Typology of national occupational standards
(draft version)

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Introduction

The aim of this typology of national regulations is to identify key factors in the description of national occupational standards (NOS)\(^1\) that positively influence the adaptation process to the European Qualifications Framework (EQF) and to highlight good practice examples from different nations that might ease the process of adaptation of educational standards towards EQF compatibility. This typology intends to outline how specific elements of national occupational standards can ease the shift towards EQF-compatibility of national educational and occupational standards whilst other elements might make it more difficult to achieve EQF-compatibility.

The process of adapting national qualification systems towards the EQF is a complex one that spans all aspects of a nation’s education and qualification system. EQF-compatibility cannot merely be characterised through the adaptability of occupational standards, other aspects of qualification systems such as training programmes and content, assessment and validation, the recognition of non-formal and informal learning, quality assurance, etc. ought to be considered in this process. The issues of adaptability of educational content, assessment and quality assurance are also being examined in the framework of the Predict project. This typology addresses occupational standards as one element of qualification systems that needs to be considered in the process of adaptation to the EQF.

It could be argued that the adaptation process of educational elements to the EQF is work to be carried out within national environments. In principle, this is true: ultimately, the process of making national occupational standards comparable to the EQF is in the hands of the respective decision-makers in the member states who are responsible for devising a National Qualifications Framework (NQF). The recommendation of the European Parliament and the Council are for member states to relate their national qualifications systems to the EQF by 2010, where appropriate, through the development of an NQF. By 2012, all qualification certificates are to bear a clear reference to the NQF and thereby to the EQF. So ultimately, the gap between occupational standards and the EQF is to be bridged by the respective NQFs. The project consortium does, however, hold the opinion that certain existing elements of national occupational standards may ease this process whereas others are not so well-suited to smooth referencing to the EQF. Also, the process of devising NQFs and referencing national occupational standards to those can positively or negatively influence the ultimate appropriateness of such referencing tools. Hence, the national processes surrounding the development / revision of the NQFs is also relevant to the question of EQF-adaptability of national occupational standards and is therefore considered in this typology. The recommendations in form of good practice examples of EQF-compatible occupational standards (or elements thereof) are aimed at stakeholders involved in the process of developing NQFs.

The objectives of this typology are to:

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\(^1\) The term *occupational standard* refers to occupational or qualification profiles, i.e. any form of official description of qualification / job profiles. It was chosen since it is a broad definition that takes into account the countries’ traditions of describing occupational profiles.
• Compare national occupational standards of selected countries and identify key factors which can facilitate the shift to an EQF-compatible design of educational elements (occupational standards)
• Create recommendations in form of good practice examples for complementing national procedures without compromising them in order to aid EQF compatibility
• Establish common grounds for determining the concept of “EQF compatibility” in order to minimise the spectrum of construing EQF descriptors

National occupational standards were analysed with regard to their EQF-compatibility in order to identify key factors which can facilitate the shift to an EQF-compatible design of educational elements. In order to establish in how far occupational standards are EQF-compatible, they were examined in terms of their description. The analysis of occupational standards and their form of description in the relevant countries (see below) highlighted the fact that there are two main factors which positively influence the EQF-adaptability of national occupational standards. Those are: (1) orientation towards learning outcomes; and (2) reference to work processes. This issue will be discussed in-depth in the analysis of factors inhibiting or positively influencing EQF-adaptability.

Beyond this, it is important to consider the process of development of NQFs in the respective countries since this work involves the very process of EQF-adaptation of national occupational standards.

National occupational standards in Europe

The following countries’ systems of describing occupational standards were examined:
• Austria
• Greece
• Germany
• United Kingdom
• Spain
• Romania
• France

The countries examined are characterised by stark differences in their tradition of describing occupational standards. The differences identified are found in: (1) the role of description of occupational standards, i.e. do they have an impact on the design of training programmes; (2) degree and extent of official descriptions ranging from highly standardised systems such as are found in Germany and Austria to highly flexible systems where there is no official description of occupational and educational standards such as can be found in the UK; (3) form of description of national occupational standards, including the extent of official description of learning
outcomes, referencing to work processes etc; (4) the referencing of occupational and qualification standards to qualifications frameworks or other official referencing tools.

