descriptor elements: knowledge (explanatory and procedural), skills (quality to work effectively and efficiently on the basis of knowledge), context (where the knowledge and skills are used, relations with others), autonomy and responsibility. The professional qualification profile is built on the competence fiches as determined by the Flanders Social and Economic Council. After a professional qualification profile has been drawn up, an interprofessional committee of stakeholders will validate the professional qualification profiles by determining whether the competences match the job description and whether they are relevant for the labour market;
- (b) after validation, a referencing committee ⁽⁶⁹⁾ will assess the professional qualification profile. For this assessment, the five Flemish qualifications framework descriptor elements will be further broken down into eight specific criteria on which the professional qualification profiles will be assigned a score (environmental context; action context; declarative knowledge; procedural knowledge; motor skills; cognitive skills; autonomy; responsibility). These descriptor elements display a strong labour market orientation of competences. Each of these eight types of descriptor elements will be assessed based on 15 definitions and the committee will unanimously decide on a score (A-, A, A+, B-, B, B+, C-, C, C+, D-, D, D+, E-, E, E+) for each of the eight types of descriptor elements. The Flemish Agency for Quality Assurance in Education and Training (Agentschap voor Kwaliteitszorg in Onderwijs en Vorming) (AKOV) is involved in this process as secretary and facilitator of the process.

After the committee has filed its decision for all descriptor elements, the AKOV will use its Flemish scaling method (*Vlaamse inschalingsmethode*), a particular weighing tool developed for this purpose, to align the qualification profiles to a level on the Flemish qualifications framework. The proposed level is then to be confirmed by the Flemish government. Thereafter, the best-fit principle will be adhered to, while the AKOV ensures that the process is done without bias for existing qualifications or social relations.

Source: Cedefop.

7.2.7. Categories for level descriptors and qualifications

A challenge for assigning qualifications to levels lies in the fact that qualifications are not always described in the same terms as the NQF level descriptors. While some countries require qualifications to be described using the same categories as used for structuring NQF level descriptors (as in Ireland), this is not the case in

⁽⁶⁹⁾ The committee is a permanent body of the NQF governance structure but the experts that conduct the scaling vary. To guarantee quality, the experts need to follow a two-day course and need to follow the instructions of the scaling method.

other countries where qualifications descriptions are only required to reflect level descriptors (such as in the UK) or where other categories are used for describing qualifications (as in Austria ⁽⁷⁰⁾). The reason for these different approaches is that NQFs may have different functions, such as a more prescriptive one or only a guiding one. Also, where there are plans for using the NQF categories for describing qualifications in the future (in particular, when NQFs are used as a tool for reform) such descriptions were often not available when the existing qualifications were classified in the NQF.

Table 18 provides an overview of categories or dimensions used for structuring the level 5 descriptors and the learning outcomes descriptions of qualifications.

7.2.8. Allocating qualifications from other learning contexts

Countries also differ in the extent to which they open up the NQF to the inclusion of qualifications acquired in non-formal and informal learning contexts.

In some countries, a level 5 qualification (or parts of it) can be gained in different learning contexts, with the qualification standard assigned to NQF level 5 without specifying a required learning route. Some countries focus only on the formal system – at least in the first step – while others also include existing qualifications outside the formal system.

Countries may also use the NQF for the development and accreditation of new qualifications. Their design is usually based on the NQF descriptors, so the qualifications descriptors must clearly reflect the NQF descriptors of a specific level to permit classification. These activities are often linked to other reform aims and processes, such as establishing closer links to the labour market and responding to skill gaps or identified needs (as in Belgium (Flanders), the Czech Republic, Latvia, Lithuania and the Netherlands).

There is evidence that the criteria used for classifying qualifications from outside formal learning contexts and for allocation of qualifications from the formal system are not always the same: for example, the Netherlands has specific procedures for non-state regulated qualifications. In addition to learning outcomes, much emphasis is put on input factors to ensure that quality standards are met.

⁽⁷⁰⁾ In Austria, VET standards are included in new curricula (qualification descriptions) of VET college qualifications that will gradually be implemented. Although VET standards are defined in categories like professional competences, methodical competence, social and personal competence, the learning outcomes descriptions in curricula are written holistically, i.e. they do not distinguish between categories but knowledge, skills and competence are implicitly reflected.

Table 18 **Descriptors for levels and qualifications**

Country	Categories/dimensions/domains used for describing the national level linked to EQF level 5 ⁽⁷¹⁾	Categories/dimensions/domains used for describing qualifications linked to EQF level 5
BE (FI)	Knowledge (explanatory and procedural), skills (quality to work effective and efficiently on the basis of knowledge), context (where the knowledge and skills are used, relations with others), autonomy and responsibility.	Professional qualification profiles: have to be structured by the descriptor elements of the Flemish qualifications framework ⁽⁷²⁾ .
CZ	Competences (closely linked to work tasks and processes); NSK level descriptors do not explicitly distinguish categories of learning outcomes although they have been developed in close connection to the EQF).	Learning outcomes constituting an individual vocational qualification are present in qualification and assessment standards; they are coded, categorised and related to the database of competences – structured in three elementary categories: soft competences; general skills; vocational knowledge and skills.
DK	Knowledge (type and complexity, understanding), skills (type, problem-solving, communication), competence (space for action, cooperation and responsibility, learning).	VET qualifications and SCHE: knowledge, skills, competence.
EE	Knowledge, skills, competence; subframework for professional/occupational qualifications: knowledge and understanding, skills, scope of independence and responsibility.	Occupational qualification standards: knowledge, competence.
IE	Knowledge (breadth, kind), know-how and skill (range, selectivity), competence (context, role, learning to learn, insight).	Knowledge (breadth, kind), know-how and skill (range, selectivity), competence (context, role, learning to learn, insight).
FR	Level descriptor does not use separate categories, but reflects knowledge, skills and competence.	Referential standards (occupational and certification referential standards): practical capacities (i.e. skills), related competences (<i>savoir-faire</i>), associated knowledge (<i>savoirs associés</i>).

⁽⁷¹⁾ For further information on NQF level descriptors see Cedefop, 2013a.

⁽⁷²⁾ Professional qualifications profiles are currently being developed.

Country	Categories/dimensions/domains used for describing the national level linked to EQF level 5 ⁽⁷¹⁾	Categories/dimensions/domains used for describing qualifications linked to EQF level 5
HR	Knowledge (factual, theoretical), skills (cognitive, practical, social), associated autonomy and responsibility.	Knowledge (factual, theoretical), skills (cognitive, practical, social), associated autonomy and responsibility ⁽⁷³⁾ .
LV	Knowledge (knowledge and comprehension), skills (ability to apply knowledge, communication and general skills) and competence (analysis, synthesis and assessment).	Occupational standards: knowledge, skills, professional competence.
LT	Descriptors are not divided in categories; they reflect characteristics of activities (complexity, independence and changeability of the activity performed) and types of competences (functional, cognitive and general competences required to perform activity).	Competences.
LU	Knowledge (<i>connaissances</i>), aptitudes, attitudes.	Learning outcomes/competences.
MT	Knowledge, skills and competences; each level summarises learning outcomes in terms of knowledge and understanding, applying knowledge and understanding, communication skills, judgemental skills, learning skills, autonomy and responsibility.	Knowledge (theory), skills (practical application) and competence (autonomy and responsibility).
NL	Knowledge, skills (applying knowledge, problem-solving skills, learning and development skills, information skills, communication skills), responsibility and independence.	General in competences, institutions can use their own categories (professional profiles: competences structured in, content core tasks areas' and 'personal task areas).
AT	Knowledge, skills, competence.	VET standards: professional competences, methodical competence, social and personal competence.
PT	Knowledge, skills, attitudes.	VET: competences, in terms of knowledge, skills, attitude.
UK (EWNI)-QCF	Knowledge and understanding, application and action, autonomy and accountability.	Not specified.

⁽⁷³⁾ In Croatia, these are requirements that will have to be fulfilled in the future.

Country	Categories/dimensions/domains used for describing the national level linked to EQF level 5 ⁽⁷⁴⁾	Categories/dimensions/domains used for describing qualifications linked to EQF level 5
UK (EWNI)-NQF	Intellectual skills and attributes, processes, accountability ⁽⁷⁴⁾ .	Not specified.
UK (Sco)	Knowledge and understanding; practice: applied knowledge and understanding; generic cognitive skills; communication, ICT and numeracy skills; autonomy, accountability and working with others.	Not specified.
UK (Wales)-CQFW	Knowledge and understanding, application and action, autonomy and accountability.	Not specified.
UK-FHEQ	A statement of outcomes, achievement of which is assessed and which a student should be able to demonstrate for the award of the qualification at that level; a statement of the wider abilities that the typical student could be expected to have developed.	Not specified.

Source: Cedefop.

7.2.9. Allocation inconsistencies

There is clear evidence that once national levels have been referenced to the EQF and qualifications have been allocated to national levels, the EQF is used for comparison to achieve better understanding of qualifications from other countries or learning contexts. In this respect, the EQF is actually used for the purpose it was designed for as a translation device for comparing qualifications from different systems and learning contexts.

In some cases classifying qualifications in NQFs and referencing NQFs to the EQF also leads to open questions because some qualifications that were considered as equivalent are now linked to different EQF levels. For example, in some countries covered by this study, the master craftsman qualification is linked to EQF level 5 (such as in France, Croatia or Luxembourg) while, in other countries it is linked to level 6 (Austria). There is a need for further discussion and closer examination of these qualifications. For example the learning

⁽⁷⁴⁾ These domains are no longer used and levels are described by the qualifications that are aligned to them.

outcomes of these qualifications from different countries could be directly compared to identify similarities and differences that justify the different levelling decisions.

Although classification in the Dutch qualifications framework is generally open to all qualifications awarded in the Netherlands, it is not the intention that every learning outcome, however minor, will receive a level classification. An application for classification in the Dutch qualifications framework by non-regulated other (not accredited) qualifications can only be made for those requiring a substantial volume of learning: this means a minimum of 400 hours. It can be questioned whether this threshold is necessary, given the additional requirements for proving that the programme leads to the learning outcomes. The following conditions for the admissibility of an application for classification of a qualification require the competent body to prove that:

- (a) it enjoys legal status;
- (b) the examination procedure leading to the qualification is validated by an independent authority;
- (c) the underlying programme has recognised quality assurance and quality management systems and is in line with European principles of quality assurance in education and training;
- (d) the qualification is described in terms of learning outcomes in such a way that they are comparable to learning outcomes as described in the Dutch qualifications framework;
- (e) the classification includes assessment criteria that prove that the intended learning outcomes are achieved by an individual (van der Sanden et al., 2012, p. 107).

The application form for classification in the Dutch qualifications framework contains the following chapters:

- (a) descriptors: the learning outcomes need to be described and proof should be given of how the programme reaches these learning outcomes;
- (b) learning efforts: the applicant needs to prove how many hours of study will go into the qualification and by what methods (contact hour, e-learning, coaching, stage, etc.);
- (c) examination: the examination needs to include independent examination committees or an external examiner;
- (d) relation with the labour market (optional): the applicant needs to describe how employees are involved in the programme.

CHAPTER 8.

Conclusions and recommendations

8.1. Key conclusions

Diverse use of level(s) linked to EQF level 5 across the 15 countries.

