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PANORAMA

The relationship between quality assurance and VET certification in EU Member States

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Foreword

Qualifications – certificates and diplomas recognising that a person has achieved and demonstrated learning to a certain standard ([1]) – play an important role in modern societies. Awarding a qualification not only communicates the character and profile of specific learning experiences (necessary for individuals and employers), it also signals the relative level and value of specific learning experiences and learning outcomes.

The extent to which qualifications are trusted very much depends on how the process leading to their award (the certification process) is organised and carried out. The value ('the currency') of a qualification is linked to the overall quality of these processes and may be negatively affected if any doubt arises.

This publication addresses how nine EU Member States organise certification and how this – at different stages and in different ways – is supported by quality assurance. Awarding a qualification requires that assessment has been carried out in a reliable way, that standards are validly applied and that those involved in the different stages are appointed in a balanced and credible way. All these steps are necessary to ensure that learners have attained the level of knowledge, skills and competence expected and required of them, regardless of when, where and how these learning outcomes were acquired.

The study shows that national responses to quality assurance of certification are diverse and reflect different traditions and philosophies of coordination and governance of education and training systems. 'The prescriptive model' refers to countries where the certification process – and the quality assurance accompanying this – is highly centralised, standardised and mainly run by public qualifications authorities. 'The cooperative model' may be organised according to a centralised and standardised model but ensures extensive participation of all relevant stakeholders, notably the social partners. 'The self-regulated' model leaves much more room for local and institutional initiative, operating according to general national objectives. While not discussing the strengths and weaknesses of these different national approaches, the study documents how they are accompanied and supported by quality assurance arrangements and mechanisms and how these address the three main stages involved: assessment (of the individual learner), validation (according to a standard) and (formal and official) recognition.

This study emphasises that more attention has to be paid to quality assurance in certification processes. This reflects that most of the current work on quality assurance in education and training is focused on input, such as the content and delivery of teaching, administrative arrangements and internal/external communication. While this focus is reasonable and necessary, the continuing shift to learning outcomes, national and European, requires a stronger focus on certification. The learning outcomes approach implies that there is no single route to a qualification, learning may take place in different ways, in formal and non-formal and informal settings. This requires high quality assessment, validation and

([1]) Definition of qualification from the EQF recommendation 2008.

recognition approaches able to guarantee that individuals meet the expectations set by the standards in question. Quality assurance must, therefore, address both the input and the outcome side, the teaching and training as well as the assessment, validation and recognition.

The study also addresses the challenge of mutual trust raised by the EQF and how increased focus on certification quality may support the implementation of the framework.

This work forms part of the overall effort to increase transparency of qualifications and to generate mutual trust between national qualifications systems and frameworks, thus contributing to establishing the EQF as a framework for comparison and translation of qualifications in Europe.

Aviana Bulgarelli
Director of Cedefop

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- Cedefop project managers Loukas Zahilas who was responsible for the overall supervision of the study, in cooperation with Irene Psifidou;
- Debra Dillon and Daniela Ulicna of GHK ([2]) who undertook the research on which this report is based, together with their research team, and drafted it in cooperation with Loukas Zahilas;
- the many country contributors who gave much help with this study;
- Christine Nychas from Cedefop who provided technical support in preparing this publication.

This publication was inspired by discussions and debates in the EQF advisory group and provided valuable input to the cluster on recognition of learning outcomes. Valuable comments and feedback were provided by the European network for quality assurance in VET (ENQA VET). This report is part of Cedefop's continuing work on learning outcomes, qualifications and qualifications frameworks.

([2]) The study was carried out under DG EAC framework contract No 19/2006.

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Executive summary

The objective of this Cedefop study is to explore the quality assurance mechanisms that underlie certification and to identify how they impact on European qualifications framework (EQF) developments. The relationship between quality assurance and certification of vocational education and training (VET) qualifications in nine European countries (the Czech Republic, Germany, Ireland, Greece, Spain, France, Romania, Finland, the UK-England) is examined to assist the transparency of quality assurance practices, particularly in the light of EQF implementation.

According to the EQF recommendation, if the EQF is to fulfil its role in aiding recognition of qualifications, mutual trust among the parties involved is crucial. This notion of mutual trust is underpinned by the existence of quality assurance practices on which the different parties can rely. The study revealed that among the nine countries examined, a variety of methods were used to quality assure the three stages of the certification process (assessment, validation and recognition):

- with regard to quality assurance of assessment (methods and processes used to establish the extent to which a learner has attained particular knowledge, skills and competence, OECD, 2005), methods included use of centrally defined assessment criteria/ methods/precise specifications, use of external examination centres or examiners, use of assessment committees or multiple assessors, and systematic training of assessors;
- quality assurance of validation (the process of confirming that certain assessed learning outcomes achieved by a learner correspond to specific outcomes which may be required for a unit or a qualification, OECD, 2005) included validation as an independent stage from that of assessment, use of validation committees involving multiple stakeholders to reach consensus or to moderate judgements, and use of centrally set evaluation grids or grading keys to grade performances;
- quality assurance of the recognition (the process of attesting officially achieved learning outcomes through the awarding of units or qualifications, OECD, 2005) stage of the process was generally less varied, mainly involving appointment of one or more awarding bodies recognised as competent to award a qualification, which were either appointed, selected or approved by one or more regulatory bodies, or were themselves the regulatory body or bodies.

The variety of VET qualifications and qualifications systems within and across the nine countries studied, means that the way in which certification standards were developed, as well as their focus (educational, assessment, occupational, etc.) also varies considerably. While the exact methods by which those standards are maintained also differed, in all cases studied, it relied on two, ostensibly opposite factors: regulation and binding guidelines; and trust and autonomy. What tended to vary from country to country was the balance between the level of regulation and the level of autonomy.

Just as the quality assurance in VET certification could be characterised as a mixture of regulation and autonomy, from the countries studied it was possible to categorise quality

assurance systems within each country into models along a continuum based on the division of responsibilities. It was possible to describe three broad (and inevitably overlapping) models:

- the prescriptive model could broadly be described as existing at one end of the continuum in which quality assurance of assessment, validation and recognition processes are all highly prescribed, usually by one or more awarding or regulatory bodies;
- the cooperative model was characterised as the approximate mid-point of the continuum, in which awarding bodies retain the responsibility for some quality assurance in assessment and validation, but other quality assurance processes lie in the hands of providers and other stakeholders. The model was seen to essentially on elements of cooperation and trust;
- the self-regulated model could be perceived as the antithesis of the prescriptive model, such that the VET provider is also the awarder of the qualification certificates, taking on the responsibility of quality assuring all aspects of the certification process without deferring to any higher or external agency.

It was similarly determined that VET certification quality assurance practices could correspondingly be analysed according to the stages (organisational and operational) at which they were applied to the design and delivery of assessment, validation and recognition.

With respect to the application of European and international quality assurance criteria and tools in VET certification quality assurance, two main criteria/tools were identified: the common principles for quality assurance (from the EQF recommendation); and ISO/CEN approaches.

The study highlighted several lessons for, and resulting from, EQF implementation, which could be broadly categorised as follows:

- national developments stimulated by the EQF often present opportunities for consolidating or strengthening national quality assurance processes. Examples of such opportunities are referencing to an NQF, designing qualifications standards based on learning outcomes, the shift to a learning outcomes approach and the development of sectoral and national qualifications frameworks;
- implications of national quality assurance practices for EQF implementation analysed by the study are the consolidation of quality assurance processes into codes of practice, the willingness to accept as valid the different systems of other countries, and the requirements to achieve a qualification being ensured through the quality of standards applied.

It was noticeable that the identified implications of the EQF implementation on national qualifications systems and on quality assurance practices were largely beneficial: improving the underlying principles governing quality assurance; providing a platform for sharing knowledge and expertise; improving practices; and improving the cohesion and cooperation both between qualification systems and organisations within Member States and also between Member States. In contrast, the implications of national quality assurance processes on EQF implementation presented a greater element of risk. The complexity of implementing the EQF across the diverse cultures, histories and educational infrastructures and practices within the EU, can be seen to bring with it fundamental requirements of trust, transparency and also common respect for differences.

1. Introduction

This study explores the relationship between quality assurance and certification of vocational education and training (VET) in a sample of European Union (EU) Member States. It presents information gathered from a series of case studies involving in-depth interviews with experts in different Member States with the aim of understanding the European quality assurance landscape of VET certification. It further synthesises these findings into a discussion of the various approaches to quality assurance and the practices employed.

The report is structured as follows: the context and conceptual issues are introduced; the research methodology is detailed; the findings are explored and analysed in the light of the research questions; issues concerning CVET and sectoral qualifications are addressed; and conclusions in terms of the lessons for EQF implementation are presented. The individual case study findings from the nine Member States (the Czech Republic, Germany, Ireland, Greece, Spain, France, Romania, Finland, the UK-England) will be available on the Cedefop website (www.cedefop.europa.eu).

1.1. European policy context

Discussion on quality assurance started formally in 2000 with the launch of the European forum on quality. The Barcelona European Council in March 2002 set up the ambitious goal to have European education and training systems a world quality reference by 2010. The Copenhagen declaration in November 2002 called for enhanced cooperation in VET quality assurance.

Several initiatives have been developed to support Member States' efforts in this area:

(a) further European cooperation in quality assurance in higher education which resulted, in 2006, in a series of recommendations and a register of quality assurance agencies in European higher education ([3]);

(b) cooperation on quality evaluation in schools ([4]) and recommendations on quality in teacher training ([5]);

(c) cooperation in quality assurance in VET ([6]) to develop a common reference framework of quality criteria and descriptors in VET ([7]) supported by the establishment of a network on quality assurance in VET (ENQA-VET) ([8]);

([3]) European Parliament and Council of the European Union, 2006.

([4]) European Parliament and Council of the European Union, 2001.

([5]) European Council, 2007.

([6]) European Council, 2004.

([7]) The proposal for a recommendation on the Common Framework (European Commission, 2008a) was in the co-decision process when this study was being finalised.

([8]) See ENQA VET website: http://www.enqavet.eu/

(d) the forthcoming European quality assurance reference framework (EQARF), already adopted by the European Parliament on 18 December 2008, designed to promote better VET by providing authorities with common tools to manage quality. The objective of this tool is to aid labour mobility and improve quality in VET across Member States by fostering transparency, common trust and recognition of competences and qualifications.

In addition to the above, quality assurance is an underpinning pillar of many other EU tools such as the European qualifications framework (EQF) or the two European credit systems: for higher education, the European credit transfer and accumulation system, (ECTS) ([9]) and, for VET, the European credit system for vocational education and training (ECVET) ([10]). The present study concerns the EQF and aims to unravel the different quality assurance approaches to certification.

1.1.1. European quality assurance framework

Establishing the European qualifications framework (EQF) ([11]) is one of the key developments designed to aid the (voluntary) common compatibility of qualifications provided in different countries, the recognition of qualifications and periods of learning undertaken in different countries and, consequently, the mobility of learners and workers between different EU countries. The EQF is a transnational metaframework based on learning outcomes, using an eight-level structure that has the objective of making qualifications systems more transparent to employers, learners, qualifications authorities, and education and training providers. It is intended to serve as a translation device between different qualifications systems and their levels.

Acceptance of the EQF, adopted on 23 April 2008, requires that the countries which decide to participate in it refer their qualifications systems to it by 2010 and that individual qualification certificates bear a reference to the appropriate EQF level by 2012.

To achieve these objectives and ensure support from different stakeholders, it is necessary to create and maintain a climate of common trust among participating countries. Two of the main factors that will influence the extent to which the EQF, and consequently the national qualifications systems, will be able to generate trust are availability of information and transparency of processes, and the existence of underpinning quality assurance arrangements in contributing Member States. Further, the processes involved in awarding (certificating) qualifications will be particularly crucial. Consequently, the focus of the present research is the quality assurance of VET qualifications processes.

Annex III of the EQF recommendation (Common principles for quality assurance in higher education and vocational education and training in the context of the European qualifications framework) ([12]) underlines the key commonalities to be observed by Member

([9]) See DG EAC web site on ECTS: http://ec.europa.eu/education/lifelong-learning-policy/doc48_en.htm

([10]) European Commission, 2008a.

([11]) European Parliament and Council of the European Union, 2008.

([12]) European Parliament and Council of the European Union, 2008.

States when implementing EQF (see Table 1). It is evident that these express general rules rather than specific standards or practices which can be directly applied and they embrace all processes relating to qualifications systems, from construction of a qualification through teaching and delivery to certification. To be of value in synergising the quality assurance principles that underpin certification processes, these general principles must be translated into specific practices suitable to the various VET systems in operation and development in the different participating countries.

Table 1: **Common principles for quality assurance in higher education and VET in the context of the European qualifications framework**

Quality assurance should be an integral part of the internal management of education and training institutions.

- Quality assurance should include regular evaluation of institutions, their programmes or their quality assurance systems by external monitoring bodies or agencies.
- External monitoring bodies or agencies carrying out quality assurance should be subject to regular review.
- Quality assurance should include context, input, process and output dimensions, while giving emphasis to outputs and learning outcomes.
- Quality assurance systems should include the following elements:
  - clear and measurable objectives and standards;
  - guidelines for implementation, including stakeholder involvement;
  - appropriate resources;
  - consistent evaluation methods, associating self-assessment and external review;
  - feedback mechanisms and procedures for improvement;
  - widely accessible evaluation results.
- Quality assurance initiatives at international, national and regional level should be coordinated in order to ensure overview, coherence, synergy and system-wide analysis.
- Quality assurance should be a cooperative process across education and training levels and systems, involving all relevant stakeholders, within Member States and across the Community.
- Quality assurance orientations at Community level may provide reference points for evaluations and peer learning.

Source: Annex III of the EQF recommendation (European Parliament and Council of the European Union, 2008.

1.1.2. Development of the common quality assurance framework in VET

Improving education and training quality is among the core objectives of the Education and training 2010 work programme. Quality assurance has been a particularly strong theme in cooperation in VET. Since 2000, with the European forum on quality VET and the consequent establishment of a technical working group on quality assurance in VET, work on

common quality criteria and quality indicators has been a cooperative process between the Member States and the European Commission.