It should be noted from the outset that it is highly difficult to compare European qualification systems for those very reasons. Occupational standards differ widely from country to country to such an extent that they become almost “un-comparable”. This again stresses the importance of a clearer definition of learning outcomes and work processes in direct reference to national occupational standards as this is the only way to achieve transparency and comparability of European qualifications.

Each country’s system of occupational standards/profiles was examined in terms of form of description, reference to learning outcomes and work processes, and the process of development of NQFs and its specific characteristics in the respective country.

The essential questions in the examination of the countries’ systems of describing occupational standards were the following:

- How are occupational standards, i.e. occupational and qualification profiles described?
- Is the current description compatible with the EQF, i.e. outcome-oriented?
- Which steps must be taken in order to adapt profiles so they become EQF-compatible?
- Do work process descriptions exist as a basis for job profiles?
- What is the current stage of development of the NQF?

The following table gives an overview of the outcomes of this analysis.
<table>
<thead>
<tr>
<th>Country</th>
<th>Germany</th>
<th>Austria</th>
<th>Greece</th>
<th>Spain</th>
<th>France</th>
<th>UK</th>
<th>Romania</th>
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<tbody>
<tr>
<td><strong>FORM AND LEGISLATION OF DESCRIPTION OF OCCUPATIONAL STANDARDS</strong></td>
<td>Occupational standards in VET are described through two documents, the Ausbildungsvorschrift and the Framework Curriculum for vocational schools. Together, they define the job profiles. The Ausbildungsordnung is developed equally by social partners and the relevant ministries, the Framework Curriculum is developed by the Standing Conference of the federal Ministers of Education.</td>
<td>Occupational profiles form a comprehensive description of a profession following an official form of structure including the following: Title - definition of the profession and/or the specialization history and development of the profession - current legislative framework - analysis of the profession and/or specialization - necessary knowledge, skills, competences to practise a profession - proposed routes for the acquisition of professional qualifications - illustrative ways of assessing knowledge, skills, competences.</td>
<td>Information needed</td>
<td>The National Qualification Catalogue is the official document containing the descriptions of all qualifications. Currently 731 qualifications are completely described. It is developed by the National Institute of Qualifications (INCUAL).</td>
<td>All French “référentiels de diplôme” are official forms which describe for each diploma: - The context of the work - The professional profile - The competencies linked to the tasks and activities describing the profile - The part “référentiel de certification” describes the modalities of the examination so that certification is not only a training certificate. Its objectives are that the trainee is able to perform the job.</td>
<td>National Occupational Standards (NOS) are the primary units formulated to identify skills and to inform construction of vocational qualifications. Regulation takes place at a national level, that is, England, Scotland, Wales and Northern Ireland. Each country has a separate educational legislation but in some instances common processes and common UK bodies advise the independent national assemblies.</td>
<td>Occupational standards are documents that define in terms of competences the necessary requirements for efficient performance of activities in an occupation. The occupations are listed in the Classification of Occupations in Romania – COR, coordinated by the Ministry of Labour, Family and Social Protection.</td>
</tr>
<tr>
<td>Economy, the German Federal Institute for Vocational Education, social partners</td>
<td>Economy, Family and Youth (BMWFJ) Federal Minister of Labour, Social affairs and Consumer Protection (BMASK) The social partners develop and provide expertise concerning VET and participate in the BU-BAB and the regional L-BABs.</td>
<td>Learning and Religious Affairs and c) Employment and Social Protection, social partners and the Organisation for Vocational Education and Training (OEEK) with Employer’s Associations, Trade Unions and INCUAL (Qualifications National Institute)</td>
<td>Qualifications Authority (SQA), the Qualifications, Curriculum and Assessment Authority for Wales (ACCAC), the Council for the Curriculum Examinations and Assessment (CCEA), the Sector Skills Development Agency (SSDA) and up to six employer representatives represented by the Sector Skills Councils. (Employers are an increasing influence on the education system including its legal structure). In addition as qualification designers, Awarding Bodies are consulted on qualification related legislation. Trade Unions have direct connections with government on education issues and are often actively engaged with Sector Skills Councils.</td>
<td></td>
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</table>
### Concept of Learning Outcomes / Competencies