The study identified 31 types of qualifications linked to EQF level 5 in the 15 countries analysed. There is one country currently without qualifications linked to level 5 (Lithuania) and two countries with only qualifications from outside formal education and training linked (the Czech Republic and Estonia). In some countries only one type of qualification (VET or higher education) is linked to level 5 (Latvia, the Netherlands, Austria and Portugal). Latvia and the Netherlands have higher education qualifications, while Austria only has VET qualifications linked to EQF level 5. In Portugal, the qualification is registered as a VET qualification, but the courses leading to it are run by higher education and non-higher education institutions. Several countries have more than one type of qualification linked to EQF level 5 (Belgium (Flanders) Denmark, Croatia, Luxembourg) and some have a diverse landscape (Ireland, France, Malta and the UK).

Half of level 5 qualifications are SCHE and belong to the higher education system or are delivered under responsibility of higher education institutions (Belgium (Flanders), Denmark, Ireland, Croatia, Latvia, Luxembourg, Malta, the Netherlands and the UK). The Austrian qualification type allocated to this level is awarded in five-year upper secondary programmes or CVET. A number of countries, such as the Czech Republic, Denmark, Croatia, Luxembourg and Malta, link (post-)secondary VET qualifications to EQF level 5. Portugal is a particular case, where the level 5 qualification is governed by the VET sector as well as by higher education, and the courses leading to these qualifications are offered by higher education and non-higher education institutions. As well as higher education and VET qualifications, a third category can be distinguished, which is closely related to higher education (UK (Scotland)). This is general education, as when the Scottish advanced higher qualification and the Scottish baccalaureate are part of the general education system aiming at preparing people to study at higher levels.

There is also diversity between the countries in the importance of the EQF level 5 qualification type to the country, expressed in quantitative terms (number of qualifications issued, students enrolled in programmes). However, there is a lack of comparable data across countries on student numbers, graduates,

progression routes, and background of people obtaining an EQF level 5 type qualification. Although the extent to which countries use qualifications at EQF level 5 differs greatly, their importance is growing in all investigated countries for several reasons. They are developed as response to increased needs for advanced technical and/or management skills in rapidly changing labour markets.

The role and function of level 5 qualifications is primarily labour market access and providing opportunities for further learning for students with a VET qualification or people already in employment.

Most level 5 qualifications are self-standing qualification, having their own profile and labour market relevance, as opposed to being only the short cycle of another qualification without their own labour market value.

There are multiple possible progression routes for EQF level 5 qualification types, from and to employment and to higher education. Among the 31 qualifications, 14 types are primarily oriented towards the labour market, for instance in the Czech Republic and in Estonia, in the EUD in Denmark, BMs in France, and master craftsman qualification in Croatia and Luxembourg. There are 12 with a double function, valued as entry qualifications for both the labour market and higher education (in some cases with the potential for credit transfer): these include the higher VET qualification (HBO5) in Belgium (Flanders), the VET college *Reifeprüfung* certificate and the VET diploma in Austria, the DUT in France and the diploma of first level professional higher education in Latvia. Eight level 5 qualification types provide clearly articulated entry and progression opportunities into bachelor programmes, including the higher certificate in Ireland, the AD in the Netherlands and the higher education certificate or diploma in the UK. The explicit use of learning outcomes supports progression. Some qualifications at EQF level 5 are solely seen as a preparation for further higher education studies, as in the advanced higher certificate or baccalaureate in Scotland.

When the level 5 qualification type is closely related to and articulated with the bachelor programme within formal education and training, the progression to and within bachelor is usually guaranteed. In cases where the level 5 qualification is a (post-)secondary VET qualification and delivers competences specific to a profession, progression to higher education is often less obvious or not an explicit objective. The available quantitative data on what people do after graduation show a variety of routes, depending on the key purpose and function of the qualification. For some qualifications, students usually continue their studies; in others, they start their career, or continue their current occupation. Some level 5 type qualifications are particularly relevant for people already in employment as

they are often more labour market-oriented than bachelor programmes and allow to progress in one's career.

There are differences in the labour market relevance of level 5 qualifications, though the qualifications at this level are generally regarded as being relevant on the labour market. Also, in countries without a long tradition of level 5 qualifications, the level is becoming increasingly important and is opened up for qualifications from different learning contexts (as in the Netherlands). In countries where the level 5 qualifications have existed for a long time, acceptance by employers and labour market relevance is higher than in countries where these qualifications have only recently been developed. Tradition is a more likely cause than the subsystem to which the qualification belongs in explaining labour market relevance: SCHE-oriented to further learning and labour-market-oriented qualifications can be equally relevant.

Level 5 qualifications carry a currency which makes them valuable on the labour market and for further learning. The fact that the qualifications allow progression in career and further learning appeals to both learners and employers.

The extent to which the learning outcomes approach is applied differs across countries. However, due to the labour market orientation of most of the level 5 qualification types, occupational profiles often underlie the qualifications; this is also the case for those qualifications governed by higher education.

The learning outcomes approach for describing qualifications is already in place in countries with mature frameworks and also in some of the countries that developed their NQF just before or in close connection with the EQF referencing process. In many countries, however, learning outcomes descriptions of individual qualifications are often not publicly available or only in national languages and at different levels of detail: in some cases qualification descriptions provide a brief overview of the learning outcomes and in others there are only detailed descriptions of each module or unit available. Learning outcomes descriptions are not yet available in some countries. Qualifications or programmes are largely described by teaching aims and content or duration, making qualifications linked to level 5 difficult to compare. However, several of the countries studied are progressively introducing the learning outcomes approach and it can be expected that – triggered by the NQF implementation process – more progress will be made during the coming years.

Learning outcomes are very differently described for the specific qualifications studied. Some of the qualifications include categories comparable with the EQF descriptors (knowledge, skills and competence) but most use very

different categories or dimensions for structuring learning outcome descriptions. Many qualifications are built on competences which are, in turn, described in terms of learning outcomes. Comparing qualifications governed by different subsystems (VET and higher education), no noticeable differences are encountered. Some of the learning outcome descriptions make reference to either the curriculum which needs to be followed to obtain the competences or to the assessment methods for individual learning outcomes. In many cases, detailed descriptions of learning outcomes are explicitly developed on the basis of a professional/occupational profile which is agreed with labour market stakeholders.

When there is more emphasis on generic, transversal competences and underlying knowledge, the mode of delivery tends to be more school-based. In contrast, focus on occupation-specific skills translates into a more work-based mode of delivery.

Many level 5 qualification types can be acquired by following different learning pathways, allowing the use of validation of prior experience to shorten the duration of the programme leading to the qualification.

Although higher education governed qualifications are mainly school-based, they often include a considerable work-based element. For (post-)secondary VET qualifications, the focus is more on gaining practical experience while working. The Austrian level 5 qualification is an exception here as it is mainly delivered within IVET. Many EQF level 5 qualifications can be acquired through validation of prior experience, as in France or, more recently, in the Czech Republic or Estonia. Level 5 qualifications linked to general education systems are generally school-based and are unlikely to be achieved through validation of non-formal and informal learning. Qualifications in the formal higher education subsystem are often more uniformly described in terms of mode of delivery and volume of the programme, often related to input factors instead of learning outcomes. The more the qualification takes into account a specific profession, both the mode of delivery and the volume become less clear. This is related to the importance of integrating work-based learning and prior experiences in assessing whether the student can perform at the required level. One example of this is the master craftsman diploma (*brevet de maîtrise*) in Luxembourg.

HE qualifications are generally more intrinsically linked to education programmes than (post-)secondary VET qualifications. In the latter, there is usually more room for including competences acquired in non-formal and informal learning contexts. There is also more attention paid to assessment procedures to obtain the qualification independently from the education programme (for instance the Estonian occupational qualification).

Expression of study intensity/volume or duration of the programme leading to the level 5 qualification is largely dependent on the related subsystem.

Whether the qualification is the result of an initial education trajectory or the result of a largely work-based trajectory also affects the way the volume of the qualification is indicated. For higher education governed qualifications duration is mostly expressed in terms of ECTS. The number of ECTS credits varies from 60 to 180 ECTS, with an average of 120 ECTS. When assessing the study duration/volume for obtaining VET-governed qualifications, more diversity is noticeable and it is not evident that the ECVET system is used to indicate the volume.

The allocation procedures for assigning levels to qualifications are not always transparent and evidence not really visible.

In countries that started NQF development around the time of the development and implementation of the EQF, the classification of qualifications in the NQF was often closely linked to the EQF referencing process: it was done within one process and not in two clearly distinguished processes (as in the Netherlands, Austria, Portugal).

The appropriate level of qualifications can be identified via linguistic matching of the qualifications and level descriptors (as in Denmark, Estonia, and Luxembourg). A main challenge in this context is the fact that qualifications are only partly described in terms of learning outcomes to a certain degree (as in Austria or Portugal) and are described using very different concepts and terms. For example, in some countries qualification descriptions are required to reflect the NQF level descriptors (as in the UK) while, in others the same categories structuring NQF level descriptors have to be used for describing qualifications (as in Ireland). Often, other indicators are (also) taken into account, such as the way qualifications are currently regarded in the society (Austria). Sometimes other criteria are (also) used, such as duration or workload (Denmark, Croatia, Malta, the Netherlands). NQFs (and in particular the levels referenced to EQF level 5) are not only used for the classification of the existing (formal) system (as in Ireland, Malta, the UK), but (also) for the development of new qualifications, perhaps from outside the formal system (as in Belgium (Flanders), the Czech Republic, Latvia, Lithuania, the Netherlands). In some cases, however, different procedures are used and input criteria are also taken into account (as in the Netherlands).

Looking at individual qualifications instead of (only) at types of qualifications can improve the NQF allocation process

Allocation procedures differ across countries in relation to what is actually allocated: countries either assign individual qualifications (Belgium (Flanders), the Czech Republic, Denmark ⁽⁷⁵⁾) or types of qualifications (Luxembourg, the Netherlands) to NQF levels. The latter approach is usually taken in the initial phase of the NQF and newly-developed or revised qualifications will be assigned to levels individually. Allocating individual qualifications to the NQF levels is more time-consuming, but it can aid identification of differences or inconsistencies in qualifications of the same type. As the example from Luxembourg shows, not all individual qualifications belong to the same type level of learning outcomes.

8.2. Policy messages

The study demonstrates that EQF level 5 qualifications play an important role; in particular, they help achieve a range of policy objectives and respond to several challenges countries are currently facing:

- (a) they allow people to acquire advanced technical and/or management competences, improving their job prospects and helping them change or progress in their careers. This complements Cedefop skills forecasts (Cedefop, 2012c), demonstrating the increased demand for skills of this type and at higher level;
- (b) their double function – combining labour market orientation with progression opportunities to/within higher education – makes them attractive to learners;
- (c) they demonstrate the importance of vocationally- and professionally-oriented qualifications in tertiary, higher education and training;
- (d) qualifications at level 5 contribute to lifelong learning by being attractive and accessible to adult and non-traditional learners;
- (e) in many countries, access to programmes and qualifications at level 5 can be acquired through validation of work experience and non-formal and informal learning;
- (f) they are seen as valuable and relevant by employers, as most include some form of work-based learning;
- (g) they seem to be attractive for people who have already acquired some kind of higher education degree, offering possible labour market specialisation.

⁽⁷⁵⁾ Except for higher education qualifications.

This illustrates that progression can take place in many directions, vertically as well as horizontally;

- (h) by acting as a bridge between education and training institutions and subsystems they can promote interaction (vertically and horizontally) between VET and higher education. This is important as it highlights the added value of VET at all qualification levels, contributing to the overall attractiveness and image of VET;
- (i) exploring the different types and purposes of qualifications at EQF level 5 in European countries could help policy-makers identify gaps in their own qualifications landscape and use this level as a platform for developing new qualifications.