Table 2: **Summary of the common quality assurance reference framework quality criteria and quality indicators**

The main quality criteria below are further detailed into descriptors:

- Planning reflects a strategic vision shared by the relevant stakeholders and includes explicit goals/objectives, actions and indicators.
- Implementation plans are devised in consultation with stakeholders and include explicit principles.
- Evaluation of outcomes and processes is regularly carried out and supported by measurement.
- Review.

The ten quality indicators proposed are:

1. Relevance of quality assurance systems for VET providers;
2. Investment in training of teachers and trainers;
3. Participation rate in VET programmes;
4. Completion rate in VET programmes;
5. Placement rate in VET programmes;
6. Utilisation of acquired skills at the workplace;
7. Unemployment rate;
8. Prevalence of vulnerable groups;
9. Mechanisms to identify training needs in the labour market;
10. Schemes used to promote better access to VET.

Source: Based on Annex 1 and Annex 2 of the *Proposal for a recommendation of the European Parliament and of the Council on the establishment of a European quality assurance reference framework for vocational education and training* ([13]).

The first outline of a common framework (common quality assurance framework, CQAF) ([14]) comprised:

(a) a model, to facilitate planning, implementation, evaluation and review of systems at the appropriate levels in Member States;

(b) methodology for assessment and review of systems: the emphasis has been given to self-assessment, combined with external evaluation;

(c) a monitoring system: to be identified as appropriate at national or regional level, and possibly combined with voluntary peer review at European level;

([13]) European Commission, 2008a.

([14]) European Commission, DG Education and Culture (2005).

(d) a measurement tool: a set of reference indicators aimed at aiding Member States to monitor and evaluate their own national or regional levels.

This outline was further developed and a proposal from the European Commission ([15]) was being decided between the European Parliament and the Council in 2008 at the time of writing. The proposed framework presents a set of quality criteria and quality indicators for VET, summarised in Table 2.

1.2. Definition of terms and clarification of concepts

This section defines and elaborates some of the key terms used for the study and clarifies the concepts they relate to. The majority of definitions are drawn from the EQF and from the forthcoming Cedefop glossary (Cedefop, 2009). Some of the terms – in particular 'quality assurance' and 'vocational education and training (VET)' – encompass very broad themes and are discussed in more detail. Drawing demarcations in and around these themes is essential for the study to progress in a systematic and logical fashion.

1.2.1. Qualification

A qualification is defined as the 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 ([16]).

This definition particularly fits the purpose of this study because it refers to the assessment and validation processes which result in recognition (and which, combined, constitute certification) and highlights the role standards have for the purpose of certification. The broader meanings of the word qualification (qualification as a completion of requirements to practise a profession) were not considered for the purposes of this study because qualifications in this broader sense do not systematically rely on assessment and validation processes. Nor are they necessarily subject to particular quality assurance processes; for example, delivery of a licence to practise may be conditional on number of years of experience instead of achieving assessed learning outcomes.

1.2.2. Qualifications system

A qualifications system is defined as all activities related to recognition of learning outcomes and other mechanisms that link education and training to the labour market and civil society. These activities include:

- definition of qualification policy, training design and implementation, institutional arrangements, funding, quality assurance;
- assessment, validation and certification ([17]) of learning outcomes (Cedefop, 2009).

([15]) European Commission, 2008b).

([16]) European Parliament and Council of the European Union, 2008.

While some countries have one unified qualifications system, in others several systems coexist, some governed by the State and others by economic sectors and social partners. While the main focus of this study is the public/ national qualifications systems, sectoral qualifications systems were also considered in some cases. One example of a sectoral qualifications system was studied in France (metallurgy industry). In Germany (the German Confederation of Skilled Crafts) and in the UK-England (vocational qualifications in the childcare sector), while there is no detailed scrutiny of the sectors, sector specific information was used to elaborate or exemplify particular practices.

1.2.3. Certification

The term certification, as it is used here, describes the multiple (and sometimes intermingling) processes of assessing, validating and recognising learning outcomes, which lead to a qualification. This understanding of the certification process is closely related to the definition of the term qualification used here.

For the present study, the following definitions of assessment, validation and recognition of learning outcomes are used (OECD, 2005):

(a) assessment: methods and processes used to establish the extent to which a learner has attained particular knowledge, skills and competence;

(b) validation: the process of confirming that certain assessed learning outcomes achieved by a learner correspond to specific outcomes which may be required for a unit or a qualification;

(c) recognition: for purposes of this study the term recognition is understood in a narrow meaning as the process of attesting officially achieved learning outcomes through the awarding of units or qualifications. This term refers to formal recognition by the education and training system which results in the award of a qualification (through issue of a certificate or grade). In this study the term does not include recognition by the labour market or wider social recognition.

It is important to underline that even though the processes of assessment and validation are sometimes subsumed into one activity, it is theoretically possible to distinguish between tasks that are proper to assessment and those that are proper to validation. Further, for assessment, the study distinguishes between:

- formative assessment: typically continuing assessment which aims at providing feedback and further informing the learning processes. Formative assessment may be used to enable learners to pass from one training phase to another (first year to second year), but does not result in certification;
- summative assessment: this aims at formally determining that the required learning outcomes have been achieved and (when this is the case) results in certification.

  The present study mainly focuses on summative assessment.

([17]) Note that while the term ‘certification’ is used in this definition to describe ‘recognition’ (issue of a qualification certificate), we use the term certification to encompass all three processes of ‘assessment’, ‘validation’ and ‘recognition’ (see Section 1.2.3.).

1.2.4. Awarding body

While the above definition of qualification refers to the term 'competent body,' for the purposes of this study, the term 'awarding body' is used as a descriptor of an institution that awards qualification certificates (documents). Awarding body is used here because it clearly refers to delivery of a certificate, in other words the recognition process. The definition in the forthcoming Cedefop glossary (Cedefop, 2009) is used here, which defines an awarding body as a body issuing qualifications (certificates, diplomas or titles) formally recognising the learning outcomes (knowledge, skills and/or competences) of an individual, following a assessment and validation procedure.

1.2.5. Vocational education and training (VET)

Understanding of what VET qualifications constitute differs from country to country; while some countries have a clear definition of VET ([18]) others do not distinguish between VET qualifications and other types of qualifications ([19]).

A pragmatic approach has been adopted in this study: to use the variety of understandings of VET qualifications that occur in the different countries studied without attempting to define, *a priori*, what is meant by a VET qualification.

While certification of all qualifications, vocational and general, has the themes of assessment, validation and recognition in common, and may also share design properties, training providers, assessment, validation, recognition and quality assurance practices, VET qualifications also pose a unique set of challenges related to certification. When compared to general or academic education, these processes are different in VET because of:

- the variety of awarding bodies in VET across Europe: ministries, examination boards, VET providers, social partners, sectors, chambers, etc.;
- the type of actors potentially involved in assessment and validation: these can be VET providers and awarding bodies, but also employers or social partners;
- the nature of learning outcomes to be assessed and validated: compared to academic or general qualifications, learning outcomes in VET are closely related to vocational activities and evidence of them may only be ephemeral or fleetingly available to the assessors themselves.

([18]) For example, the French definition of VET qualifications used by the national repertory of vocational qualifications (Répertoire National des Certifications Professionnelles; RNCP; repertory later in the text) is described as follows: 'a vocational certification registered in the repertory demonstrates that the holder is 'qualified', meaning capable of realising vocational activities in the framework of several work situations, at different levels of responsibility defined in the repertory'. (Translated by GHK from information available on the National Commission for Professional Certifications (Commission Nationale de la Certification Professionnelle; CNCP) website, available at www.cncp.gouv.fr).

([19]) For example, from the case study research it is apparent that in Ireland the key defining feature of any qualification is its level in the national framework of qualifications (NFQ). Within the framework a distinction is made between further education and training (FET) awards and higher education and training (HET) awards and learning in VET may lead to awards from FET or from HET awarding bodies.

1.2.6. Quality assurance (QA)

The common quality assurance framework (CQAF) ([20]) gives a definition of quality assurance based on the understanding of a quality cycle (planning, implementation, evaluation and review) and is more broadly used to encompass all of the processes in development, delivery and certification of VET: quality assurance should be seen as an instrument for continuous improvement of VET, based on a quality cycle establishing the appropriate interrelation between planning, implementation, evaluation/assessment and review of VET.

1.2.7. Quality assurance and certification

As highlighted by the OECD thematic review of the role of national qualifications systems in promoting lifelong learning, quality assurance of certification processes is fundamental to ensuring that qualifications are generally valued and accepted. It is essential that the players in recognition (certification) systems be subject to quality assurance standards. This ensures consistency across the systems and helps to maintain the legitimacy and value of the system to the individuals participating in it, and to the wider society. It also ensures that those participating in recognition systems are held to the same standard. Inconsistency in developing standards against which individuals are assessed, how they are used across assessment centres or educational institutions and how they are communicated to the user may undermine the confidence of the system (OECD, 2005).

To ascertain the level of attainment, a learner must be assessed in some form or other and the outcomes of the assessment process must then be validated to establish whether the performance of the learner satisfies the set standards. Consequently, learners are awarded a grade or a pass/fail. If the validation is positive, learning outcomes may be recognised through the award of a qualification or of its component (a unit) by issue of a certificate, document, title or diploma.

However, converting a learner's performance on an assessment to a clear indication of attainment (such as a grade or pass/fail), is not as simple as might be thought, as it may entail various other activities:

(a) QA of assessment: practices to ensure that the assessment is accurately and consistently applied across the range of awarding bodies delivering a qualification. Examples include centrally set assessments, standardisation meetings, assessment by multiple examiners/juries, and internal and external moderation/verification;
(b) QA of validation: practices designed to ensure that the evidence from the assessment is accurately and consistently judged against a predefined standard. Examples include boundary-setting, benchmarking, direct grading by individuals or juries, use of grading descriptors and grading grids;
(c) QA of recognition: practices to ensure that those responsible for recognising qualifications on the basis of assessment and validation, are competent to do so.

([20]) See European Commisssion, 2008b.

To summarise, quality assurance practices related to certification processes are designed to ensure that when learners are awarded a qualification, they have attained the level of knowledge, skills and competence that is expected and required of them, regardless of when, where, how or by whom those learning outcomes are assessed. To this end the present study mainly focuses on assessment, validation and recognition, as defined in Section 1.2.3.

However, in addition to processes strictly related to certification, other practices are found in quality assurance, as part of education and training systems; these may have an impact on the certification process. For example, as the definitions of qualification and of validation state, the existence of a standard against which learning outcomes can be compared is a crucial aspect of certification. This standard defines the reference for assessment, validation and recognition. The quality of this standard is therefore crucial to the quality of the certification process. However, the processes of setting standards for qualifications are not the subject of this study and will therefore not be examined here. This study will only examine how the maintenance of standards of learning outcomes affects the three key certification processes.

1.2.8. Quality assurance and VET

From our understanding of the VET landscape in Europe and the research findings, QA processes in VET qualifications are distinguished from QA relating to general (non-vocational) qualifications in:

- the nature of learning outcomes to be assessed and the corresponding variety of assessment methods used;
- the structure of qualifications systems and the complex relationships between awarding bodies, VET providers and assessors.

Because of the nature of learning outcomes to be assessed – representing a combination of theoretical and practical elements as well as a mixture between trade-/ specialisation-/ profession-related learning outcomes and more transversal learning outcomes (called ‘key competences’) – various assessment methods are used. Written examinations are used but, more often, assessments take the form of course-work, practical examinations, and on-the-job assessment, or a combination of these. In a number of European countries various assessment methods can be used for learning outcomes in awarding the same qualification. Even when the main modalities of assessment are set (it is defined that the final assessment is to comprise written, practical and oral assessments), the actual content of assessments may differ from one awarding body (or assessing institution) to another.

Sometimes quality assuring assessment and validation involve quite distinct and separate practices; at other times they are subsumed under the same practices (designed to achieve both ends). Making sure that assessment, validation and recognition are consistently applied across the range of bodies involved in VET is what is unique to the QA of VET qualifications. As will be described in Section 4, in most countries responsibilities related to assessment, validation and recognition are devolved to different types of actors, unlike in higher education where universities are in charge of all the three processes. Because of this

diversity of bodies concerned, many VET systems have developed, or are developing, elaborate QA processes to ensure consistency of qualifications awarded.

1.2.9. Standards

Conceptualisations of the word 'standard' vary considerably according to the context in which it is used. For example, when purchasing an item of clothing (a pair of jeans) which comes in various styles, the term 'standard fit' might be used to imply something that is commonplace or unadorned with additional, optional features. Even within educational contexts, the word is used with different meanings. The complaint can be heard that educational 'standards are falling' ([21]) when what is really implied is that educational attainment or achievement is falling. Alternatively, one might hear standards being referred to as a set of benchmarking criteria: the definition of a 'minimum standard' of attainment below which performances would be unacceptable.

In the context of education and training, this latter conceptualisation of the word standard is used in various instances: in general, standards are characterised by the fact that they are set by a certain authority and describe criteria which characterise either the average or the minimum performance, tasks, outcomes, etc. expected. In relation to qualifications and certification processes, according to another Cedefop study concerning the development of qualification standards ([22]) within Europe, these standards are considered to be norms and specifications applying to assessment, educational pathways or targeted occupations. The following types of standard can be distinguished if the term 'qualifications standard' is analysed.

(a) assessment standards: may specify the object of assessment and performance criteria. These are typically the standards used for the certification process;
(b) occupational standards: may specify the professional tasks and activities the holder of a qualification is supposed to be able to carry out, and the competences needed for that purpose. Occupational standards are often set through a dialogue with stakeholders in the economic world and reflect the needs of the labour market and of society more generally. They are often the basis for deriving the other two types of standards.
(c) educational standards: may define the expected outcomes of the learning process leading to the award of a qualification. These standards relate to education and training and are the basis for defining appropriate teaching and training methodologies and approaches.