Learning outcomes are expressed in the various formulations of standards of Kompetenz that have been developed in particular for VET, where a concept of Handlungskompetenz (action skills) has gradually assumed a key role in qualifications definition, alongside clear input requirements about place, duration and content of learning.

Austria is moving to strengthen the learning outcome approach in all parts of the education and training system as it will be central to the positioning of qualifications onto the NQF.

The concept of “learning outcome” is part of the methodological approach adopted in the National System for Qualifications and VET (Organic Law 5/2002).

LOs concern non formal, informal and formal learning and the descriptions of the LO are made in the same manner whatever the type of learning is.

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### Consideration of Learning Outcomes in Occupational Standards

The German qualification system is traditionally input-oriented, though there is an increasing trend towards learning outcome orientation. However, learning outcomes are clearly defined in each occupational profile through the Prüfungsverordnung which is linked to the occupational profiles (Ausbildungsordnung) and states the expected learning outcome.

Many occupational standards are already formulated in a learning outcome-oriented manner, but the approach has not been applied consistently across all sectors and institutions.

A new common methodology for the creation of job profiles based on learning outcomes was created by Ministerial Decision No 110998/2006. This common methodology is an innovative development for VET in Greece as it changes the traditional input orientation to a learning outcomes approach.

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OCCUPATIONAL STANDARDS are documents that define in terms of competences the necessary requirements for efficient performance of activities in an occupation. The Learning Outcomes approach has been more developed in IVET
### Consideration of Work Process Descriptions in Occupational Standards

<table>
<thead>
<tr>
<th>Description of work processes are included in the Framework Curricula for vocational schools in the form of fields of activity which structure the learning process.</th>
<th>Work processes are taken into account through taking on board competence requirements set by the work process in the design of qualifications.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In certified occupational profiles there is a clear link to work processes and learning outcomes.</td>
<td>At the NQF qualification structuring process there is a link to work processes which is guaranteed by the participation of companies experts representatives at every qualification profile description.</td>
</tr>
<tr>
<td>However there is no official model that ensures the matching of recognised qualifications and industry work profiles demand.</td>
<td>Work process descriptions are included in all French “référentiels de diplôme”</td>
</tr>
</tbody>
</table>

### Process of Development of NQF

<table>
<thead>
<tr>
<th>An overarching national qualifications framework for lifelong learning</th>
<th>The development of the NQF is in progress. Completion is expected in 2010.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Greek NQF will consists of 8 levels. Due to a delay in the work on the NQF, it now</td>
<td>The NQF has been finalized. There are 5 levels implying a progress route allowing for LLL.</td>
</tr>
<tr>
<td>An NQF has existed for quite some time, it includes 9 levels (1 entry level), the application of the</td>
<td>No information yet</td>
</tr>
<tr>
<td>There will be one NQF for each form of learning (VET, adult training, HE). Currently, a</td>
<td></td>
</tr>
</tbody>
</table>
based on learning outcomes (Deutscher Qualifikationsrahmen – DQR) is currently being developed in Germany. The draft version is in the process of being tested and finalisation is expected in 2010. The shift to learning outcomes is supported by major stakeholders. One important aim of the DQR is to support the use of learning outcomes in standard setting, curricula and assessment.

All qualifications (formal, non-formal and informal) will be related to the NQF. A NQF is a structure which did not at all exist in Austria and cannot be implemented without overcoming big obstacles and open or hidden scepticism. Completion is expected in 2010, vocational education is mostly located at level 4. The finalisation of the NQF will be followed by the development of occupational profiles accordingly.