The Cedefop study of qualifications at EQF level 5 also provides important lessons regarding the implementation of learning outcomes and NQFs;

- (a) describing qualifications in learning outcomes is work in progress. The study suggests further stimulating the use of the learning outcomes approach for describing individual qualifications and assigning them to NQF levels on the basis of this description;
- (b) the study evidence also identifies the need to improve the transparency of procedures for assigning qualifications – obtained in formal, non-formal and informal learning contexts – to NQF levels.

List of abbreviations

AD	associate degree
AKOV	Agentschap voor Kwaliteitszorg in Onderwijs en Vorming [Flemish Agency for Quality Assurance in Education and Training]
AP	Erhvervsakademiuddannelser [academy profession degree]
AMS	Arbeitsmarktservice Österreich [Employment Service Austria]
ANQEP	Agência Nacional para a Qualificação e o Ensino Profissional, I.P. [Portuguese National Agency for Qualification and Vocational Education]
APCMA	assemblée permanente des chambres de métiers et de l'artisanat [permanent assembly of the chambers of trades and crafts]
BHS	berufsbildende höhere Schule [VET colleges]
BM	brevets de maîtrise [master craftsman diploma]
BMUKK	Bundesministerium für Unterricht, Kunst und Kultur [Austrian Federal Ministry of Education, the Arts and Culture]
BMWF	Bundesministerium für Wissenschaft und Forschung [Federal Ministry of Science and Research]
BTEC	Business and Technology Education Council
BTS	brevet de technicien supérieur [higher technician certificate]
CET	curso de especialização tecnológica [technological specialisation course]
CLQ	cadre Luxembourgeois des qualifications [Luxembourg qualifications framework]
CNCP	Commission National de la Certification Professionnelle [National Commission for Vocational Certification]
CQP	certificat de qualification professionnelle [vocational qualification certificate]
CP	contrat de professionnalisation [professionalisation contract]
CPNE	Commission Paritaire Nationale pour l'Emploi [Joint National Commission for Employment]
CQFW	credit and qualifications framework for Wales
CVET	continuing vocational education and training
CVT	continuing vocational training
DET	diploma de especialização tecnológica

	[technological specialisation diploma]
DGEEC	Direcção-Geral de Estatísticas da Educação e Ciência [Directorate General for Education Statistics and Science]
DGES	Direcção-Geral do Ensino Superior [Directorate General for Higher Education]
DUO	Dienst Uitvoering Onderwijs [education executive service]
DUT	diplôme universitaire de technologie [university diploma of technology]
DUT-GEA	diplôme universitaire de technologie en gestion des entreprises et des administrations [university diploma of technology in the management of enterprises and administrations]
ECTS	European credit transfer and accumulation system
ECVET	European credit system for vocational education and training
EHEA	European higher education area
EQF	European qualifications framework
ETF	European Training Foundation
EUCEN	European university continuing education network
EUD	Erhvervuddannelse [vocational degree]
Eurashe	European Association of Institutions in Higher Education
EWNI	England, Wales and Northern Ireland
FETAC	Further Education and Training Awards Council
FHEQ	framework for higher education qualifications
HAVO	hoger algemeen voortgezet onderwijs [higher general secondary education]
HBO5	Hoger Beroepsonderwijs 5 [higher vocational education 5]
HETAC	Higher Education and Training Council
HNC	higher national certificate
HND	higher national diploma
HOSP	higher education for social promotion
HR	human resources
IBW	Institut für Bildungsforschung der Wirtschaft [Institute for Educational Research of the Economy]
ICT	information and communication technology
IUT	institut universitaire de technologie [university institutes of technology]
IVET	initial vocational education and training
LTECG	Lycée technique école de commerce et de gestion [Technical High School of Business and Management]

MBO	middelbaar beroepsonderwijs [upper secondary vocational education]
MCAST	Malta College of Arts, Science and Technology
MCTES	Ministério da Ciência, Tecnologia e Ensino Superior [Portuguese Ministry of Science, Technology and Higher Education]
NARIC	national academic recognition information centres in the European Union
NCP	national coordination point
NQAI	National Qualifications Authority of Ireland
NQC	national qualifications catalogue
NQF	national qualifications framework
NFQ	national framework of qualifications
NSK	national register of qualifications
NVAO	Nederlands-Vlaamse Accreditatieorganisatie [Accreditation Organisation of the Netherlands and Flanders]
NVQ	national vocational qualification
Ofqual	Office of the Qualifications and Examinations Regulator
QAA	Quality Assurance Agency for Higher Education
QCF	qualifications and credit framework
QQI	Quality and Qualifications Ireland
RNCP	répertoire national des certifications professionnelles [national register of vocational certifications]
SCHE	short-cycle higher education
SCQF	Scottish credit and qualifications framework
SVQ	Scottish vocational qualification
UKCES	UK Commission for Employment and Skills
VAE	validation des acquis de l'expérience [validation of prior experiential learning]
VET	vocational education and training

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ANNEX 1.

List of working definitions

Term	Working definition	Source
Access to education and training	Conditions, circumstances or requirements (e.g. qualification, education level, skills or work experience, etc.) governing admittance to and participation in education and training institutions or programmes.	Cedefop, 2008a.
Competence	Means the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development.	EQF recommendation (European Parliament and Council of the EU, 2008).
Competence: distinction between generic/transversal competences and specific competences	Generic competences are defined as shared knowledge, skills and attitudes of different occupational groups. Specific competences are defined as knowledge, skills and attitudes specific to conduct an occupation related task.	Working definition; based on Cedefop, 2010b, elaborated for this study.
Comprehensive NQF	NQF that includes qualifications from all subsystems of education and training and sometimes also from all learning contexts (formal, non-formal and informal learning).	Working definition elaborated for this study.
Continuing education and training	Education or training after initial education and training – or after entry into working life – aimed at helping individuals to: <ul style="list-style-type: none"> • improve or update their knowledge and/or skills; • acquire new skills for a career move or retraining; • continue their personal or professional development. 	Cedefop, 2008a
Credit arrangements	They enable or aid recognition of credit gained by an individual through, for example, the existence of equivalencies, use of exemptions, existence of units/modules that can be accumulated and transferred, the autonomy of providers who can individualise pathways, validation of non-formal and informal learning. Credit systems systematically embed credit arrangements into qualifications design. This includes arrangements such as the use of common or equivalent units, articulation of the content of qualifications among each other and building qualifications up from a pool of units. The requirements to build accumulation and transfer possibilities into qualifications design are binding for actors in the system (subsystem).	Cedefop, 2010a.

Term	Working definition	Source
Credit system	<p>An instrument designed to enable accumulation of learning outcomes gained in formal, non-formal and/or informal settings and facilitate their transfer from one setting to another for validation and recognition. A credit system can be designed:</p> <ul style="list-style-type: none"> • by describing an education or training programme and attaching points (credits) to its components (modules, courses, placements, dissertation work); • by describing a qualification using learning outcomes units and attaching credit points to every unit. 	Cedefop, 2008a
Credit transfer	The process of having credits awarded in one context recognised in another context for purposes of obtaining a qualification.	European Commission, 2009a.
Education/learning path	The sum of learning sequences followed by an individual to acquire knowledge, skills or competences. A learning path may combine formal and non-formal learning sequences, validation of which leads to certification.	Cedefop, 2008a.
Education/training pathway	A set of related education or training programmes provided by schools, training centres, higher education institutions or VET providers, that aids individuals' progression within or between activity sectors.	Cedefop, 2008a.
Experiential/prior learning	Experiential learning' implies both learning from experience and through experience; that is, the extrapolation and application of learning. In a wider sense, the term 'prior learning' may also acknowledge learning acquired both in formally/non-formally and formally.	Cedefop, 2007.
Formal learning	Learning that occurs in an organised and structured environment (an education or training institution or on the job) and is explicitly designated as learning (in terms of objectives, time or resources). Formal learning is intentional from the learner's point of view. It typically leads to validation and certification.	Cedefop, 2008a.
General education	Education which, in its choice of subject matter, does not envisage any kind of specialisation with a view to prepare students to work in a particular sector.	Cedefop, 2008b.
Higher education	Education beyond the secondary level, especially education provided by a college or university.	Merriam-Webster, n.d.
Hybrid qualifications	Double qualifications that have a hub function as they should prepare for qualified entrance into working life (in the sense of VET) and are valued as labour market entry qualifications by employers while at the same time opening access to higher education.	Hybrid qualifications-Leonardo project, 2012a.

Term	Working definition	Source
Informal learning	Learning resulting from daily work-related, family or leisure activities. It is not organised or structured (in terms of objectives, time or learning support). Informal learning is mostly unintentional from the learner's perspective. It typically does not lead to certification.	Cedefop, 2008a.
Initial education	General or VET carried out in the initial education system, usually before entering working life. This also includes higher education before entering working life.	Cedefop, 2008a, elaborated for this study.
Knowledge	Means the outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study.	EQF recommendation (European Parliament and Council of the EU, 2008).
Learning context	The situation or set of circumstances (such as regulations or institutional settings) in which something is learned, which are relevant in a learning event and can impact what is learned and how learning outcomes are achieved or recognised. The learning context can be formal, non-formal or informal.	Working definition elaborated for this study.
Learning outcomes	Means statements of what a learner knows, understands and is able to do on completion of a learning process, which are defined in terms of knowledge, skills and competence.	EQF recommendation (European Parliament and Council of the EU, 2008).
Lifelong learning	All learning activity undertaken throughout life, which results in improving knowledge, know-how, skills, competences and or qualifications for personal, social and professional reasons.	Cedefop, 2008a.
Mode of delivery	The way a programme is organised to obtain the learning outcomes related to the qualification to which the programme is oriented. This can be school-based, work-based and dual (combination of both). In addition a distinction can be made between full-time and part-time education programmes.	Working definition elaborated for this study.
NQF	An instrument for the classification of qualifications according to a set of criteria for specified levels of learning achieved, which aims to integrate and coordinate national qualifications subsystems and improve the transparency, access, progression and quality of qualifications in relation to the labour market and civil society.	EQF recommendation (European Parliament and Council of the EU, 2008).
National qualifications system	All aspects of a Member State's activity related to the recognition of learning and other mechanisms that link education and training to the labour market and civil society. This includes the development and implementation of institutional arrangements and processes relating to quality assurance,	EQF recommendation (European Parliament and Council of the European Union, 2008).