Not all countries distinguish between these three types of standards or define them centrally (Cedefop, 2008). While in some cases, for example, only the educational standards are defined centrally and are used for certification, elsewhere the distinction is very clear. Further, in some countries the term used to refer to national standards may differ from the three categories above, as in those countries using the term national curricula rather than

([21]) Treneman, 2008; Quinn, 2006.

([22]) Cedefop, 2008, draft interim report *The dynamics of qualifications – the definition and renewal of occupational and educational standards*.

standards. However in most cases even though different words are used the rationale behind these standards is:

- that of the labour market requirements for a profession: occupational standards;
- that of the educational programme and what the training programme is expected to deliver: educational standards;
- that of the certification process and of assessment requirements and criteria: assessment standards.

1.2.10. Validity and reliability in relation to certification

Finally, this study refers to the terms validity and reliability in connection with the different aspects of the certification process (mainly assessment and validation).

Reliability is understood to concern the consistency of the certification process, both over time and across assessors and awarding bodies. For example, whether the same candidate undergoes assessment with institution X or with institution Y, if the process is reliable, the outcome should be the identical. Reliability is closely related to objectivity of the process.

Validity is understood to concern whether or not the outcomes of the assessment/ validation processes are accurate reflections of the intended learning aims; that the assessment/ validation method and the content of assessment/validation actually measures or identifies the learning outcomes they are meant to identify (they are fit for purpose) and do so to an appropriate standard. So, if the assessment methods are not suitable for determining the learning outcomes (as based on the qualification standard) the assessment may be invalid.

Reliability and validity are what quality assurance processes attempt to improve.

1.3. Study objectives and research questions

As shown in the case study research (the complete study will be available on Cedefop's website: www.cedefop.europa.eu.), institutional frameworks involved in VET certification processes vary widely across Europe and the arrangements also differ from country to country. While, in some countries, certification control is centralised and the responsibility of a few qualifications bodies, in others this responsibility lies in the hands of multiple actors. The practices involved in quality assurance of certification similarly vary.

If the EQF is to fulfil its role as a tool to simplify recognition of qualifications, common trust among the parties involved is crucial. The notion of common trust is underpinned by the existence of quality assurance on which the different parties can rely. However, there is currently very little information available regarding the different certification quality assurance tools used by Member States. Therefore this study aims to analyse different approaches to certification quality assurance, provide an overview and analysis of methods used and draw out lessons that these approaches may have for the implementation of the EQF.

To reach these general objectives the following research questions have been formulated and are addressed in this report:

(a) research question 1 (RQ1): to what extent are the assessment and validation processes that lead to the formal award of a qualification, being systematically and transparently quality assured? What methods are used:
    (i) to quality assure validation and assessment instruments and methods;
    (ii) to ensure that the judgements of the awarding bodies are valid and reliable;
    (iii) to quality assure that the standards involved are being used and applied appropriately?
(b) research question 2 (RQ2): how is consistent application of certification standards maintained?
(c) research question 3 (RQ3): what are the main functions and the range/scope of certifying (awarding) bodies in a sample of countries that will exemplify the range of expectations for quality assurance in certification processes?
(d) research question 4 (RQ4): are the criteria and methods listed in Annex III of the EQF recommendation, applied in systematic ways?
(e) research question 5 (RQ5): to what extent have ISO/CEN approaches influenced certification and awarding processes, including those administered by national qualifications systems and frameworks?

It is evident that these research questions do not tackle wider issues such as quality assurance relating to training delivery or those concerned with the relative benefits and costs, or efficacy, of different quality assurance processes. Indeed, there is a vast array of questions that could be asked about such a complex and, at times, technical issues. However, what they effectively encompass are the broad issues of quality assurance in relation to the certification of VET qualifications in as much as they impact (and are themselves influenced by) implementation of the EQF. In other words, they expressly ask the kind of questions that the many EQF stakeholders within Europe (workers, employers, education providers, learners and policy-makers in different Member States) are most interested in: how, by whom, and on what basis do quality assurance processes underpin certification of VET qualifications?

2. Methodology

The present study was undertaken in two phases. The initial phase was exploratory and served to obtain general information on the overall framework of quality assurance for certification in the selected countries (see below). Outcomes of the initial phase were consolidated in an interim report, which defined the orientation of the second research phase. This second phase had the objective of obtaining detailed case study information in each of the countries studied. With regard to the methods used, the two phases can be described as follows:

(a) initial research phase:
    (i) initial desk research for the nine selected countries;
    (ii) an initial phase of interviews with expert contacts (generally, one per country);
(b) second research phase:
    (i) a second set of more extensive interviews with one or more other key experts in each country (see number of experts consulted below);
    (ii) further exploration of documentation concerning quality assurance practices in each sample country (supplementary desk research).

This chapter of the report presents the methodological framework and the tools developed.

2.1. Scope of the study

2.1.1. Countries covered

To study the different qualifications systems in detail a decision was made not to cover all the EU Member States but to focus on a representative selection of countries. Nine countries were selected for study (the Czech Republic, Germany, Ireland, Greece, Spain, France, Romania, Finland, the UK-England). These were chosen for the following reasons:

(a) they represent a mixture of countries with centralised and decentralised VET structures;
(b) they represent a mixture of quality assurance practices and institutional structures, some highly formalised and others more informally derived;
(c) geographically they represent the different VET traditions between northern, southern, eastern and western Europe;
(d) historically, the evolution of qualifications systems, especially with regard to VET qualifications is diverse and the sample reflects this diversity;
(e) in terms of development of national qualifications frameworks (NQFs), they represent a mixture of countries at different stages of the process.

In the UK the study only focused on examining the qualifications systems in England rather than in all four countries of the United Kingdom. Given the important diversity of education and training structures in the four countries an in-depth analysis of them all was not possible.

2.1.2. Qualifications systems and levels covered

The selected countries have differing organisation of their qualifications systems. While some have only one national qualifications system in VET (Finland), others have more (Romania has one for IVET and one for CVET) and some have multiple qualifications systems (France). Where the number of qualifications systems in a country was small (one or two main systems) all the different systems were covered. However, where multiple systems coexisted, only a restricted number of cases were studied. In France only the system of the Ministry of National Education and an example of one sectoral qualifications system were analysed in detail.

Both continuous and initial VET were covered in countries where this difference is made. With relation to CVET, mostly qualifications that are somehow governed, regulated or funded by the State were covered, exceptions being qualifications examined under the examples of sectoral qualifications systems.

In some countries no distinction exists between IVET and CVET qualifications (Ireland, France, Finland, the UK-England) ([23]). It was, nevertheless, ensured that certification processes applicable to both young learners in initial training and adult learners were addressed.

2.2. Methods used

2.2.1. Interviews

Qualitative semi-structured open-ended interviews were one of the two main sources of information for this study.

Interviews were undertaken in two stages: initial interviews and detailed interviews. In each country one initial interview with an expert with good knowledge of the country qualifications system(s) was undertaken. This had the objective of exploring broadly the different quality assurance approaches used.

Given the nature of the institutions the interviewees were from, and also the nature of the national VET systems, different levels of detail were obtained for the questions asked, which made the second research phase particularly important in filling in gaps in information.

The goals of the detailed interviews were to:

(a) establish a broad information base by interviewing experts who worked in different but convergent sectors such as different awarding bodies (where applicable), quality assurance practitioners/technical experts, stakeholders involved in the formulation or conduct of quality assurance practices and regulatory bodies;

(b) obtain more detail concerning specific practices with regard to quality assurance of assessment;

([23]) From the case study findings it is evident that, in these countries, the distinction between IVET and CVET only applies to the training pathway followed by the learner and not to the qualification itself.

(c) obtain more detail concerning specific practices regarding the quality assurance of validation processes;
(d) establish the extent of the formalisation of procedures and the extent to which the resulting recognition of qualifications was regulated or overseen.

Detailed interviews were an elaboration of initial interviews with different interviewees. The use of a variety of interviewees enabled the research team to triangulate information as well as to obtain more detailed information on the different aspects examined.

2.2.2. Interviewees

In total, 30 interviews were undertaken for this study. The interviewees were selected to represent the key organisations involved in designing and conducting quality assurance for processes related to certification as well as organisations designing and conducting other aspects of assessment/validation or recognition processes, if relevant. A 'snowball' method was used to identify the best suited persons for interviews: persons interviewed were asked to indicate other suitable persons in their country within organisations identified as key by the research team.

2.2.3. Desk research

Like the interviews, the desk research was divided into two phases: initial desk research and additional desk research.

In the first stage data on national institutional frameworks for certification was collected, along with general data on how the qualifications systems are organised. The initial desk research on the nine countries focused on identifying:

(a) the types and structure of VET qualifications and/or VET provision that were and continue to be reviewed as part of this assignment;
(b) the national institutions involved in the key functions identified and their main roles;
(c) common assessment practices for VET;
(d) practices involved in the quality assurance of assessment of VET;
(e) practices involved in the quality assurance of validation (and/or recognition) of VET.

This information was used to identify the organisations to be interviewed, to adapt the interviews to the country context and to contextualise information gathered through interviews.

The additional desk research focused on reviewing documentation on the different specific practices examined, to the extent that this was available. This information was used to complete that obtained from interviews and to obtain a clear picture of the practices existing in relation to assessment, validation and recognition, and related quality assurance, and the extent of formalisation of practices.

The literature reviewed in the two stages was by no means exhaustive, as it is not only vast, but at times unpublished, confidential or not in a language spoken by the core research team. Nevertheless, both from individual research and with the support of interviewees, a substantial range of documentation from various sources was reviewed during the initial and additional desk research phases:

(a) descriptions of national VET or qualifications systems (main sources were Cedefop and the Organisation for Economic Cooperation and Development (OECD));
(b) websites of institutions identified (to the extent to which these were available in a language spoken by the core research team);
(c) documents provided by interviewees (which may or may not be in the public domain).

Although in the initial desk research the sources reviewed were mainly in English, the use of native language researchers for the second stage enabled the team to use information from sources in the country language.

3. Quality assurance methods and approaches

This section presents different methods of quality assurance in certification in the countries covered by the report. Although it does not cover all quality assurance methods used across the EU, the sampling of countries gives reason to believe that main approaches have been captured. This section addresses two research questions.

First, to what extent are the assessment and validation processes that lead to the formal award of a qualification, being systematically and transparently quality assured? What methods are used:

(a) to quality assure validation and assessment instruments and methods;
(b) to ensure that the judgements of the awarding bodies are valid and reliable;
(c) to quality assure that the standards involved are being used and applied appropriately?

Second, how is consistent application of certification standards maintained?

In essence, these questions can be seen to address how, by whom, and on what basis quality assurance processes underpin the certification – understood as assessment, validation and recognition – of VET qualifications.

3.1. Methods used to quality assure assessment

The findings from the nine countries revealed a broad range of methods to assure the quality of assessments (see details in www.cedefop.europa.eu); these aim, in different ways, to strengthen the reliability, validity and credibility of the diverse testing and examination practices. This diversity is a reflection of different professional philosophies and national traditions, ranging from the centralised to the decentralised; the first gives priority to top-down control, the second to extensive local and institutional autonomy. In between these two extremes we find mixed models combining central control and local autonomy.

A significant example of the centralised approach is the use of nationally defined and regulated assessment standards, methods and specifications. Aiming at strong reliability and overall credibility of the system, these approaches leave relatively less room for local tailoring of assessment, potentially reducing its ability to capture local and individual variation.

Significant examples of the decentralised approach are provided use of independent examination centres and self evaluation mechanisms. Most important, a certain degree of institutional autonomy is necessary to pursue a decentralised approach; providers must be able to choose the methods and processes used for the assessment. The training and networking of assessors is an important part of a decentralised approach as it tends to create communities of practitioners supporting reliability. It is worth noting that decentralised approaches allowing for extensive institutional autonomy frequently refer to broad objectives (for example specified as expected learning outcomes) set at national level providing direction for the assessment.

While reliability and validity are key criteria for judging assessment quality,, the overall credibility of the assessment is important. A range of initiatives address this aspect, such as use of external inspection and national evaluation mechanisms. The involvement of neutral assessors, external to the institution organising the test (or even external to the education and training system) is frequently used to ensure increased credibility of assessments.

Table 3 illustrates the range of quality assurance practices applied to assessment of vocational qualifications, based on the case study findings.

Table 3: **Range of methods used to quality assure assessment**

Method	**Description**	**Country example**
Use of centrally set standards to define assessment criteria	Use of the same standard across the entire qualifications system as a basis for assessment criteria ensures the reliability of the assessment process. Whether the standards are educational standards, occupational standards or assessment standards, depends on the country situation. Several countries studied define assessment standards centrally in the qualification description. The quality of the standard is therefore crucial to the quality of the assessment.	In France the qualification description defines in detail the assessment criteria for the expected learning outcomes as well as the expected level of performance. In the UK-England, NVQs are based on national occupational standards.
Centrally defined assessment methods	Centrally defining the assessment method (whether it is a written, practical, oral, etc.) ensures that all candidates are assessed on the same basis (reliability). It also, to a certain extent, can ensure that the assessment method used is appropriate for the learning outcomes to be assessed (validity). However, this method constrains VET providers to use always the same method independent of the profile of the candidate they assess and their own resources and timetables. Further, if only the assessment method is centrally defined and not the standard, reliability is not ensured because the standard to which the method refers to is lacking.	Several countries specify in their certification regulation the assessment methods to be used. In some cases the method to be used per unit of qualification is defined (France); in others (Romania) it is defined that the final assessment has three elements: written, practical and oral assessment.
Centrally defined assessment specifications	Centrally defining assessment specifications (not only the method but also the content of the assessment) further improves the reliability of assessment across the different assessment occurrences. These specifications are usually defined through cooperation that brings together pedagogues, technical experts and representatives of the economic sectors. If such cases, the validity of the assessment is also strengthened.	Final examinations in IVET in the Czech Republic are based on centrally set specifications. Schools can choose among a range of specifications provided: this is a new practice introduced in certain types of VET schools that is currently used by 50 % of these schools.
External examination centres	Using external assessment centres (centres external to the provider who delivers training) enhances the reliability of the assessment. The independence of these centres ensures that the candidate is assessed without prejudice regarding his prior learning performance.	In Romania in IVET final assessment is systematically carried out by accredited assessment centres which have to demonstrate their capacity to organise and carry out the assessment.