Term	Working definition	Source
	assessment and the award of qualifications. A national qualifications system may be composed of several subsystems and may include a NQF.	
Non-formal learning	Learning embedded in planned activities not explicitly designated as learning (in terms of learning objectives, learning time or learning support), but which contain an important learning element. Non-formal learning is intentional from the learner's point of view. It typically does not lead to certification.	Cedefop, 2008a.
Permeability	An individual's possibility to move vertically and horizontally in the qualification system, to transfer from one educational programme, educational subsystem, type of education or learning pathway to another, which involves the accumulation and/or transfer of learning achievements that lead to a new qualification. Permeability can be considered a system characteristic.	Working definition elaborated for this study.
Professional qualifications	Professional qualifications are typically based on specific occupational profiles that are drawn up in close collaboration with labour market stakeholders and are sometimes awarded by professional organisations and not necessarily regulated by national government. They can include recognition of work experience (professional practice).	Working definition elaborated for this study
Programme of education and training	An inventory of activities, content and/or methods implemented to achieve education or training objectives (acquiring knowledge, skills and/or competences), organised in a logical sequence over a specified period of time.	Cedefop, 2008a.
Qualification type	A group or cluster of qualifications within a country that share specific characteristics, for example in terms of subsystem they belong to, legal regulations and regulatory body, general educational objectives as well as duration of related programmes, access requirements or level of labour market entry. Within a qualification type, there can be many different qualifications with regard to the content: the specific learning outcomes they include can be quite different because they are linked to different fields (such as different technical fields, social and health care, business).	Working definition elaborated for this study.
Qualifications awarded outside the formal system	Qualifications awarded by private providers, companies, NGOs that are registered and based in the country concerned, but which are not covered or regulated by the national education and training system. Qualifications from outside the country offered by other qualification authorities, by institutions in the	Background paper on the peer learning activity on including qualifications from outside formal education and training systems into

Term	Working definition	Source
	non-formal sector, private companies or international organisations.	NQFs (Västerås, Sweden, 28 February to 1 March 2013)
Recognition of competences/prior learning	(a) The overall process of granting official status to competences, gained either formally (by awarding certificates) or informally (by granting equivalence, credit units, validation of gained competences) (formal recognition). (b) The acknowledgement of the value of competences by economic and social stakeholders (social recognition).	Cedefop, 2008b.
SCHE	Qualifications which are typically organised and recognised within the first higher education cycle or linked to this cycle and are typically represented by approximately 120 ECTS credits.	Eurashe, 2011.
Skills	Means the ability to apply knowledge and use know-how to complete tasks and solve problems.	EQF recommendation (European Parliament and Council of the EU, 2008).
State-regulated qualifications	Qualifications are regulated by national authorities, usually with a legal base, and are part of the national education and training system (formal qualifications system).	Working definition elaborated for this study.
Study duration/volume/study intensity	Any expression of the workload related to a programme/course leading to an EQF level 5 qualification. This can be expressed in terms of credit points, study hours, years, or otherwise.	Working definition elaborated for this study.
Type of qualification	See qualification type	
Validation of learning outcomes	The confirmation by a competent body that learning outcomes (knowledge, skills and/or competences) acquired by an individual in a formal, non-formal or informal setting have been assessed against predefined criteria and are compliant with the requirements of a validation standard. Validation typically leads to certification.	Cedefop, 2009a.
VET	Education and training which aims to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labour market.	Cedefop, 2008a.
Qualification	Means a formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards.	EQF recommendation (European Parliament and Council of the EU, 2008).

ANNEX 2. List of interviewees

Name	Organisation	Number of interviewees
Belgium (FI)	AKOV	5
	NVAO	
	Union of Self-Employed Entrepreneurs	
	Artesis Plantijn College Antwerps	
	Ministry of Education and Training, department of education and training	
Czech Republic	Ministry of Education, Youth and Sports	27
	Prague information services	
	National Institute of Education	
	Confederation of Industry of the Czech Republic	
	NSK	
	European Career Institute	
	Tyrkys, School of Culture and Entrepreneurship in Tourism	
	Ministry of Regional Development	
	Various organisations, focus group	
Denmark	Ministry of Children and Education	4
	Ministry of Science, Innovation and Higher Education	
	Danish Industry Organisation	
	Danish Evaluation Institute	
Estonia	Kutsekoda Qualifications Authority of Estonia	4
	Ministry of Education and Research of the Republic of Estonia	
	Estonian ENIC/national academic recognition information centres in the European Union (NARIC)-Foundation Archimedes	
	Estonian Employers' Confederation	
Ireland	QQI	25
	Institute of Art, Design and Technology	
	Coláiste Íde College of Further Education	
	Irish Hospitality Institute	
	Galway-Mayo Institute of Technology	
	PREM group	
	Athlone Institute of Technology	
	Fitzpatrick's Castle Hotel	

Name	Organisation	Number of interviewees
	President, Irish Hotels Federation	
France	National Conservatory of Arts and Crafts Group of public educational institutions, Strasbourg Europe	10
	University of Strasbourg	
	CNCP	
	IUT Mulhouse, University of Haute Alsace	
Latvia	Academic Information Centre	3
	Latvian Employers Association	
	Riga Technical College	
Lithuania	Qualifications and Vocational Education and Training Development Centre	11
	Association of Chemical Industry of Lithuania	
	Kaunas VET Centre for Service Sector Employees	
	Kaunas Energy Repair, Common Lithuanian- German Welding Training Centre	
	Kaunas University of Applied Sciences	
	Kaunas VET Centre for the Specialists in the Service Industries	
	The Engineering Industries Association of Lithuania	
Luxembourg	Ministry of Education and Vocational Training	2
	Ministry of Higher Education and Research	
Malta	Ministry of Education and Employment	5
	MCAST	
	Malta Qualification Recognition Information Centre	
	Employment and Training Corporation	
Netherlands	LEIDO	22
	NCP, Dutch qualifications framework	
	Dutch Council for Education and Training	
	NVAO	
	Gooiconsult	
	Dutch Institute for Banking, Insurance and Securities	
	Rotterdam Academy	
Austria	Federal Ministry of Science and Research	14
	Ministry of Education, the Arts and Culture, EQF advisory group, NQF steering group	
	Institute for Educational Research of the Economy/Chamber of Commerce, Austrian Economic Chambers, NQR steering group, EQF advisory group	
	Bfi VET college of business administration (Vienna)	

Name	Organisation	Number of interviewees
	TGM Engineering College (Vienna)	
	Vienna Business School Academy Street	
	TTTech group	
	VET college graduate (business administration)	
Portugal	ANQEP	5
	National Association of Professional Schools	
	Employment and Vocational Training Institute	
	Polytechnic Institute of Setúbal	
UK	Ofqual (England)	9
	Council for the Curriculum Examinations and Assessment (Northern Ireland)	
	SCQF partnership (Scotland)	
	Scottish Qualifications Authority (Scotland)	
	Welsh government (Wales)	
	UK NARIC	
	UK Commission for Enterprise and Skills	

ANNEX 3.

Available data on EQF level 5 qualifications

Data are generally assessed on the number of qualifications issued in the country, and/or the number of students enrolled in pathways for acquiring these qualifications or the number of qualifications available at EQF level 5. These numbers are compared to the total number of students in ISCED 1997, level 5 and 6 programmes ⁽⁷⁶⁾. Data are just indications and by no means provide an exhaustive picture.

Belgium (Flanders)		
Qualification type		Higher vocational education 5
Qualification type linked to ISCED		Yes
ISCED level 1997		5B
Quantitative data available	Description	Total number of students enrolled
	Data	24 490
	Year	2012
Benchmark	Description	Total number of students in the reference year (Eurostat; ISCED 1997 levels 5-6)
	Data	210 611
Importance		Comparing the number of students enrolled in EQF level 5 programmes compared to the total amount of students (ISCED 5-6), the ratio is around one to eight.
Czech Republic		
Qualification type		Vocational qualification
Qualification type linked to ISCED		No
ISCED level 1997		n/a
Quantitative data available	Description	Total number of vocational qualifications (included in the NSK) at level 5
	Data	6
	Year	2013
Benchmark	Description	Total number of qualifications in the NSK
	Data	366
Remarks		There are in total six vocational qualifications at level 5 in the NSK. The total number of NSK qualifications is 366.

⁽⁷⁶⁾ Data are based on ISCED 1997 (see Unesco, 2006).

Denmark		
Qualification type		Academy profession degree (SCHE)
Qualification type linked to ISCED		Yes
ISCED level 1997		5B
Quantitative data available	Description	Total number of students enrolled (regular and adults)
	Data	53 124
	Year	2011
Benchmark	Description	Total number of students in the reference year (Eurostat; ISCED 1997 levels 5-6)
	Data	258 932
Qualification type		Vocational degree
Qualification type linked to ISCED		Yes
ISCED level 1997		-
Quantitative data available	Description	-
	Data	No data
	Year	-
Remarks		21% of the student population enrolled at ISCED 1997 levels 5-6 are enrolled in SCHE programmes. This includes regular students and adult learners. Data on the EUD programmes are not available. Comparing the number of students at EQF level 5 programmes and the total number of students at ISCED levels 5 and 6, the ratio is at least one to four.
Estonia		
Qualification type		Occupational qualification
Qualification type linked to ISCED		No
ISCED level 1997		n/a
Quantitative data available	Description	Total number of occupational qualifications awarded at EQF level 5
	Data	1 124
	Year	2012
Benchmark	Description	Total number of graduates (Eurostat; ISCED 1997 levels 5-6)
	Data	11 828
Importance		Comparing holders of the occupational qualification and the qualifications at ISCED levels 5 and 6, the ratio is one to ten. The comparison with enrolment in higher education does not do justice to the Estonian system. Those acquiring an occupational qualification are also not included in higher education statistics. Hence, although, the comparison can be made as a benchmark, it is not reported as such.

Ireland		
Qualification type		Higher certificate
Qualification type linked to ISCED		Yes
ISCED level 1997		5B
Quantitative data available	Description	No data
	Data	-
	Year	-
Qualification type		Advanced certificate
Qualification type linked to ISCED		Yes
ISCED level 1997		4C
Quantitative data available	Description	Total number of qualifications issued
	Data	11 546
	Year	2012
Benchmark	Description	Total number of graduates (Eurostat; ISCED 1997 levels 5-6)
	Data	59 260
Remarks		
		Comparing graduates of advanced certificates to graduates of all ISCED 1997 levels 5 and 6 qualifications, the ratio is around one to four. Not all qualification types are covered by the statistics on EQF level 5 qualification types.
France		
Qualification type		BTS
Qualification type linked to ISCED		Yes
ISCED level 1997		5B
Quantitative data available	Description	The number of awarded BTS qualifications
	Data	113 505
	Year	2010
Benchmark	Description	Total number of graduates (Eurostat; ISCED 1997 levels 5-6)
	Data	628 089
Qualification type		DUT
Qualification type linked to ISCED		Yes
ISCED level 1997		5B
Quantitative data available	Description	Total of awarded DUT qualifications
	Data	47 331
	Year	2010
Benchmark	Description	Total number of graduates (Eurostat; ISCED 1997 levels 5-6)
	Data	628 089

Qualification type		Vocational qualification certificates
Qualification type linked to ISCED		No
ISCED level 1997		n/a
Quantitative data available	Description	No data
	Data	-
	Year	-
Qualification type		Further vocational training certificates
Qualification type linked to ISCED		Yes ⁽⁷⁷⁾
ISCED level 1997		5B
Quantitative data available	Description	No data
	Data	-
	Year	-
Remarks		
		26% of the students (ISCED 5-6) are enrolled in an EQF level 5 programme (BTS or DUT). Data on other types are missing. In total 16% of the graduates (ISCED levels 5-6) graduate from a BTS or DUT programme. Comparing the number of students in BTS and DUT with the total number of students at ISCED 1997 levels 5 and 6, the ratio is at least one to three.
Croatia		
Qualification type		Master craftsman exam
Qualification type linked to ISCED		No
ISCED level 1997		n/a
Quantitative data available	Description	Total number of candidates who passed the exam master craftsman qualifications
	Data	1 195
	Year	2012
Benchmark	Description	Total number of graduates (Eurostat; ISCED 1997 levels 5-6)
	Data	38 789
Qualification type		Short-cycle professional study
Qualification type linked to ISCED		Yes
ISCED level 1997		5B
Quantitative data available	Description	No data
	Data	
	Year	

⁽⁷⁷⁾ This is according to the project on the master craftsman http://www.adam-europe.eu/prj/6190/prd/3/1/Overview_Master_Craftsperson.pdf [accessed 16.12.2013]. This qualification is however not included in the OECD overview (OECD, 1997).

Remarks	Argumentation	<p>Comparing candidates who passed the exam master craftsman qualifications and the graduates of qualifications at ISCED levels 5 and 6, the ratio is around one to 30.</p> <p>Not all qualification types are covered by the statistics on EQF level 5 qualification types.</p>
Latvia		
Qualification type		Diploma of first level professional higher education
Qualification type linked to ISCED		Yes
ISCED level 1997		5B
Quantitative data available	Description	Total number of students enrolled
	Data	9 866
	Year	2012
Benchmark	Description	Total number of students in the reference year (Eurostat; ISCED 1997 levels 5-6)
	Data	103 856
Remarks		Comparing the number of students enrolled in EQF level 5 programmes with the total number of students in ISCED 1997 levels 5 and 6, the ratio is around one to 10.
Luxembourg		
Qualification type		Master craftsman diploma
Qualification type linked to ISCED		Yes
ISCED level 1997		4B
Quantitative data available	Description	Total number of students enrolled
	Data	832
	Year	2011
Benchmark	Description	Total number of students in the reference year (Eurostat; ISCED 1997 levels 5-6)
	Data	5 376
Qualification type		Higher technician certificate
Qualification type linked to ISCED		Yes
ISCED level 1997		5B
Quantitative data available	Description	Total number of students enrolled
	Data	230
	Year	2012
Benchmark	Description	Total number of students in the reference year (Eurostat; ISCED 1997 levels 5-6)
	Data	5 376
Remarks		Comparing the number of students at EQF level 5 qualification types with the total number of students at ISCED 1997 levels 5 and 6, the ratio is around one to four.

		Data are from different year; there is difficulty in comparing the data as the data partially covered qualifications in higher education but partially not.
Malta		
Qualification type		Undergraduate certificate VET higher diploma Foundation degree
Qualification type linked to ISCED		Yes
ISCED level 1997		5B
Quantitative data available	Description	No data
	Data	
	Year	
Remarks		Quantitative data on the outcomes of level 5 qualifications have proved impossible to report, largely because the protocol used by the National Statistics Office does not require it to report on student progression. This is a pity because the institutions report student data to the National Statistics Office. The government of Malta see this as an important area of development and have, in the past few months, launched a new department of research and statistics to analyse and report on such data.
Netherlands		
Qualification type		Associate degree
Qualification type linked to ISCED		Yes
ISCED level 1997		5B
Quantitative data available	Description	Total number of students enrolled
	Data	2 016
	Year	2012
Benchmark	Description	Total number of students in the reference year (Eurostat; ISCED 1997 levels 5-6)
	Data	650 905
Remarks		Comparing the number of enrolled students at EQF level 5 programmes with the total number of students in ISCED 1997 levels 5 and 6, the ratio is around one to 50.
Austria		
Qualification type		VET college <i>Reifeprüfung</i> certificate and VET diploma
Qualification type linked to ISCED		Yes
ISCED level 1997		Main form (five-year full-time programmes and VET colleges for people in employment): 4A. Programmes offered in CVET (post-secondary VET course: after <i>Reifeprüfung</i> exam; two-year full-time course or three-year evening course): 5B.

Quantitative data available	Description	Total number of students enrolled in a VET college in Austria
	Data	137 000
	Year	2011/12
Benchmark	Description	Total number of students in the reference year (Eurostat; ISCED 1997 levels 5-6)
	Data	361 797
Remarks		<p>Comparing both the number of enrolled students in, and graduates of, VET colleges with total numbers of students enrolled in and graduates from ISCED 1997 levels 5 and 6, the outcome is similar. The ratio is one to three: for each enrolled student in a VET college, there are three students enrolled in programmes related to ISCED 5 and 6 (NB: VET colleges are not included in ISCED 5). The same ratio occurs when looking at the number of graduates.</p> <p>The comparison with enrolment in higher education does not do justice to the Austrian system. VET college students are also not covered in higher education statistics. Hence, although, the comparison can be made as a benchmark, it is not reported as such.</p>
Portugal		
Qualification type		Technological specialisation diploma
Qualification type linked to ISCED		Yes
ISCED level 1997		4B
Quantitative data available	Description	Total number of students enrolled
	Data	7 177
	Year	2010
Benchmark	Description	Total number of students in the reference year (Eurostat; ISCED 1997 levels 5-6)
	Data	383 627
Remarks		Comparing the number of students at EQF level 5 with the total number of students in ISCED 1997 levels 5 and 6, the ratio is around one to 300.
UK (EWNI/Sco)		
Qualification type		Certificate or diploma of higher education Foundation degree Higher national diploma
Qualification type linked to ISCED		Yes
ISCED level 1997		5B
Quantitative data available	Description	No specific data
	Data	-
	Year	-
Remarks		Comparing the number of students in 'other undergraduate' with the total number of students in

		higher education, the ratio is one to seven (see Table 19 below). Data do not cover all EQF level 5 qualifications.
UK (Scotland)		
Qualification type	Advanced higher Scottish baccalaureate	
Qualification type linked to ISCED	Yes	
ISCED level 1997	3A	
Quantitative data available	Description	No specific data
	Data	-
	Year	-
Remarks	Comparing the number of students in 'other undergraduate' with the total number students in higher education, the ratio is one to seven (see Table 19 below). Data do not cover all EQF level 5 qualifications.	

Table 19 UK statistics: all students by level and mode of study 2011/12

	Full-time	% of full-time higher education students	Part-time	% of part-time higher education students	Total	% of higher education students	Writing-up and sabbatical higher education students	% of writing-up and sabbatical higher education students
Higher degree (research)								
Doctorate degree mainly by research	68 265	4.0%	24 490	3.2%	92 755	3.7%	29 615	68.3%
Master degree mainly by research	10 170	0.6%	5 390	0.7%	15 560	0.6%	2 450	5.6%
Higher degree (research) total	78 435	4.6%	29 880	3.9%	108 315	4.3%	32 065	73.9%
Higher degree (taught)								
Doctorate degree not mainly by research	1 220	0.1%	995	0.1%	2 215	0.1%	115	0.3%
Master degree not mainly by research	192 365	11.2%	139 465	18.0%	331 830	13.3%	9 990	23.0%
Postgraduate bachelor degree not mainly by research	200	0.0%	40	0.0%	235	0.0%	0	0.0%
Higher degree (taught) total	193 785	11.3%	140 500	18.1%	334 285	13.4%	10 105	23.3%
Other postgraduate								
Postgraduate certificate in education	23 020	1.3%	3 805	0.5%	26 825	1.1%	10	0.0%
All other postgraduate	14 190	0.8%	84 895	11.0%	99 085	4.0%	945	2.2%

Qualifications at level 5: progressing in a career or to higher education

	Full-time	% of full-time higher education students	Part-time	% of part-time higher education students	Total	% of higher education students	Writing-up and sabbatical higher education students	% of writing-up and sabbatical higher education students
Other postgraduate total	37 205	2.2%	88 700	11.4%	125 905	5.0%	955	2.2%
Total postgraduate	309 425	18.0%	259 080	33.4%	568 505	22.8%	43 125	99.4%
First degree	1 312 115	76.2%	229 250	29.6%	1 541 365	61.7%	135	0.3%
Other undergraduate								
Professional graduate certificate in education	2 650	0.2%	3 475	0.4%	6 125	0.2%	0	0%
Foundation degree	42 130	2.4%	38 010	4.9%	80 140	3.2%	10	0%
HND	8 735	0.5%	2 415	0.3%	11 150	0.4%	0	0%
Diploma of higher education	31 365	1.8%	8 540	1.1%	39 900	1.6%	10	0%
HNC	1 760	0.1%	7 635	1.0%	9 395	0.4%	0	0%
All other undergraduate	13 220	0.8%	226 840	29.3%	240 060	9.6%	90	0.2%
Other undergraduate total	99 860	5.8%	286 915	37.0%	386 775	15.5%	110	0.2%
Total undergraduate	1 411 975	82.0%	516 165	66.6%	1 928 140	77.2%	245	0.6%
Total higher education students	1 721 400	100%	775 240	100%	2 496 645	100%	43 365	100%
Total further education students (#10)(#11)	14 135		40 290		54 425		0	
Total	1 735 535		815 530		2 551 065		43 365	

NB: In this table 0, 1, 2 are rounded to 0. All other numbers are rounded up or down to the nearest multiple of five. Percentages are not subject to rounding.
 Source: Higher Education Statistics Agency, 2012.

ANNEX 4.

Key purposes and functions of qualifications

Country	Name (national language/ English translation)	Key purpose and function
BE (FI)	Beroepskwalificaties/ professional qualification	<p>A professional qualification is a comprehensive and classified set of competences allowing individuals to exercise a profession. Individuals can acquire qualifications via state education and other education providers or through a procedure of recognition of prior learning. A professional qualification is developed using a professional qualification dossier. The competent database of the Flanders Social and Economic Council (Sociaal-Economische Raad van Vlaanderen) is the primary reference framework. The AKOV coordinates the development of professional qualification dossiers and organises their validation and classification. Currently, there are eight professional qualifications placed at level 5 of the NQF (Vlaams Ministerie van Onderwijs en Vorming, 2013).</p> <p>This qualification is primarily oriented to the labour market, but also informs educational qualifications.</p>
	Hoger Beroepsonderwijs 5/higher vocational education 5	<p>The HBO5, positioned between secondary education and the professional bachelor, delineates vocational and higher education, mainly offering learners specific knowledge and skills in a particular profession. It may be used as a stepping-stone towards higher education, but this is infrequent. It is not required to finish a HBO5 programme to start one for a professional bachelor. An important aim of this qualification in higher vocational education is to adjust to increasing market demand for mid-level graduates. It also offers a second chance for adults to improve their position on the labour market. Another, less explicit, aim is to encourage learners to continue learning up to the professional bachelor. Last, it serves to position existing comparable higher vocational education better in the education system. At this moment only the programme nursing is offered by university colleges, while adult learning centres offer HBO5 programmes. The adult learning centres that offer the HBO5 programmes used to offer programmes called HOSP. Most education programmes are still structured that way and may be considered second chance education. People who enrol in HBO5 are not called students, but learners (<i>cursisten</i>).</p>

Country	Name (national language/ English translation)	Key purpose and function
		<p>This qualification is oriented both to the labour market and to opening up learning opportunities at higher education level.</p>
CZ	Profesní kvalifikace/vocational qualification	<p>Vocational qualifications are defined in legislation as the professional competence of an individual to duly carry out a particular work activity or a set of activities inherent in a particular occupation or two or more occupations, within the scope and extent specified in a qualification standard. Vocational qualifications are basic components of the NSK, and can be regarded either individually as specialisations within an occupation, or as components of a comprehensive vocational qualification that can be acquired upon aggregating a given combination of vocational qualifications and passing a final exam. Vocational qualifications are meant to facilitate CVET and the recognition and validation of non-formally and informally acquired professional competence. Designed by employer-led sectoral councils and following the work-task-based descriptors of NSK, vocational qualifications aim primarily at employment. Vocational qualifications at level 5 can be seen as fulfilling the purposes of preparation for employment and confirmation of occupational competence and/or licence to practise. These qualifications are heavily demand-oriented and aim to create a qualified work force to fill narrowly specialised jobs for which other levels of qualification are either suboptimal (level 4) or lack in vocational aspects (level 6). With the absence of comprehensive (full) qualifications at level 5 in the Czech system, vocational qualifications at this level can be considered strictly employment-focused.</p> <p>This qualification is primarily oriented to the labour market.</p>
DK	Erhvervsakademiuddannelser/ academy profession degree	<p>The AP programmes are SCHE programmes that combine theoretical studies with a practical approach. The main aim is to prepare students/adults for employment by offering specialised degrees. AP programmes include a work placement period that is equivalent to at least 15 ECTS. It is possible to enrol on professional bachelor degrees after successfully obtaining an AP, sometimes even with full recognition of the credits obtained at the AP programme. Such professional bachelors then effectively serve as top-up programmes for relevant AP programmes, though this is not centrally organised and left up to</p>