Method	Description	Country example
External examiners	Like the use of external assessment centres, the use of external examiners who often have to satisfy certain conditions of qualification and practice enhances the reliability of the assessment. These examiners are specifically trained to undertake assessment and often also to validate it (see below).	In Greece, in post-secondary VET all written examinations are corrected (moderated) by external examiners who are nominated by the awarding body. In the UK-England, many assessments conducted by the provider are similarly 'externally verified'.
Assessment committees with external actors	The fact that assessments are carried out by a committee composed of several members enhances the reliability of the assessment. These committees often contain representatives of the economic sector in addition to the teaching staff. The independence of the committee is important for the credibility of the assessment.	In the Czech Republic and France assessment is carried out by a committee which comprises one representative of the economic sector.
Multiple assessors	The use of a more than one assessor enhances the reliability of the assessment by making it more objective.	In Greece (post-secondary VET) written examinations are corrected by two assessors and if their conclusions differ significantly (more than two points) a third examiner is used. In Spain tutors from the work place and the provider both assess professional performances.
Inspection of assessment	Inspection of the assessment has the objective of ensuring that the process has been carried out in line with regulatory requirements. Inspection may be systematic or impromptu depending on the system. The inspection ensures both the reliability of the assessment (the same control criteria apply to all assessments) and the validity, if the use of appropriate assessment methods and criteria is verified.	In Romania all external assessment centres are systematically inspected.
Monitoring or evaluation of assessments	Rather than inspection, some countries rely on monitoring and evaluation of assessment processes (including self-evaluation). While inspections are focused on verifying whether the regulation is respected, these monitoring or evaluation exercises analyse whether the assessment practices themselves are indeed valid and reliable and result in suggestions for modifications.	In Finland, for example, the National Board of Education evaluates on an annual basis the outcomes of skills assessments conducted across the country. Similarly, in Ireland VET providers' assessment practices are monitored by FETAC.

Method	Description	Country example
Systematic training of assessors (including teachers who undertake assessment)	The preparation of assessors (including teachers who undertake the assessment) is crucial especially if these have autonomy in designing and undertaking assessment. In such cases the assessors have to be trained to ensure that assessment methods are appropriate and assessment is carried out in an impartial manner. Some may also be specifically trained in quality assurance as a subject area.	In Spain and Finland, where VET providers have important autonomy in designing, planning and carrying out assessment, initial and continuing training of teachers ensures that the assessment is valid and reliable.
Approval of the assessment design by a competent body	The fact that the assessment design has to be approved by a competent body enhances the validity and reliability of the process. While providers have the potential to design the assessment process according to their target group and their resources, an external body (the awarding body) approves the reliability and validity of the assessment method, criteria and instruments.	In Ireland, FETAC recognises as valid a range of assessment methods from which providers can choose those that are most adapted. In the UK-England, Ofqual considers assessment practices in making decisions on whether or not to accredit qualifications onto the qualifications and credit framework (QCF).
Regulation of assessment processes by process rather than content	This describes approaches where providers are autonomous regarding the design and planning of assessment (choice of methods, choice of instruments, planning of assessment), but where requirements regarding how assessment is organised are in place. These requirements may concern issues such as documentation of the assessment process and the composition of those who participate in assessment. These processes strengthen the reliability of assessment.	In Ireland, all providers have to put in place an authentication process which covers internal verification (by the provider) and external authentication (by an external independent person).
Description of assessment methods as part of accreditation criteria	Accreditation is a very common quality assurance mechanism in CVET. The assessment methods used are often examined as part of the accreditation process. This can ensure the validity of the assessment by verifying that the appropriate methods and criteria are used. It can also enhance the reliability of the assessment if the assessment is based on centrally set standards.	In the Czech Republic, for example, the description of the assessment process is one of the accreditation criteria.

Source: GHK.

3.2. Methods used to quality assure validation

The country examples demonstrate a variety of methods used for quality assurance of validation. By validation we refer to the process of confirming that certain assessed learning outcomes achieved by a learner correspond to specific outcomes which may be required for a unit or a qualification. Though, in some cases, the processes of assessment and validation are subsumed into one activity, these are different certification process which must be kept apart.

Table 4: **Range of methods used to quality assure validation**

Method	Description	Country example
Validation stage is independent from the assessment stage	When validation is carried out by different persons from those who carry out the assessment it is a quality assurance process itself. The separation between assessment and validation ensures the validity of certification. During validation the evidence from the assessment is examined and the judgement on pass or fail is made. Separation between assessment and the pass/fail judgement ensures an independent judgement on candidate results. If independent, the validation stage can also strengthen the reliability of the assessment if the assessment process is examined and its compliance with the requirements is checked.	In Ireland the provider has to organise a so called results approval process during which the internal verifier and external authenticator reports are considered and it is ensured that the correct conclusions are made regarding the assessment outcome. In the UK-England, cut scores for applied GCSE and applied GCE grades are decided separately from candidates' marks in assessments.
Validation committees with participation of different parties	When validation is done in cooperation with other stakeholders (inspectors, representatives of the economic sector) the reliability of the certification process is enhanced.	In France validation committees organised at regional level per qualification bring together around 12 persons combining inspectors, providers' staff, employers and employee representatives.
Centrally organised validation	This is the case where all assessments are validated by a single awarding body.	In Greece, for all post-secondary VET qualifications, OEEK collects the assessment results (written and practical) from the regional centres and centrally validates them. The outcomes are then communicated back to the regional centres.
'Weak criterion referencing'	Validation is conducted by the awarding body by means of scrutinising candidate's work on particular marks thought to be close to the grade boundary (cut-score), with expert criterion referenced judgements being supported by 'objective' normative data on passing percentages, etc. While the marks allocated may vary with changes in the difficulty of the examination, the cut-scores are adjusted to reflect the consistency in standards for a grade or pass/fail judgement.	In the UK-England, the grading of learners taking applied GCSEs and applied GCEs usually uses this form of validation process.
Centrally set evaluation grids/ grading keys or criteria to grade performance	Centrally set evaluation grids typically serve to document the extent to which the candidate satisfies the assessment criteria and are the basis for grading. They enhance the reliability of validation. Other methods are used to achieve the same objective; in centrally set specifications numbers of points can be specified if the performance of the learner is fully in line with the assessment criteria. In this case, if the difficulty of the examination changes, then the grading key (criteria required for mark or point allocation) is adjusted instead of the overall cut score.	In Germany, written examinations are marked using a standardised grading key. For those written examinations developed by supra-regional bodies, these bodies also provide the grading key.

Source: GHK.

Also in validation we see a diversity of approaches. An important distinction can be made between those approaches combining assessment and validation, for example by locating both processes to the education and training institution in question, and those clearly separating these phases. The separation of assessment and validation permits inclusion of external stakeholders, notably social partners and other users of qualifications, introducing

an independent perspective and potentially strengthening the overall quality of the process. This separation of assessment and validation may signal a broader change aiming at more 'neutral' qualifications. It is argued, for example in relation to validation of prior learning, that qualifications should be based on the learning outcomes acquired, not the specific learning pathway followed. Introducing independent and provider-neutral validation may support this objective.

The dichotomy between centralised and decentralised approaches seems to be less clear for validation than for assessment. This may indicate that countries see validation as important for the overall credibility of the qualification and are thus less inclined to accept local and institutional autonomy and adaptation. We can, however, observe different degrees of central control. In a few countries one central body controls all validation. More commonly, central authorities use standardised evaluation grids, grading keys or criteria to grade performance and make decisions to pass or not.

Validation is important for the value of qualifications, basically underwriting their function as currencies in the labour market and in educations and training. The institutional choices made at this stage are important for reasons of mutual trust and also for strengthening the accountability of certificates and diplomas.

Table 4 illustrates the range of quality assurance practices applied to validating vocational qualifications, based on analyses of the case study findings.

3.3. Methods used to quality assure recognition

In quality assurance of the recognition process the approaches are less varied. They mainly refer to the appointment of awarding bodies who have the capacity to recognise that assessment and validation comply with the requirements and consequently, if the outcomes of assessment and validation are positive, to award the qualification. In all cases studied here the body undertaking recognition (the awarding body) has been:

- either appointed, selected or approved by the regulatory body;
- or it is the regulatory body itself.

This applies even to CVET where the providers (who often are the awarding bodies themselves) are often accredited. It is also the case for the sectoral qualifications studied; the branch organisation which regulates the qualification process in that system is the awarding body.

The awarding body is quality assured rather than the recognition process itself. The recognition process is usually a consequence of positive assessment and validation. In cases where the awarding body is different from the parties involved in assessment and validation (France), recognition follows submission of a statement, or other evidence, that the conditions for assessment and validation comply with the requirements. The fact that assessment and validation were undertaken in line with the requirements (in terms of organisation, parties present, etc.) is typically verified by inspection. This can be systematic (Romania), random or managed by exception (initiated by a complaint, as in Germany). In some cases where no inspection exists (Finland for example), this is the task of other parties

(in Finland these are the local steering committees that bring together the education and training sector, the economic sector, local authorities and representatives of students).

3.4. Methods to quality assure validity and reliability

The validity and the reliability of judgements on passing or failing a candidate is at the core of measures to quality assure assessment and validation. It is expected, by the authorities who invest in education and training and by society and the labour market which rely on qualifications, that when issuing a qualification, the awarding body has verified that the candidate has achieved the learning outcomes required and this has been verified using:

- assessment methods and criteria that are appropriate for the learning outcomes to be assessed. In other words the methods (oral, written, practical, etc.) and the assessment questions or tasks are suitable for what is being assessed and the assessment criteria are set at the appropriate level to distinguish between satisfactory and unsatisfactory achievement of learning outcomes;
- assessment methods and criteria that ensure that different candidates holding the same qualification were assessed on the same basis; the methods and criteria used by different assessors for the different candidates lead to consistent judgements if performance is comparable.

The question of reliability and validity is addressed differently in the countries studied. The variety is partly due to the fact that the exact tasks of awarding bodies with regard to the certification process vary greatly from system to system. While in some qualifications systems awarding bodies are the VET providers who also undertake the assessment and validation (Finland), in others the awarding body only formally issues the certificate based on judgement by an independent validation committee (France). In some systems the difficulty is mainly in ensuring consistency across a wide range of awarding bodies with significant authority regarding the choice of assessment methods and assessment specifications; in others the issue is collection of assessment evidence from a large number of assessors to one or a few central or national body(ies) while maintaining assessment methods suitable for the learning outcomes to be assessed. In the first case (decentralised assessment systems), the assessment autonomy of VET providers aids use and development of methods that are particularly suitable for VET qualifications learning outcome (such as on-the-job observations and project work) while making it more difficult to ensure all providers assess on the same basis. The second case (centralised assessment systems) aids reliability of assessment because everyone is assessed in the same way (everyone undergoes the same written examination) while constraining the providers to methods that are less holistic.

Although the exact combination of means to achieve reliability and validity varies, in all cases studied here, it relies on two dimensions:

- regulation and binding guidelines, with regard to certain processes (for example who has to participate in an assessment; what assessment methods to use; what assessment criteria to use, etc.);
- trust and autonomy, with regard to the competence and experience of assessors.

What varies from country to country is the balance between regulation and autonomy. There is a tendency for countries with traditionally very autonomous qualifications systems to introduce stronger regulation in certain aspects of assessment; in traditionally highly regulated qualifications systems introduce aspects of autonomy. Finland, a country system with great autonomy, has recently made it compulsory for schools to organise skills assessments (one aspect of summative assessment) and these have to be planned in cooperation with local steering groups. The Czech Republic, which also had a system with distinct autonomy in the past, is creating a more centralised system of summative assessments where providers use assessment specifications designed by teams of national level. Such measures are inspired by the need to reinforce assessment reliability. France, which has a very centralised system, has been strengthening the aspect of continuous assessment (*contrôle en cours de formation*) in VET qualifications giving providers more autonomy regarding the planning and choice of assessment situations than the system of final examinations. This evolution in the French system was motivated by the willingness to accommodate the variety of teaching contexts and local requirements and enable on-the-job assessment and other more professional task-related examinations, and hence strengthen the validity of the assessment (bringing it closer to the real job situation).

3.5. Methods to quality assure appropriate standards

Standards against which the assessment and validation are made are crucial to quality assurance for certification. The way the standards are formulated (what level of detail they contain) as well as their focus (whether they are educational or occupational standards) will constrain assessment methods and content and also validation criteria. For quality assurance of certification, it is important that the standards used for assessment and validation are 'fit-for-purpose', that is clearly related to the qualification standard and measurable. It is not the objective of this study to analyse how standards are elaborated, nor what standards are used across the selection of countries analysed. However, Table 5 presents an overview of the standards used for assessment across the countries studied here.

Table 5 shows that in some countries the assessment standard is formulated centrally, as part of the qualification's design; in others it is based on other types of centrally set standards, often educational or occupational. Sometimes these other types of standards contain an indication of assessment criteria or techniques (Ireland, Spain). In some countries the assessment standard is not explicitly formulated centrally or by providers (Finland or the current system in the Czech Republic). It remains implicit in assessor evaluations of learner performance and in their grading judgements.