Country	Name (national language/ English translation)	Key purpose and function
		<p>individual education institutions; few students actually pursue this education track. Professional experience is also taken into account when graduates from AP programmes want to move onto a degree programme and professional experience aids such a transition. Also, students from other European countries with SCHE qualifications can earn a degree in Denmark based on the credits they earned in their own country. In such cases recognition of prior learning is applied.</p> <p>This qualification is oriented both to the labour market and to opening up learning opportunities at higher education level.</p>
	Erhvervuddannelse/vocational degree	<p>This EUD has a clear employment focus and is targeted at students who have accomplished secondary education. EUDs exist at levels 3 to 5, depending on the length and complexity of the programme. Especially at level 5, EUDs have a highly technical component and usually last four and a half to five years (compared to level 3 programmes which usually last one and a half years). These programmes do not aim for further progression in the education sector; but to prepare fully for employment in the particular sector. Like any other EUD in Denmark, it is often possible to pursue this degree as part of adult education.</p> <p>This qualification is primarily oriented to the labour market.</p>
EE	Kutsed/occupational qualification	<p>An occupational qualification is designed mainly for employment. It is open to the recognition of personal growth and engagement in learning, preparation for further learning or training and/or developing knowledge/skills in a subject area. The qualification confirms occupational competence and/or licence to practise.</p> <p>This qualification is primarily oriented to the labour market.</p>
IE	Higher certificate	<p>The higher certificate is an intermediate qualification within the Bologna first cycle. It is awarded in institutes of technology and is based on programme-specific standards within broad national field standards.</p> <p>This qualification is oriented both to the labour market and opening up learning opportunities at higher education level.</p>
IE	Advanced certificate	<p>An advanced certificate award enables learners to develop a comprehensive range of skills, which may</p>

Country	Name (national language/ English translation)	Key purpose and function
		<p>be vocationally-specific and/or of a general supervisory nature, and require detailed theoretical understanding. Modules include advanced vocational or occupational skills, enabling certificate holders to work independently or progress to higher education and training. Most certificate/module holders at level 6 take up positions of employment; some of these may be self-employed. Examples of VET awards at level 6 would include: advanced certificate craft-electrical (major); advanced certificate craft-metal fabrication (major); advanced certificate farm management (major); component certificate in communications and personal development (minor); component certificate in culinary skills and standards (minor).</p> <p>This qualification is primarily oriented to the labour market, but provides a route into higher education.</p>
FR	Brevets de maîtrise/further vocational training certificates	<p>The BM qualifications are created and updated (including the design of their referential standards) by the chambers of trades and crafts through their APCMA in several basic specialties such as BM hairdresser, bakery, pastry, florist, beauty care – cosmetician and electrical equipment installers. At request, they are validated, registered and referenced for five years by the CNCP within the NQF repertory RNCP. It is addressed to the holders of EQF level 4 qualifications or equivalents connected with the targeted qualification, such as the vocational certificate in the art of crafts (<i>brevet des métiers d'arts</i>), vocational certificate (<i>brevet professionnel</i>), vocational baccalaureate or a CQP. Its aim is providing the trainees with the required general and specific skills and competences for holding management positions within craft businesses. The BM is obtained either through the dual system of apprenticeship and CPs, through the CVT system, or via the use of VAE.</p> <p>This qualification is primarily oriented to the labour market.</p>
	Brevet de technicien supérieur/higher technician certificate	<p>Created in 1959, the BTS is a labour-market-focused national qualification with possible progression through further higher education pathways. It is delivered in any of about 150 specific professional fields connected with production and service sectors. The programme consists of a mixture of full-time courses with practical training in the specific professional area. The two-year cycle of studies is composed of theoretical teaching with dominant professional characteristics and of</p>

Country	Name (national language/ English translation)	Key purpose and function
		<p>practice-oriented seminars and training in a professional environment through organised internships during the programme. This combination of theoretical and practical education aims basically at preparing the students for work in a specific profession.</p> <p>This qualification is primarily oriented to the labour market with possible progression through further higher education pathways.</p>
	Certificats de qualification professionnelle/vocational qualification certificates	<p>Introduced at the beginning of the 1990s, the CQPs are sector-specific qualifications created and developed by the sectors under the responsibility of the social partners. The initiative of creating them (including the design of their referential standards) is usually taken in charge by the CPNE (as a joint body composed of employer and trade-union representatives) at sector level. For this purpose, CPNE relies also on bodies created at sectoral level such as the training funds insurance (<i>fonds d'assurance formation</i>) and the accredited joint fund collector (organisme paritaire collecteur agréé) and the Training Association (Association de Formation). Over 400 certificates have been created by more than 30 sectors. Their registration (for five years) within the RNCP is requested by the concerned sector bodies and approved by the CNCF. Their target groups are basically the employees of companies in the sectors which introduced the CPs, including the professional inclusion of young school leavers and adults wishing to return to work.</p> <p>This qualification is primarily oriented to the labour market.</p>
	Diplôme universitaire de technologie/university diploma of technology	<p>Created in 1966, the DUT is a national EQF level 5 qualification prepared in 115 IUTs. It is delivered in 25 specialties covering all production and service sectors. Although it is a labour-market-oriented qualification, it is more generalist than the BTS in its labour market focus. This is why it allows equally for both further higher education and easy access to employment. The programme (including its referential standards) specific to each DUT is established by the National Education Commission (Commission Pédagogique Nationale) and published through an order of the Ministry of Higher Education. It is a two-year higher education short-cycle programme composed of theoretical teaching with dominant professional characteristics, including practice-oriented seminars and training in a</p>

Country	Name (national language/ English translation)	Key purpose and function
		<p>professional environment through organised internships during the programme. This combination of theoretical and practical education aims to prepare students for both work in a specific profession and further progression through higher education pathways.</p> <p>This qualification is oriented both to the labour market and opening up learning opportunities at higher education level.</p>
HR	Majstorski Ispit/master craftsman exam	<p>The main aim of the qualification is to prepare for employment, confirm occupational competence and licence to practise. Passing the master craftsman exam is a precondition for running businesses regulated by special act (Official Gazette 42/08).</p> <p>This qualification is primarily oriented to the labour market.</p>
	Stručni Studij/short-cycle professional study	<p>Following completion of the short-cycle professional study, students are able to access undergraduate professional programmes or enter the labour market.</p> <p>This qualification is oriented both to the labour market and opening up learning opportunities at higher education level.</p>
LV	Pirmā līmeņa profesionālās augstākās izglītības diploms/diploma of first level professional higher education	<p>The qualification is mainly aimed at employment, but also opens the opportunity for further studies in the second cycle of higher vocational education. Qualification can be obtained by recognising informal and non-formal learning outcomes. It confirms occupational competence and licence to practise.</p> <p>This qualification is primarily oriented to the labour market, but provides a route into higher education.</p>
LU	Brevet de maîtrise/master craftsman diploma	<p>The BM is a specific VET programme based on the German <i>meister</i> system. After gaining a vocational qualification (vocational aptitude diploma), it is possible to continue vocational education at the level of the master craftsman diploma. Holders of this qualification may set up as self-employed in the crafts sector and may also take on apprentices. This VET certification is organised by both the Chamber of Crafts (Chambre des Métiers) and the Ministry of Education and Vocational Training. Even though the Ministry is formally responsible, in practice the Chamber organises the courses and examination leading to the certificate, playing a crucial role in defining the standards of this qualification.</p>

Country	Name (national language/ English translation)	Key purpose and function
		<p>Qualifications of this type are diverse; some are very technical in nature while others mainly focus on more managerial tasks. Holders of this qualification may set up as self-employed in the crafts sector and may also take on apprentices, in accordance with statutory provisions on business establishment and the apprenticeship system.</p> <p>This qualification takes, in principle, three years to accomplish and is designed specifically for working adults with at least some work experience. They take on this education in the evenings and weekends and complement their previous crafts training by further modularised training on managing a small company, pedagogical methods for training students, and additional practical and theoretical professional knowledge.</p> <p>This qualification is primarily oriented to the labour market.</p>
LU	Brevet de technicien supérieur/higher technician certificate	<p>The BTS is SCHE (lasting between two and two and a half years) and is open to students who finish secondary education in Luxembourg. The programme consists of a mixture of part-time courses with practical training in the professional area concerned. The cycle of studies is composed of theoretical teaching with professional characteristics, of practice-oriented seminars and of training in a professional environment, by organised internships during the programme. This combination of theoretical and practical education aims to prepare students for a profession. The BTS is a national diploma, delivered in a specific professional field in one of the following professional domains: industrial and commercial, agriculture, professions related to crafts, business, and health. The BTS allows access to some bachelor degrees, though the law has no specific reference on this. With a BTS it is possible to start in the third year of a professional bachelor programme.</p> <p>This qualification is primarily oriented to the labour market, but provides a route into higher education.</p>
MT	Undergraduate diploma (foundation degree)	<p>Foundation degrees are designed and delivered by universities in partnership with employers to equip people with relevant knowledge and skills for business. The study methods can be flexible: available to people already in work, those wishing to embark on a career change, and to those who have recently completed level 4 qualifications. A foundation degree is the equivalent of the first two</p>

Country	Name (national language/ English translation)	Key purpose and function
		<p>years of an honours degree, may be studied full- or part-time, and consists of academic study integrated with relevant work-based learning undertaken with an employer. It may be studied as a stand-alone qualification or, on completion; there is progression to the final year of a bachelor degree.</p> <p>This qualification is oriented both to the labour market and at opening up learning opportunities at higher education level.</p>
	Undergraduate certificate	<p>The programme leading to this qualification aims at allowing high school students to become familiar with study in the University of Malta. Some weaker students (in terms of school-leaving qualifications) may use this programme to access a bachelor programme. Progression to a full bachelor course (such as marketing) is the key outcome. Some see the qualification as not as an end in itself but rather as a partial qualification towards a bachelor degree. The content of the programmes is not expressed in terms of specific learning outcomes: broader ones are indicated. For example, a student aiming for this qualification will have general skills programmes such as improving the use of English language or study skills. They will also have specialist studies that are provided by faculties in their area of special interest so, for example, a learner might take foundation studies in marketing or Mediterranean cultures.</p> <p>This qualification is primarily oriented to further learning at higher education level.</p>
	VET higher diploma	<p>The aim is to recognise learning in a specific field so that it will provide access to jobs and further studies. In a few cases, it may be regarded as showing professional competence that is sufficient for a licence to practise. It may be studied as a full-time programme or a part-time study programme; in the latter it is often used by employers as a means of training up employees and so is part of an alternative scheme (part workplace-based, part learning in a college). The specific focus of this higher diploma seems to be on small and medium-sized businesses suited to the Maltese job market.</p> <p>This qualification is primarily oriented to the labour market.</p>
NL	Associate degree	<p>The aim of the AD qualification is to bridge the gap between VET and higher education and to introduce an intermediate level higher education qualification between VET (MBO-4) and the professional</p>

Country	Name (national language/ English translation)	Key purpose and function
		<p>bachelor. The AD has a dual function: first, prepare for employment/career development; second, further learning in the professional bachelor.</p> <p>This qualification is oriented both to the labour market and opening up learning opportunities at higher education level.</p>
AT	Reife- und Diplomprüfung der BHS/VET college <i>Reifeprüfung</i> certificate and VET diploma	<p>VET colleges are higher-level vocational qualifications provided by secondary level II schools in five-year full-time form ⁽⁷⁸⁾ (starting with the ninth school year). The core of VET college qualifications builds the acquisition of in-depth general education and specialist vocational training that combines theory and practice. Graduates of VET colleges acquire a double qualification, the <i>Reifeprüfung</i> certificate, which grants them general access to higher education (studies at universities and universities of applied sciences) and a VET diploma, which allows them to hold senior occupations in their respective field. VET colleges also provide the basis for later self-employment: graduates may start up their own business, depending on their specialisation and are given access to regulated trades. VET colleges are often said to have a role in reducing social and regional inequalities. Students can select from among a variety of specialist areas and training focuses.</p> <p>This qualification is oriented both to the labour market and opening up learning opportunities at higher education level.</p>
PT	Diploma de especialização tecnológica/technological specialisation diploma	<p>'By their nature and objectives, these qualifications are SCHE programmes, with the main goal of preparing students for employment, but also providing preparation for, and access to, the first cycle' (MCTES, 2010). However, the qualifications are considered post-secondary non-tertiary VET qualifications directed at the labour market. DETs are obtained after a combination of CET, a special modality of VET that allows learners to attain a double objective. Beneficiaries can update competences and develop new ones through practical training oriented to the labour market but CETs are also an alternative gateway to higher education (particularly relevant for those who have</p>

⁽⁷⁸⁾ In their traditional and most prominent form, VET colleges are five-year full-time schools, although they also come in other forms (post-secondary VET courses, VET colleges for people in employment/CVET).

Country	Name (national language/ English translation)	Key purpose and function
		<p>been away from education and training for some time).</p> <p>This qualification is primarily oriented to the labour market, but provides a route into higher education.</p>
UK (EWNI)	Foundation degree	<p>Foundation degrees are designed and delivered in partnership with employers to equip people with relevant knowledge and skills for business. Study methods can be flexible: available to people already in work, those wishing to embark on a career change, and to those who have recently completed level 3 qualifications (A levels, advanced apprenticeships or NVQ/SVQ3). A foundation degree is the equivalent of the first two years of an honours degree, may be studied full- or part-time, and consists of academic study integrated with relevant work-based learning undertaken with an employer. It may be studied as a stand-alone qualification or, on completion, there is progression to the final year of an honours degree.</p> <p>This qualification is oriented both to the labour market and opening up learning opportunities at higher education level.</p>
	Professional qualification (regulated)	<p>This qualification consists of units aimed at obtaining professional competences in a specific field of work.</p> <p>This qualification is primarily oriented to the labour market.</p>
UK (Sco)	Advanced higher	<p>The stated aim of these qualifications is twofold: allow independent study and foster personal growth. The qualification aims to recognise the highest levels of achievement in school subjects following the completion of upper secondary education. Studying for an advanced higher can be a useful bridge between class-based learning, typical of higher (EQF level 4), and the more self-motivated and proactive type of study at college or university. It can also be a useful preparation for some types of employment.</p> <p>This qualification is primarily oriented to further learning at higher education level.</p>
	Scottish baccalaureate	<p>The stated aim of these qualifications is twofold: allow independent study and foster personal growth. These are important preparations for study at higher levels in higher education.</p> <p>This qualification is primarily oriented to further learning at higher education level.</p>

Country	Name (national language/ English translation)	Key purpose and function
	Professional development awards	<p>Professional development awards are principally designed for those already in a career or vocation who wish to extend or broaden their skills base or reskill in another area of work. They may also be embedded within another qualification such as HNC/HND.</p> <p>This qualification is primarily oriented to the labour market.</p>
UK	Certificate or diploma of higher education	<p>This certificate usually recognises achievement deemed equivalent to the first year of a bachelor degree course. It can be used as a stepping-stone for further learning or as an exit qualification that leads to a job.</p> <p>This qualification is primarily oriented to further learning at higher education level.</p>
	Professional qualification (unregulated) (international)	<p>Professional qualifications that are awarded by the body concerned and not regulated by government. These qualifications often carry the title associateship or licentiate. The goal here is to offer professional recognition of practice. These may or may not be part of NQFs.</p> <p>This qualification is primarily oriented to the labour market.</p>
	HND and HNC ⁽⁷⁹⁾	<p>This qualification is recognition of significant learning in a specific field and will provide access to jobs and further studies in that field. In a few cases it may be regarded as showing professional competence that is sufficient for a licence to practise. It may be studied as a full-time programme or as a part-time study programme; in the latter it is often used by employers as a means of training up their employees, so it is part of an alternative scheme. A HNC is a shorter form of this qualification, normally achieved one year full-time or two years part-time; it is equivalent to a certificate of higher education. HNDs normally take two years full-time study.</p> <p>This qualification is primarily oriented to the labour market.</p>

⁽⁷⁹⁾ This qualification with the same title is offered in Malta as well.

ANNEX 5.

Further material on learning outcome descriptions of qualifications

a. Assessment criteria and modes for vocational qualification HR generalist, Czech Republic

Table 20 Assessment criteria for vocational competence

Orientation in the labour code and related legislation	
Assessment criteria	Assessment modes
(a) Demonstrate orientation in basic provisions of the labour code and of the civil code regarding the area of HR.	Written and oral assessment
(b) Demonstrate orientation in basic provisions of the commercial code in relation to the work in HR.	Written and oral assessment
(c) Demonstrate orientation in legislation regarding remuneration and benefits.	Written and oral assessment
(d) Describe the types of employment relations and explain their implications for health and social security schemes.	Written and oral assessment
(e) Describe the contents of HR management – its function in organisation, tasks and objectives.	Written and oral assessment
(f) Name the powers and responsibilities of statutory organs and of the executive management (board of directors, supervisory board, etc., according to the type of organisation) in the area of HR.	Written and oral assessment
All criteria must be fulfilled.	

Source: Cedefop, adapted from HR generalist (Ministry of Labour and Social Affairs).

b. Learning outcomes for the higher certificate in culinary arts, Ireland

Table 21 Programme learning outcomes for the higher certificate in culinary arts in Ireland

Interim standards	Learning outcomes	Modules delivering learning outcomes
Specialised knowledge of a broad area	<p>Knowledge-breath; the learner is expected to be able to:</p> <p>(a) demonstrate a professionalism and customer focus within the provision of tourism and hospitality;</p> <p>(b) comprehend and apply fundamental business principles to hospitality operations.</p>	<ul style="list-style-type: none"> • All modules. • Essentials of business.
Some theoretical concepts and abstract thinking, with significant underpinning theory	<p>Knowledge-kind; the learner is expected to be able to:</p> <p>(a) respond in a professional manner to the needs and expectations of customers, using appropriate social/relationship skills and language skills in an active learning environments;</p> <p>(b) appreciate the importance of, and demonstrate the ability to meet industry standards in relation to social/relationship skills, personal presentation/grooming and customer care.</p>	All practice-based modules.
Demonstrate comprehensive range of specialised skills and tools	<p>Knowledge-how and skill range; the learner is expected to be able to:</p> <p>(a) satisfy customer expectations by demonstrating, with confidence and creativity, best practice in technical skills;</p> <p>(b) practice with competence and creativity, skills in the following areas: culinary skills, culinary knowledge food and beverage and personal development to include reflective and experiment practice;</p> <p>(c) employ ICTs relevant to the tourism and hospitality industry, including the following: e-mail, internet, Word processing, PowerPoint, Excel, Access, property management and reservations systems, for example Fidelio, EPOS, Calc Menu.</p>	<ul style="list-style-type: none"> • All practice-based modules. • All practice-based modules and learning to learn, communication and above information technology.
Formulate responses to well-defined abstract problems	<p>Knowledge-how and skill selectivity; the learner is expected to be able to:</p> <p>(a) demonstrate and apply product knowledge to the various functions of a hospitality operation;</p>	<ul style="list-style-type: none"> • All modules. • All modules.

	(b) communicate effectively through a range of media and demonstrate an ability to respond to the ever-changing customers' expectation.	
Act in a range of varied and specific contexts involving creative and non-routine activities: transfer and apply theoretical concepts and/or technical or creative skills to a range of contexts	<p>Competence – context; the learner is expected to be able to:</p> <p>(a) recognise current industry trends including major product and market trends affecting the national and international tourism and hospitality industry;</p> <p>(b) demonstrate the adaptability and flexibility required to work within the various sectors of the tourism and hospitality industry;</p> <p>(c) respond appropriately to health and safety, emergency situations and adhering to the principles of hazard analysis critical control point.</p>	<ul style="list-style-type: none"> • All modules. • All modules. • All practice-based modules.
Exercise substantial personal autonomy and often take responsibility for the work of others and/or for allocation of resources: form, and function within, multiple complex and heterogeneous groups	<p>Competence – role; the learner is expected to be able to:</p> <p>(a) operate within the appropriate legislation, including legislation in relation to: equality, employment, environmental best practice, food safety legislation, health and safety and licensing laws;</p> <p>(b) employ learning strategies that draw on the networking ability learned from collaboration from fellow students and work colleagues.</p>	<ul style="list-style-type: none"> • All practice-based modules. • Essentials of business. • Culinary science. • Nutrition. • Learning to learn.
Learn to evaluate own learning and identify needs within a structured learning environment: assist others in identifying learning needs	<p>Competence – learning to learn; the learner is expected to be able to:</p> <p>(a) illustrate the knowledge and apply the skills required to design a professional career plan;</p> <p>(b) demonstrate the potential capacity to progress to supervisory level;</p> <p>(c) be cognisant of limitations of own expertise and know when to seek advice and guidance;</p> <p>(d) reflect on achievement to date and evaluate appropriate actions required for personal life long goals.</p>	<ul style="list-style-type: none"> • Learning to learn. • Work-based learning. • Work placement. • Practice-based modules.
Express an internalised, personal world view, reflecting engagement with others	<p>Competence – insight; the learner is expected to:</p> <p>(a) recognise the socio-economic impacts of the tourism and hospitality industry nationally and internationally;</p> <p>(b) operate effectively within a culturally-diverse environment.</p>	All modules.
Progression and transfer	e.g. BA culinary arts e.g. BB hotel management	

Source: Cedefop, adapted from higher certificate in culinary arts.

c. Learning outcomes of VET college qualification in electronics specialising in technical computer science in Austria

The general educational objectives in the curriculum of this VET college programme (as of September 2011) implicitly reflect the descriptors of EQF level 5. For example, the descriptions refer to the following aspects:

- (a) comprehensive, specialised, factual, theoretical and practical knowledge within a field of study that is required for carrying out professional activities;
- (b) to select methods and practical skills for solving engineering tasks taking into account the requirements and boundaries of their application to achieve results or to develop creative solutions based on concrete specifications or abstract conditions;
- (c) exercise steering and supervision activities in the context of individual work and study activities where there is unpredictable change;
- (d) to take responsibility for reviewing and developing performance of self and others.

The VET standards developed for electronics and technical computer science have been integrated into the curriculum. For example, the technical software-engineering competence field (*Kompetenzfeld Fachspezifische Softwaretechnik*) includes eight competence areas; one of them is programming languages (BMUKK and Höhere technische Bundeslehr und Versuchsanstalt (Higher Technical Training and Research Institute), 2011). The descriptors included in the curriculum as educational and teaching tasks are as follows:

Students:

- (a) know the pros and cons of prevalent programming languages and are able to select the most relevant language for a specific task;
- (b) can apply basic structures, commands, syntax rules and programming mechanisms of a specified programme language and understand the functionality of software modules on the basis of source codes;
- (c) are able to apply the rules of specified programming languages to solve complex tasks.