Table 5: **Types of standards used for assessment and validation**

Country	Type of standard	Description
Czech Republic	Currently: Educational standards	Currently assessment in IVET is based on educational standards (curriculum) and the assessment criteria are not standardised. In CVET there are no centrally set standards for the moment.
	Future: Assessment standards	With the introduction of the NQF, qualifications are undergoing reform and will be based on qualifications standards. Qualifications standards will be the basis for curricula and also for assessment standards (in the NQF). The latter will be progressively introduced as the basis for assessment.
Germany	Assessment standards (*Prüfungsanforderungen*)	These are defined together with educational and occupational standards and have the characteristics of legislation.
Greece	Educational standards	Educational standards are used by the awarding body (theoretical part) and providers (practical part) to design assessment. However, their use for assessment is not regulated.
Spain	Educational standards (*módulos formatives*)	These standards define the education and training content, the competences to be achieved and the assessment criteria.
Finland	Educational standards	Assessment is based on the standards defined in curricula.
	Competence-based qualifications: assessment standard	Competence-based qualifications contain the training and assessment standards.
France	Assessment standards (*référentiel de certification*)	Assessment standards are defined as part of the qualification definition when registered in the national repertory of qualifications. For sectoral qualifications assessment is also based on assessment standards.
Ireland	Qualification standard (as defined in the award specifications)	Award specifications contain a description of learning outcomes and of assessment techniques.
Romania	Qualification standards	These define the competence to be achieved and the performance criteria for assessment.
UK-England	Assessment standards	Based on occupational standards, all units within the qualifications and credit framework (QCF) contain assessment criteria.

NB: The vocabulary of qualification, education and assessment standards, as defined in Section 1.2.7., is used in this table for clarity. In brackets the name of the standard in the national language is provided if relevant.

Source: GHK.

Making the assessment standards explicit through the qualifications design process, for example for the purposes of referencing to a national qualifications framework, or through a process of programme design, is one way of ensuring consistent use of standards. The new qualifications and credit framework (QCF) in the UK-England requires that assessment standards are formulated when referencing a qualification to the framework. In Ireland the assessment standard is formulated when the provider designs a programme to deliver a qualification that is in the framework. This programme has to be approved by the awarding

body (FETAC). Therefore, the assessment standard is not directly referenced in the qualifications framework, but it is based on the qualifications standard that is in the framework. In countries where assessment standards are explicitly formulated, the awarding bodies can more easily monitor (through inspection, self-evaluation or external monitoring/evaluation) whether these standards are consistently reflected in assessment methods, assessment specifications, and assessment and validation criteria.

In countries where assessment standards are implicit their consistent application relies on:

- assessors' understanding of what these implicit standards are;
- the extent to which the assessment methods and specifications are set to examine learner performance regarding these implicit standards.

In some countries (Germany, Greece, Spain, Finland) the focus is put on assessor qualifications and experience. It is expected that well qualified and properly trained assessors will correctly translate the centrally set educational standards into assessment standards that they use implicitly while assessing and grading. Assessor qualifications, both in their subject expertise and in applying quality assurance processes, are also an important element in consistently applying standards in countries where these are formulated implicitly.

The fact that assessments in some countries are formulated centrally and accompanied by an evaluation (grading) grid or key ensures that, even though the assessment standard is not formulated explicitly, it is still maintained consistently across the range of awarding bodies, providers or assessors. In the Czech Republic, topics for final examinations (all written, oral and practical) are designed centrally ([24]) and are accompanied by an evaluation key which guides assessors through the grading process. Although there are currently ([25]) no explicit assessment standards in the qualifications system, the consistency of the (implicit) standard is still maintained.

([24]) According to the research, this form of final examination is currently being piloted and applies to approximately 50 % of upper-secondary VET schools. It is expected that these centrally set assessments will become compulsory for all schools.

([25]) The findings suggest that it is expected that with the implementation of the national qualifications framework the assessment standards that are in the NQF will be used for these final assessments.

4. Organisations involved in quality assurance of certification

This section discusses findings from research question three ([26]). In asking how, by whom, and on what basis quality assurance processes underpin the certification of VET qualifications, it is most concerned with the simplified question of 'by whom?'.

It is evident from the country case studies (and the discussion in Section 3) that there is a great deal of variability in quality assurance practices as they relate to certification processes for VET qualifications, across the nine EU Member States that are the focus of this research. These differences are also often reflected in the organisational structures of qualifications within countries and in the institutional frameworks assessing, validating and recognising qualifications.

Not only do these variations occur within countries, between different types of qualifications, sectoral specialities and levels within national qualifications frameworks or ISCED levels, but also between different countries. Nevertheless, some similarities in practices also exist, as do similarities in organisational structures and institutional frameworks.

To some extent, the reasons underlying the differences may be somewhat symbiotic. For example, it is not always clear whether the variations in practices within a country are a consequence of, or the reason for, a large number of awarding bodies. What is most likely is that practices have been adapted to accommodate variations in institutional frameworks, and *vice versa*. Other reasons no doubt lie in geographical and sociocultural factors. It is easier, for example, to provide a 'one size fits all' system of quality assurance if the population is relatively small or if there is a strong tradition of fixed, or prescribed assessment and qualifications practices. However, establishing specific causes of variability among Member States is not the principal goal of this research.

One of the most notable aspects of the findings is the extent to which it may be possible to place the QA of VET systems within a number of broad categories along a continuum concerned with the separation of powers and regulatory responsibilities.

4.1. Quality assurance systems with divisions of responsibility

The process of certification can be seen to encompass a number of other subprocesses: assessment, validation and recognition. It follows, therefore, that to quality assure the certification process, each of these subprocesses must also be quality assured. Moreover, most VET systems incorporate a range of actors responsible for undertaking these practices: from governmental departments likely to formulate overall policy and strategy, through

([26]) RQ3: What are the main functions and the range/scope of certifying (awarding) bodies in a sample of countries that will exemplify the range of expectations for quality assurance in certification processes?

oversight and monitoring agencies, awarding bodies, education and training providers, examiners, and, finally, the individual learner who undertakes the qualification, usually with a goal in mind. Alongside these actors, often involved in the various stages, will be stakeholders such as employers and trades unions. How the responsibilities for the quality assurance of certification are divided between the various actors, seems to be one of the key differences between the systems explored in this study.

It is possible to describe at least three broad models of QA systems based on this continuum of divisions of responsibilities:

(a) the prescriptive model;
(b) the cooperative model;
(c) the self-regulated model.

In most cases, it is not possible to place an entire country's system of quality assurance into any one model, simply because of the degree of within-country variation. More pointedly, there will be significant areas of overlap, where it is difficult to decide which of two models best describes a system of quality assurance. Despite this, attempting to place individual systems within broad categories may enable us to formulate subcategories, and also other classification types. Further, this initiates the process of capturing an overall picture of quality assurance systems within the EU.

4.1.1. The prescriptive model

This model represents one end of the continuum described. There may be VET qualifications in some countries whose assessment methods are entirely designed by one awarding authority, from design of the assessment criteria, to specification of the exact methodology and content of the assessments. Further this same body may be responsible for marking (scoring) the assessment, quality assurance of the marking, validation (grading) of the qualification and its quality assurance, through to the recognition (awarding of a certificate) and the quality assurance (through self or external regulation) of the recognition process.

Under such a system, the education provider, while potentially having a great deal of responsibility in other important areas such as teaching, mentoring and even curriculum development, in terms of the certification processes is little more than a conduit between the individual learner and the awarding body.

In practice, it is comparatively rare to find such extremes in terms of the division (or lack of) of responsibilities, but the scenario does illustrate the point. With minor digressions, there are quite a number of systems that bear some resemblance to this scenario.

The Czech Republic provides an interesting example here: currently, final examinations for ISCED level 3 qualifications can be quality assured in two ways. Roughly half of VET providers use detailed standardised examinations provided by the National Institute for Vocational Education, selecting from a range of pre-set assessments. The results of these assessments are, however, validated and recognised at provider level. The other half are currently part of the self-regulated model of quality assurance as seen below. This situation describes a transition between the previous model of quality assurance in the Czech Republic, which was very much self-regulated, to a model which has more prescriptive features.

In Germany most VET qualifications come with three certificates; one from the vocational school, one from the employer and one from the chamber. All three are quality assured differently. Probably the most important certificate, the one issued by the chamber which allows learners to practice within an occupational field, is entirely under the jurisdiction of the examination boards, although these are, in turn, regulated by the chamber.

The qualifications obtained in vocational training institutes (IEKs) in Greece also fit this model of quality assurance. While some of the practical assessments occur within providers' establishments, they are designed by the Organisation for Vocational Education and Training (OEEK), assessed by examiners appointed by OEEK and are standardised and graded by those examiners.

In the UK-England, the written components of applied GCSE and applied GCE examinations are entirely designed, constructed, standardised, graded and awarded by the awarding bodies. Interestingly, unlike most other countries, alternative versions of the same qualifications may be offered by different awarding bodies. Specifications (syllabuses) in applied GCSE ICT, for example, may be offered by three different awarding bodies. The only departure from the fully prescriptive end of the continuum is that the quality assurance process must conform to guidelines published by the Office of the Qualifications and Examinations Regulator (Ofqual), who also oversee the process. They, essentially, provide quality assurance of the recognition phase of certification.

4.1.2. The cooperative model

To some extent, this model represents the approximate mid-point of the continuum. Here, for example, while there are some awarding bodies that retain the responsibility of designing assessment criteria and broad methodological boundaries, decisions concerning the exact form and content of the assessments is left to individual providers. The providers may also be responsible for marking or even grading the examinations but this responsibility is closely overseen by the examinations body, who may themselves be overseen by a regulatory authority.

Providers may have to submit their activities to scrutiny, or remain within certain guidelines. They may be required to train their staff to take on some of the quality assurance processes and even to grade learners directly, but the ultimate responsibility for ensuring the quality of the certification process lies within the hands of an external agency. The model essentially relies, therefore, on an element of mutual cooperation and trust, both in formulating practices and in undertaking those practices.

This model does often involve separation of responsibilities between the quality assurance of assessment and the quality assurance of validation, even if exactly where the separation occurs varies.

The Finnish system of VET quality assurance seems almost entirely to fit within the cooperative model. Some aspects of assessment are regulated (for example providers have to put in place a certain number of skills demonstrations), while others are not. Skills demonstrations are one aspect of summative assessment. Other forms of assessment are up to the provider to design, plan and organise. However providers have to design assessment plans and these are approved by local schools' steering committees.

The Irish system of VET quality assurance is also very close to the cooperative model. The assessment process is based on qualifications standards that are defined in the national framework of qualifications (NFQ). The Further Education and Training Awards Council (FETAC, the main awarding body for VET qualifications) sets certain requirements concerning the range of assessment methods that are accepted as valid and reliable or the need to put in place certain process (the internal and external verification process). However, the assessment methods and criteria, and the assessment programme, are defined by the provider together with the training programme. These are than approved by FETAC, which also monitors how they are implemented.

The Romanian system of IVET is almost entirely based on the division of responsibilities between a number of different actors. Education and training providers are responsible for implementing a quality assurance framework. Certain national regulations exist: final assessment is comprised of written, oral and practical assessments and is done in externally accredited assessment centres. In contrast, some elements of summative assessment (concerning different units) are up to the provider to design, plan and organise.

In the UK-England, the best example of the cooperative model is national vocational qualifications (NVQs) and apprenticeships. These are based on achieving learning outcomes consistent with national occupational standards. However, the quality assurance of assessment and validation are responsibilities shared by accredited providers and awarding bodies, all overseen by Ofqual, and (in the case of NVQs), in accordance with a code of practice for quality assurance.

4.1.3. The self-regulated model

This model seems the antithesis of the prescriptive model, lying at the opposite end of the continuum of division of responsibilities. In this case the VET provider is also the awarder of the qualification certificates, taking on the responsibility of quality assuring all aspects of the certification process, without deferring to any higher governmental or subgovernmental agency. Several examples are evident.

In the Czech Republic, the other providers for final examinations for ISCED level 3 qualifications (not described above under the prescriptive model) often design, construct, deliver and grade the assessments themselves, although this system is moving towards a more unified prescriptive approach.

In Germany the other two certificates for VET qualifications issued by the chambers are issued by the vocational schools and employers and the quality assurance mechanisms for this are entirely their own responsibility. This example, however, is perhaps not the true form of the self-regulated model as the third certificate (as described above) is not only the most important in terms of recognition to practise an occupation, but also fits the prescriptive model of quality assurance.

A truer example of the self-regulated model would appear to be that of apprenticeships in Greece, which tend to be entirely under the regulation of the providers, from training and curriculum decisions through to grading and accreditation.

In the UK-England, the clearest example of the self-regulated model is in the majority of the vocationally related qualifications (VRQs, more than 25 000), many of which are not on

the national qualifications framework (NQF) and hence not regulated by Ofqual. While some of these are contracted out to awarding bodies to administer (and hence undergo similar QA processes to nationally regulated qualifications), many are awarded in-house by providers who, as they are usually employers and occupational organisations, also accredit and recognise them (if recognition through issue of a certificate occurs at all). The quality assurance of these is based on employers knowing that it is in their own best interests to have appropriately knowledgeable and skilled staff. It is likely that the quality assurance of private (non-State-funded) CVET in many countries in the EU follows this model.

In Spain, design and delivery of assessment and validation processes are largely left to individual VET providers to decide, with little external monitoring of judgements other than the fact that providers are required to fulfil certain general quality assurance criteria by the administrations responsible for awarding the qualifications.

Perhaps the most common example of the self-regulated model, alongside that of CVET in many countries, is VET at a tertiary level in universities. Most universities in the EU appear to be unitary awarding authorities in their own rights, acting as providers and awarders of qualifications. While some are overseen by other external bodies, often (as in the case of Ireland and the UK-England) this arrangement is mostly voluntary, with universities working together and with the external agency (in Ireland the National Qualifications Authority and in UK-England the Qualifications Assurance Agency) to provide self-determined quality assurance principles and practices.

4.2. Quality assurance systems as multidimensional entities

The analysis of quality assurance methods in Section 3 reveals that quality assurance practices, in certification of VET, can be seen to lie along at least two dimensions: one relating to the degree of separation of responsibilities among the bodies concerned (as described above) and the other relating to the stage (organisationally and operationally) at which they apply.

4.2.1. Different stages of certifying quality assurance

Certification involves the subprocesses of assessment (appraisal of learning outcomes against predefined criteria), validation (confirmation that assessment has been conducted correctly and that the assessment criteria are compliant with a standard) and recognition (granting official status to achieved learning outcomes). Although these are not systematically distinguished as separate tasks of bodies/persons concerned, the logic behind these stages can be distinguished in all qualifications systems. Consequently, quality assurance processes, as applied to certification, can be similarly viewed at various stages or levels. In addition to the stages of assessment, validation and recognition, distinction can also be made between the design and the delivery of these processes.