ANNEX 6. Duration and mode of delivery

Country	Name (national language/ English translation)	Duration/study intensity/volume	Mode of acquisition
BE (FI)	Hoger Beroepsonderwijs/higher vocational education 5	The volume of the programme is between 90 and 120 ECTS and takes at least two full years. HBO5 programmes are not yet expressed in ECTS. Exception to the above is the full-time nursing programme located at level 5, which lasts longer (at least three years full-time).	Except for the HBO5-nursing, all other HBO5 programmes are part-time or dual programmes. About half of all students follow courses in the evenings or at weekends (still reflecting its HOSP past) and may combine this with employment. Some HBO5 programmes require their learners to have a job in order to obtain sufficient professional qualification.
CZ	Profesní kvalifikace/vocational qualification	Vocational qualifications are not programme-based qualifications and are thus not defined by workload or ECTS/ECVET volume. A vocational qualification examination can be taken by candidates who have acquired the prescribed vocational competence through non-formal and/or informal learning.	Vocational qualifications are designed to facilitate continuing VET, and thus are by definition acquired via validation of non-formal and in-formal learning. A vocational qualification is granted to any candidate fulfilling access criteria and passing the examination procedure according to qualification standard and assessment standard. Both IVET and CVET providers, public as well as private, offer paid training courses to help candidates prepare for particular vocational qualification examinations.
DK	Erhvervsakademiuddannelser/ academy profession degree	90-150 ECTS for the regular track, 60 ECTS for the adult learning certificate continued	APs are offered through formal education and are regulated by national law. It is a school-based

Country	Name (national language/ English translation)	Duration/study intensity/volume	Mode of acquisition
		adult education (<i>Viderregaende Voksuddannelse</i>). Most APs have a volume of 120 ECTS.	education programme, with some time devoted to a work placement period.
	Erhvervuddannelse/vocational degree	The programme takes approximately four and a half to five years.	Qualifications of this type are formally recognised by the Danish government and officially part of the education sector. In terms of delivery, these programmes usually consist of a long work-placement, combined with periods of schooling.
EE	Kutsed/occupational qualification	Very different, depending on the occupation.	Non-formal and informal learning, work-based learning. Qualification can also be acquired via validation of non-formal and informal learning.
IE	Higher certificate	120 ECTS	Formal programme; the award could be acquired through the validation of non-formal and informal learning.
	Advanced certificate	Programmes leading to the award are generally run by further education. There are two variants: an alternance model that takes four years post school, and a taught programme that takes one year for a learner entering with a level 4 qualification. An ECVET pilot has been developed for the latter.	Formal with a significant work placement.
FR	Brevet de technicien supérieur/higher technician certificate	120 ECTS	The BTS is usually obtained through formal schooling tracks within public and private upper secondary colleges (<i>lycées</i>), apprenticeship centres (<i>centres de formation d'apprentis</i>),

Country	Name (national language/ English translation)	Duration/study intensity/volume	Mode of acquisition
			CVT centres, distant learning institutions. It can also be acquired fully or partially through the VAE, on the condition of having accumulated at least three years of relevant working experience in the field of the concerned qualification.
	Diplôme Universitaire de technologie/university diploma of technology	120 ECTS	The DUT is basically obtained within 115 French IUTs, including university apprenticeships centres (<i>centres de formation d'apprentis universitaires</i>) and distant learning institutions. It can also be acquired fully or partially through the VAE, on the condition of having accumulated at least three years of relevant working experience in the field of the concerned qualification.
	Certificats de qualification professionnelle/vocational qualification certificates	The duration is dependent on the trainee's profile (prior educational qualifications and work experience) and the type of CVT instruments. If using the CP, the duration rises from six to 24 months.	The CQP is usually obtained through the instruments of CVT within CVT centres connected with the relevant sectors or through the dual system of the CP or through the VAE on the condition of having accumulated at least three years of relevant working experience in the field of the qualification concerned.
	Brevets de maîtrise/master craftsman diploma	335 hours for BM	The BM is usually obtained through the instruments of CVT within CVT centres connected with the relevant craft sectors or through the dual system of the CP or through the VAE on the

Country	Name (national language/ English translation)	Duration/study intensity/volume	Mode of acquisition
			condition of having accumulated at least three years of relevant working experience in the field of the qualification concerned.
HR	Majstorski Ispit/master craftsman exam	The master craftsman exam is not based on an educational programme. It is a state-recognised exam regulated by the Law on Trades and Crafts. It consists of four parts. The law on the CROQF foresees that the master craftsman qualification will have a minimum of 120 ECVET credit points.	Preparation courses for the master craftsman exam are not compulsory, but can be organised by institutions for adult education and other entities. Master craftsman schools are not part of formal education and can be established under provision of the Law on Trades and Crafts. This exam is a way of recognising informal and non-formal competences acquired through work experience.
	Stručni Studij/short-cycle professional study	Students accumulate a minimum of 120 ECTS credits over two years.	The short-cycle study is part of formal education. It is delivered by HEIs including universities, colleges and polytechnics. The training is mainly school-based with a period of practical training in the enterprise. There are some cases where formal education was not necessary and the person entered into SCHE through validation of prior learning. However, this is not introduced systematically. The Law on CROQF is expected to introduce this possibility systematically.
LV	Pirmā līmeņa profesionālās augstākās izglītības diploms/diploma of first level professional higher education	The amount of the programmes is 80-120 CP (120-180 ECTS credit points).	Qualification can be acquired through the formal, non-formal and informal learning. The training is mainly school-

Country	Name (national language/ English translation)	Duration/study intensity/volume	Mode of acquisition
			based with a period of practical training in the enterprise (three months).
LU	Brevet de maîtrise/master craftsman diploma	80 hours (year one) + 80 hours (year two) + 84 hours (year three) = 244 hours for the common courses that are similar for all students. In addition, a workload of 100-400 hours of occupation-specific courses is required. These programmes are very diverse, ranging from caterer (<i>traiteur</i>) (+/- 100 hours), to for instance optician-optometrist (+/- 400 hours).	The qualification is acquired through central examination following mandatory courses that are organised around working hours. Students are expected to be professionally active in the craft they are specialising in during the course. The classes are only offered at the weekend by the Chamber of Crafts, further underlining its particular character.
	Brevet de technicien supérieur/higher technician certificate	120-135 ECTS	The BTS has a formal mode of delivery by (technical) secondary schools or university, either public or private. With at least three years of relevant working experience it is also possible to apply for validation of non-formal and informal learning.
MT	Undergraduate certificate	60-70 ECTS	Formal taught programmes.
	VET higher diploma	Mostly a two-year full-time programme (unitised) and a variable length part-time programme. 60 ECTS.	Mostly college-based, either full-time or part-time. It is possible, but rare for this qualification or part of it to be awarded by the validation of experience.
	Undergraduate diploma (foundation degree)	Two years full-time or part-time over a longer period. 120 ECTS.	It is offered by universities in partnership with further education colleges and employers.
NL	AD	The volume of an AD programme is usually 120 ECTS. It can be	The AD programmes can be full-time, part-time or dual programmes.

Country	Name (national language/ English translation)	Duration/study intensity/volume	Mode of acquisition
		larger as well.	<p>Approximately half of the students are enrolled in a dual programme, combining learning and working. Often these students are already in employment.</p> <p>All providers have exemption systems in place to let students enrol in tailor-made programmes based on prior experience, learning and certifications.</p>
AT	Reife- und Diplomprüfung der BHS/VET college <i>Reifeprüfung</i> certificate and VET diploma	<p>There is no credit system in place; VET college qualifications can be obtained through three different education pathways:</p> <ul style="list-style-type: none"> • full-time VET college: IVET, five years (school-based; • post-secondary VET course: after <i>Reifeprüfung</i> exam; two-year full-time course or three-year evening course; • VET colleges for people in employment: two to four years. <p>Learning hours fluctuate according to the type of VET college.</p>	<p>Delivery is essentially school-based. Depending on the type, several VET college curricula include compulsory work placements in their curricula.</p>
PT	Diploma de Especialização Tecnológica/technological specialisation diploma	60-90 ECTS	<p>DETs are currently delivered through formal learning. The enforcement of the legal framework of CETs in 2006 (particularly the organisation of CETs into ECTS) has made validation of knowledge and competences</p>

Country	Name (national language/ English translation)	Duration/study intensity/volume	Mode of acquisition
			obtained inside and outside the formal education system possible, including the award of a DET diploma. Individuals over 25 years old and with at least five years of proven professional activity in the specific area of a CET, can receive a DET diploma based on the validation of their professional skills.
UK (EWNI)	Foundation degree	A two-year full-time programme (modularised) or part-time programme over a longer period.	They are offered by universities in partnership with colleges of higher education. Employers are involved in design of the qualification and provide work placements. It is possible, but rare, for this qualification or part of it to be awarded by validation of experience. In Scotland, however, at the very least the graded unit components of the HNC and/or HND must be taken.
	Professional qualification (regulated)	The professional qualifications are unitised. The units can have a different volume. For instance, the unit advanced machine tools (QCF unit) consists of 60 guided learning hours.	Mostly by a combination of formal course tuition and work-based learning. These awards can be made by validation of non-formal and informal learning.
UK (Sco)	Advanced higher	Not defined in terms of credits. Full programme one year.	This qualification is gained after formal teaching. The qualification is unlikely to be gained by validation of non-formal and informal learning.
	Scottish baccalaureate	Two-year full-time study for most students.	Formal, the qualification is unlikely to be achieved through validation of non-

Country	Name (national language/ English translation)	Duration/study intensity/volume	Mode of acquisition
			formal and informal learning.
	Professional development awards	There is a series of core and optional units.	Mostly by a combination of formal courses and work-based learning. These awards can be acquired by validation of non-formal and informal learning.
UK	Certificate or diploma of higher education	One to two years full-time study.	They are offered by universities in partnership with further education colleges and by further education colleges.
	HND and HNC ⁽⁸⁰⁾	HNDs normally take two years and HNCs one year full-time study or variable length part-time programmes.	Formal education, but units can be claimed through a validation process. Increasingly offered by higher education institutions (under licence from the awarding organisation Edexcel).
	Professional qualification (unregulated)	It differs. An example of a professional certificate in marketing has a volume of 35 hours.	Part-time study or distance learning.

⁽⁸⁰⁾ This qualification with the same title is offered in Malta as well (MCAST, 2013).

Qualifications at level 5: progressing in a career or to higher education

This study addresses qualifications at level 5 of the European qualifications framework (EQF) in 15 countries (Belgium (Flanders), the Czech Republic, Denmark, Estonia, Ireland, France, Croatia, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Austria, Portugal, the United Kingdom (EWNI and Scotland) that had linked their national qualification levels to the EQF by June 2012.

EQF level 5 qualifications play an important role in providing access to employment and career advancement as well as enabling further learning and progression to higher education. This double function makes them attractive to learners and employers. Although the extent to which countries use qualifications at EQF level 5 differs, their importance is growing in all countries investigated for several reasons. First, they are developed as response to increased needs for advanced technical and/or management skills. Second, they seem to be especially attractive to students with VET background and those already in employment. They also contribute to lifelong learning by being accessible and attractive for adults and non-traditional learners.

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