Six possible stages of quality assurance can be described:

(a) design of assessment: processes ensuring that the assessment methods to be used are valid and reliable, such as use of explicit assessment standards and centrally set

assessment methods. Regulation of assessment methods, and guidelines on how assessment is to be designed to be valid and reliable, are involved;

(b) delivery of assessment: requirements or guidelines that refer to conditions in which assessment can be undertaken, such as use of external examination centres and presence of external parties;

(c) design of validation: regulation or guidelines of how validation is organised;

(d) delivery of validation: regulation or guidelines regarding when and by whom validation is done;

(e) design of recognition: processes that regulate or advise on what basis recognition is issued, such as a validation committee submitting a statement that the assessment has been undertaken according to requirements;

(f) delivery of recognition: regulation concerning who can deliver recognition and award a qualification, such as accreditation of providers to recognise qualifications or appointment of awarding bodies.

4.3. Mapping quality assurance dimensions

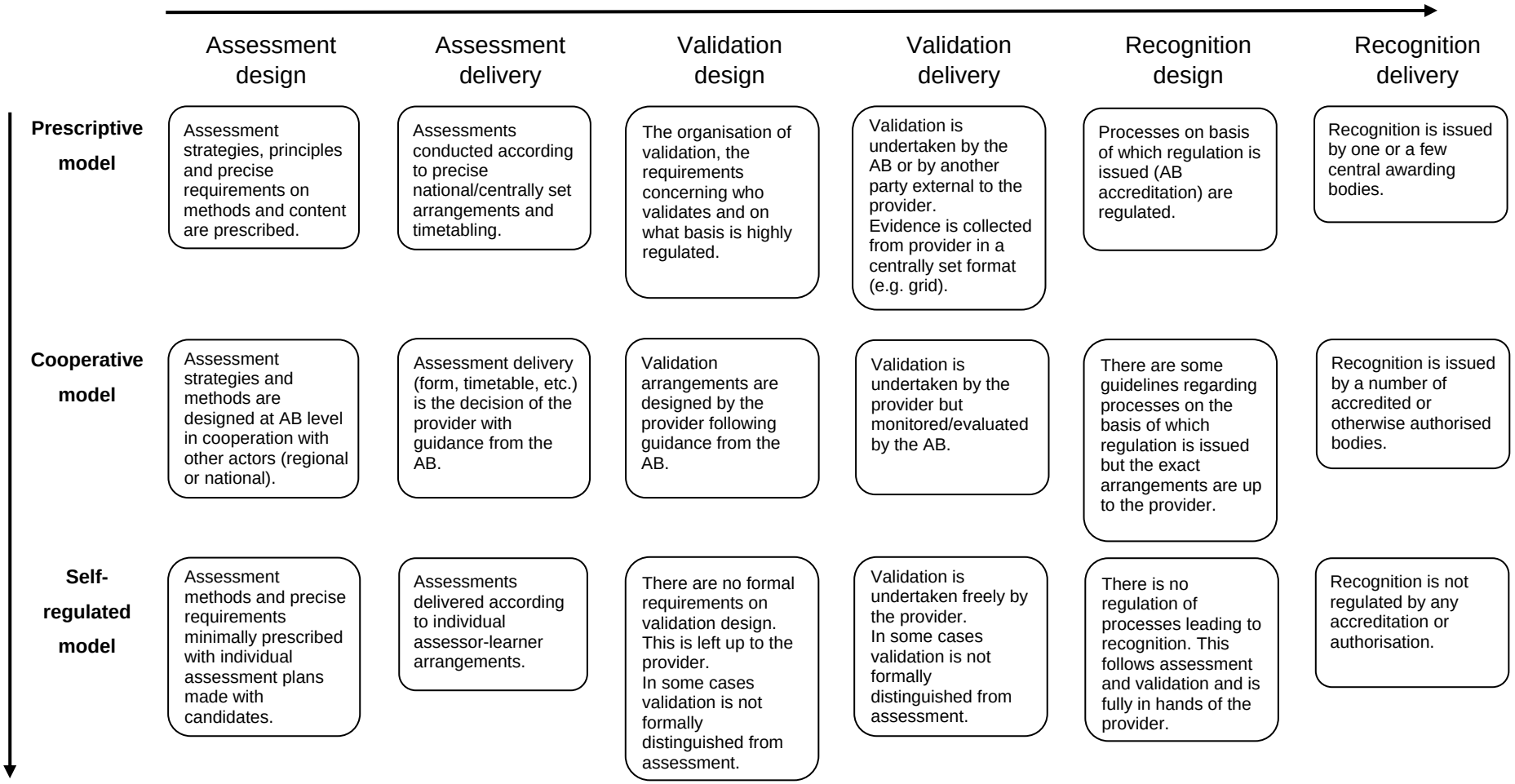
An attempt can be made to capture and visualise the various stages of quality assurance (above) against the models of quality assurance based on division of responsibilities (discussed earlier) by reference to Figure 1 which illustrates a type of ‘map’ in which various (example) QA practices can be located (Figure 2).

In scrutinising Figure 1 and Figure 2, it is important to make several caveats clear:

- the chart only shows examples of how processes might vary along both dimensions, and is by no means exhaustive;
- to some extent, these dimensions correlate with each other. For example, systems that are highly prescriptive also tend to locate much of the development and formalisation of QA practices within systemic legislative bodies and at the design and development stage of assessment and validation. Conversely, those that are self-regulated also tend to devolve many of the QA practices to individual examiners or providers and to the delivery side of assessment and validation;
- systems within countries, or even for individual types of qualification, however, don’t necessarily form homogenous (or even consistent) entities, but sometimes fluctuate up and down and across the ‘map’. Figure 2, for example, shows how the the Czech Republic’s current system of final examinations is validated, but there are certain to be variations among the sample countries and beyond. While it is possible to draw out three broad categories of ‘models’ of QA along the continuum of division of responsibilities, it is not so easy to do this in relation to where the focus of QA lies along the various stages. The picture is simply too heterogeneous.

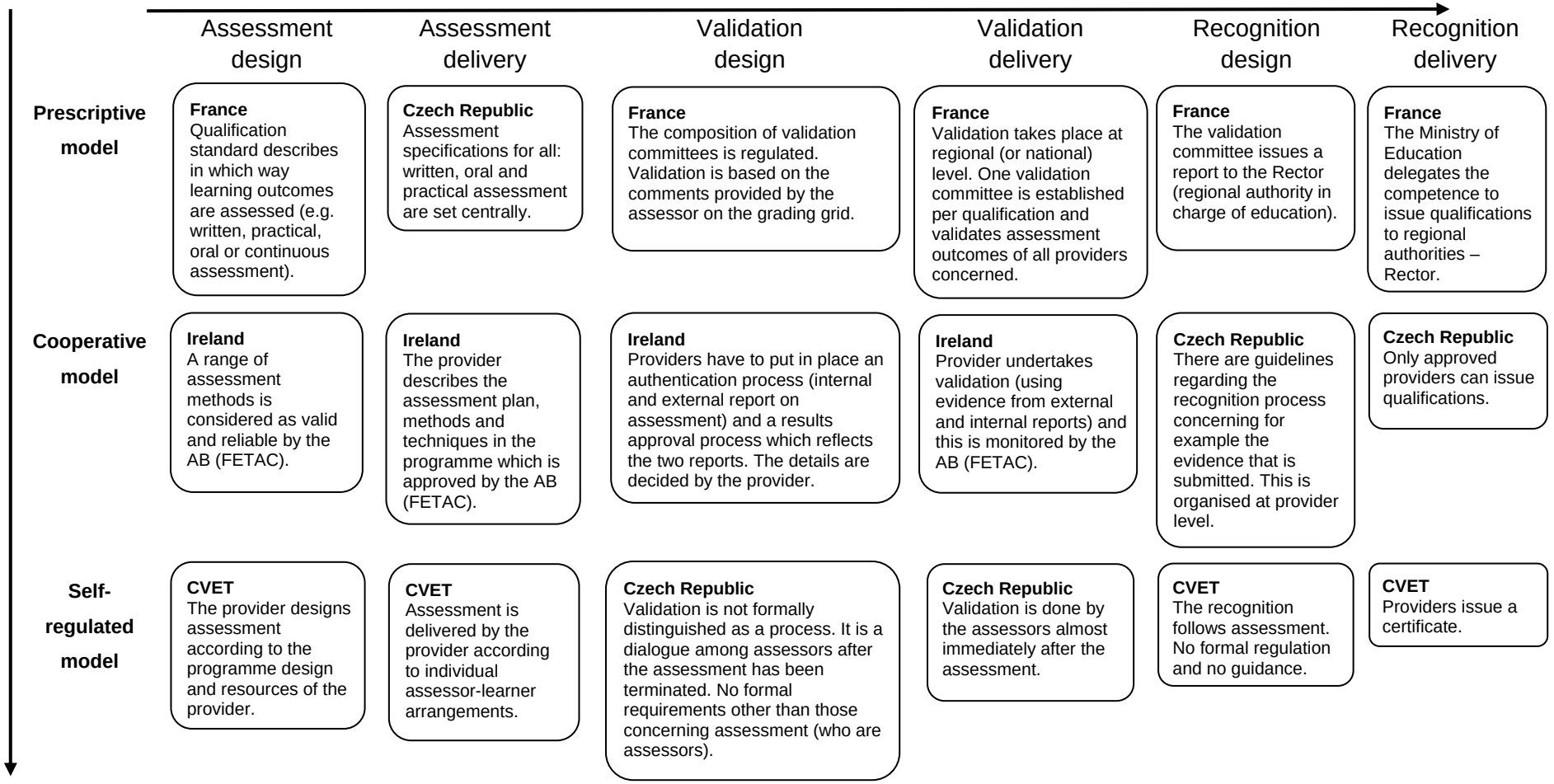
Despite the above caveats, these ‘maps’ provide useful visualisations of how the myriad of practices, processes and principles of quality assurance can be applied to certifying VET qualifications and of how the various activities of the organisations involved in certification quality assurance operate.

Figure 1: **Visual representation of the quality assurance and certification processes**



Note: AB = awarding body.

Figure 2: **Examples of national approaches illustrating Figure 1**



Legend: Czech Republic (current system of final examinations); France (national education); CVET (especially private CVET, in several countries, including Germany).

Note: This scheme is approximate and has the aim of illustrating, by example, Figure 1. Additional arrangements exist in countries used as examples.

5. Application of European and international quality assurance criteria and tools

This section discusses the findings with regard to research questions four and five ([27]). It is concerned with the question: on what basis do quality assurance processes underpin the certification of VET qualifications?

5.1. Common principles for quality assurance (from the EQF recommendation)

One of the key research questions to be addressed in this study (RQ2) is the extent to which the criteria and methods listed in Annex III of the EQF recommendation (common principles for quality assurance in higher education and vocational education and training in the context of the European Qualifications Framework)11qualifications framework) have been applied systematically within individual countries in their quality assurance of certification processes. The present section tackles this issue by separating several of the key principles into individual components and exploring how the countries studied in this research have been influenced by them.

(a) Common principles in relation to external monitoring of institutions or their QA (see Table 6):
   (i) quality assurance should include regular evaluation of institutions, their programmes or their quality assurance systems by external monitoring bodies or agencies;
   (ii) external monitoring bodies or agencies carrying out quality assurance should be subject to regular review;

(b) Common principles concerning important elements of QA systems (see Table 7):
   (i) clear and measurable objectives and standards;
   (ii) guidelines for implementation, including stakeholder involvement;
   (iii) appropriate resources;
   (iv) consistent evaluation methods, associating self-assessment and external review;
   (v) feedback mechanisms and procedures for improvement;
   (vi) widely accessible evaluation results.

([27]) RQ4: Are the criteria and methods listed in Annex III of the EQF recommendation, applied in systematic ways?

RQ5: To what extent have ISO/CEN approaches influenced certification and awarding processes, including those administered by national qualifications systems and frameworks?

(c) Common principles in relation to coordination and cooperation (see Table 8):

(i) quality assurance initiatives at international, national and regional level should be coordinated to ensure overview, coherence, synergy and system-wide analysis;

(ii) quality assurance should be a cooperative process across education and training levels and systems, involving all relevant stakeholders, within Member States and across the Community.

Table 6: **EQF recommended common principles for quality assurance in relation to external monitoring**

	Common principles relating to external monitoring of institutions or their QA systems	
Country	**Quality assurance should include regular evaluation of institutions, their programmes or their quality assurance systems by external monitoring bodies or agencies.**	**External monitoring bodies or agencies carrying out quality assurance should be subject to regular review.**
Czech Republic (upper-secondary VET)	There is (as yet) relatively little external monitoring of QA. VET providers are monitored regarding the teaching they offer. Monitoring of summative assessment falls under this process. Providers' self-evaluations are also monitored by the inspection. However, the QA of certification as such is not specifically monitored.	No external review of external monitoring bodies.
Germany	Certification from providers is not externally monitored (but is not as important for progression as the chamber certification). Quality of provision is rigorously monitored and companies which provide IVET are monitored by the chambers (although for CVET it is voluntary).	The quality assurance activities of the chambers are themselves subject to review by the ministries of economy and chambers' decisions regarding certification of candidates can be appealed in a court of law.
Greece (post-secondary VET)	VET providers are monitored regarding the training they provide. The certification process and its quality assurance are managed by the awarding body OEEK. These QA processes are not monitored or evaluated specifically.	All monitoring is within the remit of the awarding body OEEK. There is no external monitoring.
Spain	VET providers are required to fulfil general quality assurance criteria, by the administrations responsible for awarding the VET qualifications, but the level of scrutiny and the precise criteria varies considerably according to the autonomous communities.	No external review of external monitoring bodies.
Finland	Finnish National Board of Education is in charge of assessment of learning outcomes of education. External evaluation programmes for monitoring learning outcomes from skills demonstrations have been conducted since 1995.	In 2007 the Ministry of Education appointed a senior civil servant to evaluate the actions and services of the Finnish National Board of Education.

	Common principles relating to external monitoring of institutions or their QA systems	
Country	**Quality assurance should include regular evaluation of institutions, their programmes or their quality assurance systems by external monitoring bodies or agencies.**	**External monitoring bodies or agencies carrying out quality assurance should be subject to regular review.**
France	For national education qualifications: yes, there are regular inspections of providers and of assessment processes. The inspection participates in the validation process. For the example of sectoral qualifications studied (UIMM, Union of Metallurgy Industries), there is no external monitoring of providers other than regular audits of examination centres by a steering committee which brings together representatives from UIMM members (companies).	No external review of external monitoring bodies. In the system of national education all monitoring and evaluations are done within the national and regional inspection system.
Ireland	The Further Education and Training Awards Council (FETAC) publishes guidelines concerning the specific practices that must be followed by recognised (registered) VET providers in the design and delivery of assessment and validation, and conducts regular external monitoring to ensure this.	The awarding (quality assurance and external monitoring) functions of FETAC are overseen by the National Qualifications Authority of Ireland.
Romania	School inspectors, who assess the quality of examinations procedures, conduct external monitoring activities on a yearly basis for the Romanian Agency for Quality Assurance of Preuniversity Education (RAQAPE).	No external monitoring of RAQAPE, although it is involved in conferences, networks and peer-review initiatives aimed at sharing best practice.
UK-England	Awarding bodies responsible for national vocational qualifications (NVQs), and also many of those responsible for other VQs require the assessment and internal verification (quality assurance) processes of providers to be conducted according to published codes of practice, and also conduct external verification of applied assessment standards.	The Office of the Qualifications and Examinations Regulator (Ofqual) requires awarding bodies to demonstrate that they have the expertise and resources to conduct quality assurance processes and to monitor the QA practices of providers in order to be given recognised awarding body status.

Source: GHK.

Table 7: **EQF recommended common principles for quality assurance concerning important elements of QA systems**

	Common principles concerning important elements of QA systems					
Country	**Clear and measurable objectives and standards**	**Guidelines for implementation, including stakeholder involvement**	**Appropriate resources**	**Consistent evaluation methods, associating self-assessment and external review**	**Feedback mechanisms and procedures for improvement**	**Widely accessible evaluation results**
Czech Republic	Yes, assessment and accreditation criteria will have clear and measurable standards with the development of the NQF.	Not as yet, but in development.	Not as yet, but in development.	Self-evaluations are compulsory for VET providers. These are monitored by external school inspection.	Statistical surveys and inspection reports are presently the only feedback mechanism.	Inspection reports are publicly available.
Germany	Yes, QA is an integral part of the training regulation and the goals are operationalised in companies and schools.	Yes, guidelines often produced by the chambers with involvement of social partners and teachers. Stakeholder involvement is key to the assessment and validation processes.	Yes	Yes, although may vary from region to region.	Yes, this is part of the quality assurance management systems.	Yes and no, some evaluations are made public (e.g. school inspections), usually via the Internet, but attainment rates may not be.
Greece	No, the assessment standards are implicit and are not formulated at national or at regional/local level.	Guidelines regarding implementation of summative assessment are in place. The summative assessment involves external stakeholders.	Yes, regarding both financial and human resources.	No self-evaluations, but assessment methods are consistent and external parties participate in summative assessment.	The awarding body (OEEK) collects all assessment outcomes. These may serve as feedback mechanism to formulate future assessments. However this is not formalised into a feedback mechanism. The assessment subjects and methods are updated but the process is not formalised.	No

	Common principles concerning important elements of QA systems					
Country	**Clear and measurable objectives and standards**	**Guidelines for implementation, including stakeholder involvement**	**Appropriate resources**	**Consistent evaluation methods, associating self-assessment and external review**	**Feedback mechanisms and procedures for improvement**	**Widely accessible evaluation results**
Spain	Yes, performance criteria and learning outcomes of learning modules are embodied within law and the Spanish system for qualifications and VET (SNCFP).	Yes, development of qualifications, in particular, is a multi-stakeholder process guided by the SNCFP.	To some extent, this varies according to autonomous community.	No, precise methods vary regionally and from provider to provider with little relative consistency.	No feedback other than peer review and sharing of best practices which occurs at conferences arranged for directors of autonomous communities.	No
France	Yes, clear and measurable standards are reflected in the qualification standards and design.	Yes, employer-employee stakeholder involvement is integral to certification process.	Yes	In national education providers are subject to inspection but there is no obligation of self-evaluation.	National inspection does regular reports to the minister of education. The topic of these reports depends on the need for education and training reforms.	Availability of reports from regional inspections depends on the regional authority. National inspection reports are available on the website of the Ministry of Education.
Romania	Yes, law provides assessment criteria for external and internal assessment.	Yes, there are guidelines for stakeholder involvement.	No, allocation of appropriate resources remains a problem.	Yes, a handbook for self-evaluation and inspection of QA is produced by the Ministry of Education.	Yes, RAQAPE produce a yearly synthesis report: an analysis of best practices, key indicators and trends at national level.	Yes, RAQAPE report is available externally and a number of schools publish the results of their evaluations.

	Common principles concerning important elements of QA systems					
Country	**Clear and measurable objectives and standards**	**Guidelines for implementation, including stakeholder involvement**	**Appropriate resources**	**Consistent evaluation methods, associating self-assessment and external review**	**Feedback mechanisms and procedures for improvement**	**Widely accessible evaluation results**
UK-England	Yes, attainment targets are set and monitored and standards are embodied at several levels (through national occupational standards, NOS), assessment criteria and QCF level descriptors.	Yes, clear guidelines produced for implementation of QA practices with regard to publicly funded VQs and stakeholder involvement is focused largely at strategic level and in development of NOS.	Yes	Yes, embodied within QCA/Ofqual codes of practice.	Yes, providers are monitored as part of the Learning and Skills Council (LSC) framework for excellence (FfE) performance management system and QCA/Ofqual conduct both qualitative and quantitative reviews of assessment standards.	Yes

NB: For Ireland and Finland, no information was available concerning this feature of the common principles.

Source: GHK.

Table 8: **EQF recommended common principles in relation to coordination and cooperation**

	Common principles in relation to coordination and cooperation	
Country	**Quality assurance initiatives at international, national and regional level should be coordinated to ensure overview, coherence, synergy and system-wide analysis.**	**Quality assurance should be a cooperative process across education and training levels and systems, involving all relevant stakeholders, within Member States and across the EU.**
Czech Republic	For publicly funded training, quality assurance initiatives are under the responsibility of the different ministries which are nationally coordinated.	There is not currently a cooperative process throughout the system, but this is improving with the development of the NQF, through the activities of an advisory body.
Germany	In Germany, the education and training system is very mature and the various actors are clear about their responsibilities.	In Germany the system is cooperative with stakeholders involved in examination boards and chambers' examination committees while allowing flexibility at regional level.
Greece	There is little coordination of QA processes across the different sectors of VET (upper-secondary, post-secondary, CVET). Organisations in charge of these subsystems have their own QA approaches that are often implicit.	There is currently no cooperation process.
Spain	While the Spanish national system for qualifications and vocational education and training (SNCFP) provides some overarching synergy to the VET system in Spain, there is still considerable variation in practice regionally, which does not appear to be greatly coordinated.	The development of professional competences and qualifications is a multi-stakeholder process in Spain, involving cooperation and consultation.
Finland	Quality assurance practices tend to be devolved to local level such as tripartite committees and not coordinated systematically. However, recent developments (such as a national system of evaluating learning outcomes of skills demonstrations) are bringing more synergy.	The system is cooperative at national level for policy making, involving the Finnish National Board of Education, the Education Evaluation Council, the Finnish HE Evaluation Council, the Association of Finnish Local and Regional Authorities and Trades Unions and Student Associations.
France	There is a common understanding and a common approach to quality assurance across the different bodies (ministries in charge). This is, however, not formalised through any documentation or set of practices and is spread over a range of activities (qualification design, school inspection, etc.). There is a common approach to designing qualifications that serves as the basis for summative assessment. This is formulated in the NQF.	Quality assurance is a cooperative process between the ministry, the general and regional inspection, VET providers and social partners, both in assessment level and in the design of qualifications.

	Common principles in relation to coordination and cooperation	
Country	**Quality assurance initiatives at international, national and regional level should be coordinated to ensure overview, coherence, synergy and system-wide analysis.**	**Quality assurance should be a cooperative process across education and training levels and systems, involving all relevant stakeholders, within Member States and across the EU.**
Ireland	Since most VET in Ireland is awarded through a single organisation – the Further Education and Training Awards Council (FETAC) – there is a strongly coordinated system in place, which includes comprehensive guidelines.	Quality assurance processes are designed and developed in cooperation with VET providers, employers and other stakeholder groups.
Romania	There is a national framework for quality assurance. There is also a national working group which ensures the coordination and integration of quality assurance tools, although county committees are autonomous.	At national level, different agencies work together to check that programmes are in line with operational standards. Economic stakeholders are involved in formulation of these and in the process of assessment. However, difficulties still remain in the lack of synergy between pre- and post-university education and training.
UK-England	While England has a very large number of awarding bodies the quality assurance processes, at least for applied GCSEs, applied GCEs and national vocational qualifications (NVQs) are well regulated via QCA/Ofqual codes of practice. There is more diversity and less coordination for other public and privately funded VET. The period of transition at present, in development of the qualifications and credit framework (QCF) and the UK vocational qualification reform programme (UK VQRP) has led to less synergy, although activities are in place to improve this.	Increasing employer engagement in VET has been a main priority of the UK VQRP and there is increasingly well-established cooperation between employers, sector skills councils and awarding bodies in the development of vocational qualifications and quality assurance of certification. Also, establishment of the QCF and clearer progression routes have improved cooperation between different levels of the education system.

Source: GHK.

Evidence presented in Tables 6, 7 and 8 suggests that, while the extent to which the various common principles for quality assurance annexed in the EQF recommendation varies from country to country, most countries have been influenced by some if not all of the key principles.

What is particularly noticeable is the fairly consistent extent to which different countries have embraced the three main features of the common principles: external monitoring of quality assurance practices and of the monitoring agencies themselves; key elements of quality assurance such as clear and measurable standards, regular and widely disseminated feedback and evaluation mechanisms; and, coordination and cooperation between the various organisations, and regional and national systems. Where countries have rigorously applied one feature of the common principles to their quality assurance systems, they have tended to apply other features equally rigorously.

Also noticeable is that countries with mature, well established qualifications, VET and quality assurance systems (Germany, France and the UK-England) have also incorporated the common principles most zealously, either knowingly or through the established tried and tested evolution of processes and of good practice. Conversely, those with newer qualifications systems, or those currently undergoing reforms (the Czech Republic, for example), are understandably only implementing the common principles more gradually, as their systems become more fully embedded.

5.2. ISO/CEN approaches to certifying quality assurance

The extent to which ISO/CEN approaches have been incorporated into QA practices for certification varies in the nine countries studied. In Ireland, Greece, Finland and the UK-England, ISO/CEN has relatively little influence. In the remaining countries there is some influence of ISO/CEN approaches, but their use varies:

- in the Czech Republic, some providers have ISO accreditation, but the process is regarded as expensive and lacks State support, and so is not universal. ISO criteria also influence the accreditation criteria for providers;
- in France, the overall quality assurance principles reflect ISO principles, however, the training and assessment centres are not ISO certified, even though some establishments use ISO to inspire their internal management evaluations, also the case in Germany;
- in Romania, school guidelines from the Ministry of Education are thought to be influenced by ISO/CEN approaches and have been taken into account in the national framework for quality assurance. Only in isolated cases are providers ISO certified;
- in Spain, some of the regional quality assurance systems are strongly influenced by ISO/CEN approaches, as is the case for the Basque Country. Further, some vocational training administrative bodies (the Office for Vocational Training within the Department of Education of the Basque Government) have also obtained ISO certification.

In approximately half of the countries studied, ISO/CEN approaches have some influence on the quality assurance of certification. However, in some (Germany, France, Romania) the influence is typically focused on internal management evaluations rather than on specific quality assurance practices.

6. CVET and sectoral qualifications systems

Although the main focus of this study is to analyse quality assurance processes for certification in initial vocational education and training (IVET) – be it at upper-secondary or post-secondary level - attention is also paid to continuing vocational education and training (CVET) and to sectoral qualifications. First, this research suggests that qualifications in CVET appear to be quite sector-specific, as do the quality assurance processes in certification of those qualifications. Second, in part due to the sector-specificity of CVET, there tends to be more variability in practices, both in terms of the specific quality assurance processes implemented and also in terms of the degree of regulation of those processes. Finally, in part due to this variability and in part due to vast number of CVET and sectoral qualifications systems in place, the research in these areas has been necessarily selective.

Quality assurance of certification in CVET was analysed in the following case studies:

(a) the Czech Republic, in relation to QA of CVET qualifications that receive public funding;
(b) Germany, in relation to qualifications that fall under the remit of the Chamber of Skilled Crafts;
(c) Finland, in relation to competence-based qualifications;
(d) France, where qualifications can be achieved through different pathways (initial or continuous VET) but there is no category such as CVET qualifications;
(e) Ireland, where, as in France, there is no category such as CVET qualifications. Qualifications can be achieved through different pathways;
(f) Romania, where qualifications that fall under the remit of the National Council for Adult Vocational Training.

In Greece, due to the limited availability of experts in the field, the system of accreditation of CVET providers currently developed by the National Accreditation Centre for VET (Ekepis) was not analysed in detail and in Spain and the UK-England, general IVET provision can also in most cases be accessed for CVET.

Sectoral approaches were analysed in the French case study (for the metallurgy sector) and the German case study (qualifications under the Chamber of Skilled Crafts).

Information regarding CVET and sectoral quality assurance practices is still relative sparse in comparison to that for IVET. This may be a consequence of the greater variability that exists between different qualifications for certification quality assurance of CVET in comparison to that of IVET. More important, however, it appears that in many countries privately occurring CVET (which is in some cases a substantial component of CVET provision) is only weakly regulated or formalised.

Following on from this, the extent to which certification of CVET is formally or legally quality assured seems to depend, in part, on the extent to which it is publicly funded. Availability of knowledge also seems to correlate with the extent to which CVET is a public activity or one largely conducted within private enterprises that are not required to abide by or publish their quality assurance arrangements.

This should not automatically result in the conclusion that CVET, even the large amount of privately funded CVET is not quality assured. At least anecdotally, there is evidence that some qualifications or training programmes incorporate quite rigorous validation methods in their assessment practices. Also, awarding bodies that offer both CVET and IVET (such as FETAC in Ireland) often have precisely the same level and types of quality assurance for their CVET qualifications as they do for IVET.

Overall approaches to QA in CVET and sectoral qualifications can be observed:

- CVET follows the same QA as IVET: this is the case in countries where national qualifications frameworks (NQFs) are open to qualifications from outside the formal education and training system (Ireland, France, the UK-England). Referencing of CVET or sectoral qualifications to an NQF is motivated, for example, by the possibility of receiving public funding, or by the fact that it enhances the national and international credibility of (and hence, demand for) the qualifications;
- QA based on accreditation of CVET providers: in the remaining countries, accreditation of CVET providers is typically linked to the possibility of receiving public funding and delivering qualifications recognised by the public sector (recognised by employment services, training of civil servant or health professionals, etc.);
- self-regulated QA: in parallel to the two approaches above, there are a significant number of CVET or sectoral qualifications that are fully self-regulated. Even in countries where sectors have the option to have their qualifications referenced to an NQF, a high proportion of qualifications still remain outside the framework. For example, in France the metallurgy sector – one of the major sectors in the country – has only a small proportion of its qualifications referenced to the NQF.

For certification the following quality assurance measures are typically covered by the accreditation process. This includes description of assessment methods (and assessment criteria) and description of assessment committees or description of qualifications of the teaching staff that will undertake assessment.

In some countries additional requirements may be formulated such as the requirement to involve external assessors: in fact all countries studied, except Spain, require that there is at least one external assessor during at least one of the assessments required for certification. There is also the need for assessors (or teachers conducting assessment) to be accredited or approved: this is the case for sectoral CVET qualifications in France, where assessors are appointed by the branch organisation, or in Greece where assessors are drawn from a central list. Sometimes CVET assessors are encouraged to be accredited by an organisation representing the adult learning sector: such a solution is being considered in the Czech Republic.

This shows that attention is paid mainly to the assessment stage while the validation stage is often left to the provider. Accreditation tends to be concerned with the formulation of assessment methods rather than with the use of clearly defined assessment standards. In several cases (the Czech Republic and Romania) it was noted that assessment standards are not clearly formulated and that the assessment is mainly based on the requirements of the training programme. The qualifications of assessors represent another important aspect of accreditation. However, while accreditation criteria often require assessors to be qualified

in the professional area concerned, they rarely require assessors to have the capacity to design appropriate assessment methods and to use assessment standards as required.

The extent to which self-regulated qualifications, be they sectoral or others awarded by private adult learning providers, have developed quality assurance codes of practice varies. For example the sectoral qualifications developed and governed by the French metallurgy sector all follow a strictly defined quality assurance process: from the design of the qualification (regarding the need for such qualification and the formulation of the qualification standards), through assessment (which is always the same for all employees of branch member organisations) to validation and recognition (done centrally by a sectoral committee of the branch).

However, some private providers rely on accreditations such as ISO to demonstrate that they observe QA practices (see also Section 5.2.). In other cases the quality of the practice is purely regulated by the demand. In many countries and many systems there is an inherent feedback mechanism based on public trust, employer demand and the need for qualifications providers to have credibility with both. When quality assurance systems fail, whether prescribed or self-regulated, and whether they are formal or informal, stakeholders are usually quick to respond to such failures. The entire VET system, as with other forms of training, is based on mutual trust. Such trust can operate even in situations where information is not visible, such as the trust that consumers have that enterprises with reputations for delivering quality products will train their staff through high quality VET programmes, even though information concerning their quality assurance arrangements is not publicly available.

7. Conclusions: lessons from and for the EQF

Quality assurance processes are evolving in several countries. Often this evolution is related to other reforms in the qualifications system such as: development of national qualification frameworks; reform of qualifications standards and moves towards a learning outcomes approach; shifts towards more autonomy of VET providers (in IVET) or efforts to quality assure the traditionally liberal adult learning sector. Therefore, quality assurance arrangements regarding certification have to be considered in the wider context of education and training policies.

The objective of this study was to explore the quality assurance mechanisms that underlie certification and identify how these could impact on the EQF, plus the implications of the EQF on national qualifications systems and quality assurance processes.

Adopting the EQF has stimulated national reforms in some countries and often presents opportunities for consolidating or strengthening national quality assurance processes. Examples of such opportunities are considered below.

In several of the countries studied, the existing qualifications framework or the one foreseen has implications for quality assurance. In Ireland and the UK-England qualifications referenced to the NQFs have to satisfy certain requirements regarding quality assurance of certification. In the the Czech Republic, it is expected that the NQF will introduce assessment standards that will be the basis for reliable assessment across the country.

In addition, NQFs can consolidate existing QA practices among different awarding bodies. For example in Ireland (through FETAC) or in the UK-England (through Ofqual) a single approach to QA that applies to all awarding bodies submitting qualifications of a particular type onto the framework has been designed. This does not necessarily regulate all aspects of assessment and validation but provides general guidelines on how assessment and validation should be designed to constitute a valid and reliable basis for certification.

In some countries assessment standards remain implicit in assessor behaviour and judgements in evaluating learner achievements. Rendering these standards explicit is an opportunity to strengthen the reliability and the validity of assessment across the country. These explicit standards constitute a reference for quality assurance: it is easier for the institutions or parties concerned (inspectors, awarding bodies, etc.) to determine whether the assessment process is reliable and valid.

The shift to learning outcomes in the design of qualifications standards, and consequently in assessment practices, may improve the relevance (for the labour market but also for society) of criteria against which learners are assessed.

As the trend towards more autonomy for VET providers ([28]) (specifically in initial VET) allows providers to adapt assessments (mainly regarding methods and planning) to their

([28]) The Eurydice publication *Levels of autonomy and responsibilities of teachers in Europe* (Eurydice, 2008) describes how schools and teachers are increasingly gaining new responsibilities across Europe. Although

learners and to their resources, it becomes even more important to ensure, through quality assurance requirements and guidelines, that the standards against which learners are assessed are applied consistently across the country or qualification system.

The development of sectoral and national qualification frameworks (NQFs) presents an opportunity to strengthen quality assurance in both CVET and sectoral qualifications. By requiring CVET and sectoral qualifications to be referenced to a NQF on the basis of quality assurance processes, current quality assurance regulations can be strengthened or formalised. However, should these requirements impose too large an administrative burden on CVET providers or sectors, there may be a risk that their motivation to be referenced to the framework is diminished. In cases like Ireland, where the QA requirements are formulated in terms of broad quality processes (involvement of external actors, existence of the results approval process), rather than regulation of the content (what assessment methods to use), the restrictions on CVET providers or sectors are likely to be fewer than in systems that strongly regulate content.

In addition, the development of NQFs and of learning outcomes-based standards may improve the quality of CVET or sectoral qualifications by making explicit the standards that are currently often implicit in CVET or sectoral training programmes.

Finally, the design of quality assurance for certification processes is an opportunity to strengthen the link between education and training systems and the labour market. Stakeholder involvement, namely inclusion of employers' and employees' representatives in assessment and validation, offers external review that can strengthen the credibility of qualifications for the labour market and improve the certification quality.

While the implications of EQF implementation for national qualifications systems and quality assurance practices are diverse, they also seem largely beneficial. They improve the underlying principles governing quality assurance, provide a platform for sharing knowledge and expertise, improve practices and the cohesiveness and cooperation both between qualification systems and organisations, within Member States and also between Member States. This is not to say that all of these benefits do not have concurrent costs, in terms of time, resources and perhaps even additional layers of administrative burden, but they do so with the goal of improving the quality of vocational qualifications in Europe and the mobility and transferability of workers and learners and their skills.

7.1. EQF implications of national quality assurance processes

Using the EQF as a tool for portability of qualifications requires that those involved can trust qualifications awarded in another country. Therefore, quality assurance processes for certification are crucial. The following implications are evident from the analysis of quality assurance methods and approaches used in the sample of countries studied.

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this publication describes the situation in general education, the situation in IVET is similar to that of general upper-secondary education in many countries.

While in some countries the QA processes underpinning certification are consolidated in a code of practice, in others this is not the case. This does not mean that the QA processes are non-existent, but merely that they are not systematically described in QA guidelines or regulations. For example, (as mentioned in Section 6) all countries studied except Spain require that there is at least one external assessor during assessment. Such an approach is clearly a quality assurance measure but in few of the countries studied is it described as such in a formalised document on quality assurance. Lack of consolidated descriptions of QA certification will have implications for transparency that underpin the awarding of qualifications and implementation of the EQF.

Assessment and validation quality is strongly dependent on the quality of standards and of criteria used for assessment. The assessment and validation processes confirm that the requirements to achieve a qualification are satisfied (or not) and the QA of certification ensures that this judgement is valid and reliable. However, the extent to which the requirements to achieve a qualification are relevant for society and the labour market, is not ensured through the QA of certification but through the quality of standards and criteria used for the assessment. It is important that countries make the standards used for assessment transparent and that these are clearly related to the needs of the society and of the labour market (fit-for-purpose).

There are clear differences in the level of regulation and autonomy in quality assurance of assessment, validation and recognition. In some countries providers undertake assessment and validation in a strictly regulated environment; in others much more responsibility is delegated to the provider while the quality of the process is guided and monitored. As shown in Section 4, quality assurance systems within countries vary in divisions of responsibility (prescriptive, cooperative or self-regulated) and on the stages of certification where quality assurance is most concentrated. Regarding the implementation of EQF it is important that each country is willing to accept the quality assurance practices of other systems as valid, even if these are based on more or less regulation or are focused on different stages of certification from their home system. This will, however, require these processes to be made transparent.

The implications of national quality assurance processes on EQF implementation, in contrast to influences operating in the other direction, present a greater element of risk. The three points above are not disadvantages, *per se*, but examples of how the complexity of implementing the EQF across the diverse cultures, histories and educational infrastructures and practices within the EU, brings with it fundamental requirements of trust, transparency and common respect for differences.

Glossary of acronyms and abbreviations

General acronyms and abbreviations

AB	Awarding body
CPD	Continuing professional development
CQAF	Common quality assurance framework
CV	Curriculum vitae
CVET	Continuing vocational education and training
ECTS	European credit transfer and accumulation system
ECVET	European credit system for vocational education and training
ENQA-VET	European network on quality assurance in vocational education and training
EQF	European qualifications framework
EU	European Union
ISCED	International standard classification of education
ISO/CEN	International Organisation for Standardisation / European Committee for Standardisation
IVET	Initial vocational education and training
NQF	National qualifications framework
OECD	Organisation for Economic Cooperation and Development
QA	Quality assurance
VET	Vocational education and training

Country-specific acronyms and abbreviations ([29])

Czech Republic	NUOV	National Institute for Vocational Education and Training
Germany	BIBB	Federal Institute for Vocational Education and Training
	BMBF	Federal Ministry of Education
	TGA	German Association for Accreditation
Ireland	FETAC	Further Education and Training Awards Council
	HETAC	Higher Education and Training Awards Council
	NFQ	National framework of qualifications
	SEC	State Examinations Commission
Greece	EKEPIS	National Accreditation Centre for Vocational Training
	EPAL	Vocational lyceums
	EPAS	Vocational schools

([29]) Countries are only specified where acronyms/abbreviations have been used in the case-studies. Further, for the sake of consistency, all acronyms are referenced in English rather than in the original language.

	IEK	Vocational training institutes
	KEK	Vocational training centres
	OEEK	Organisation for Vocational Education and Training
	PEEP	Regional certification examination councils
Spain	CNCP	National catalogue of professional qualifications
	INCUAL	National Institute for Qualifications
	RP	Professional performances
	SNCFP	Spanish national system for qualifications and vocational education
	UC	Competence units
France	CNCP	National Commission for Professional Qualifications
	CQP	Certificate of professional qualification
	RNCP	National repertory of professional certifications
	UIMM	Union of Industries and Crafts in Metallurgy
Romania	MoERY	Ministry of Education, Research and Youth
	NCAVT	National Council for Adult Vocational Training
	RAQAPE	Romanian Agency for Quality Assurance in Preuniversity Education
UK-England	A-level	Advanced level (alternatively known as GCE; see below)
	AVCE	Advanced vocational certificate in education
	GCE	General certificate in education (alternatively known as A-level; see above)
	GCSE	General certificate in secondary education
	NOS	National occupational standards
	NVQ	National vocational qualification
	Ofqual	Office of the Qualifications and Examinations Regulator
	QCA	Qualifications and Curriculum Authority (in the future to be known as the Qualifications Development Agency (QDA))
	QCF	Qualifications and credit framework
	UK VQRP	UK vocational qualification reform programme
	VQ	Vocational qualification
	VRQ	Vocationally related qualification

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The relationship between quality assurance and VET certification in EU Member States

This publication explores quality assurance mechanisms supporting certification of VET qualifications in nine European countries. It examines the necessary transparency of quality assurance practices, particularly in the context of the EQF. The study reveals that various methods are used to assure the quality of the three stages of certification: assessment, validation and recognition.

Quality assurance of VET certification can be characterised as a mixture of regulation and autonomy. In the countries studied it is possible to categorise quality assurance systems into models along a continuum based on the division of responsibilities: the prescriptive, the cooperative and the self regulated. It is shown that VET certification quality assurance practices can be analysed according to the stages (organisational and operational) at which they are applied to design and delivery of assessment, validation and recognition.

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