“Qualification” as a term refers to occupational competence units profiles which are divided into competence units. Each qualification consists of individual modules and can be acquired through any form of learning, formal, non-formal and informal. There is an official procedure of assessment, recognition, evaluation and accreditation.

NQF to the EQF is to be finalized by 2010. There is also one Qualifications and Credit Framework in place, consisting of units and credits, based on a mix and match principle, enabling progression and LLL.

National vocational qualifications (NVQs) are embedded in the National Qualifications framework. The NQF is regulated and consistency of application maintained by the Qualifications and Curriculum authority.
Findings of the analysis of national systems of developing NOS

The professional bodies involved in the development of NOS such as governmental bodies, social partners, sometimes end users are consistent throughout the examined countries. However, the degree to which and the stages within the process a which they are involved varies between countries and sub-systems but they are always involved in defining the professional competencies for the standard, often in collaboration with training providers and relevant authorities.

The analysis also aimed at exploring the extent to which learning outcomes are considered in NOS:

Most NOS are described in relation to the profession. Professional competencies are the defining factors for specific learning outcomes of a given profession. These professional competencies are often expressed in terms of what a learner is able to do, i.e. in the form of learning outcomes and often span the EQF categories of knowledge, skills and competencies but are rarely categorised explicitly. However, the existence of any form of description in terms of learning outcomes does not mean that NOS are to be considered outcome-oriented. In spite of the inclusion of learning outcomes in NOS, there is still a strong input-orientation prevalent in most systems (the most notable exception being the UK).

The inclusion of learning outcomes in one form or another in NOS exists in all the countries examined. However, the definition of learning outcomes differs between countries. Moreover, the fact that a description of learning outcomes is in some way included in occupational standards does not imply that its development is based on learning outcomes or that there is a real tendency towards outcome-orientation in the systems. In spite of the use of learning outcome descriptions, most systems are still predominantly input-oriented. There is a need to find a way of incorporating transversal competencies into learning outcomes whilst describing NOS independent of the learning pathway (input).

Many systems remain more concerned with learning pathways rather than the outcome. The reason for this is often a fear of losing quality. In many countries, specifically highly standardised ones, the institution in which learning takes place is regarded as a quality-assurance mechanism. Hence, there is a level of reservation to say the least, to switch to a more outcome-oriented approach.
Factors positively influencing EQF-adaptability

Learning outcome orientation

As described above, two main factors positively influencing EQF-adaptability become apparent: the clear reference to learning outcomes of occupational standards one the one hand, and the inclusion of work process descriptions on the other.

As the EQF builds upon learning outcomes, an outcome-oriented system can define clearer references to the EQF than a certificate-based one. The EQF builds upon learning outcomes, i.e. it matters what an individual knows, is able to do, is competent at, not how this individual has achieved that given level of knowledge, skills or competencies. Occupational standards that bear a clear link to the learning outcomes that come with it can more easily be referenced to the EQF. A clear definition of learning outcomes is the first step towards EQF-adaptability.

As a matter of fact, most European countries are still input-oriented in that they base qualifications on the form of learning and not the learning outcomes. This becomes apparent in predominant assessment structures that do not allow for the recognition of informally or non-formally acquired learning outcomes. This applies particularly to IVET but is also still the case in many CVET qualifications. The vast majority of European countries still have a long way to go to achieve true learning outcome orientation. True outcome orientation implies that the question of where, how and for how long an individual acquired outcomes becomes redundant. However, in recent years, all countries that were examined have made a noticeable move toward the inclusion of clearly defined learning outcomes that relate to specific occupational/qualification standards. This means that despite the lack of true outcome orientation as described above, learning outcomes are clearly defined in direct connection to the occupational standards they refer to. This is a first and major step towards EQF-adaptability. However, especially with regard to the recognition of informal and non-formal learning, most countries still have a long way to go.

The most notable exception to this trend is the UK. The learning outcome approach underpins the English and Northern Irish education systems and has done so since the 1980s. This is also reflected in the nature of the NVQs. NVQs are work-related, competence-based qualifications. They reflect skills and knowledge needed to do a job effectively and show that a candidate is competent in the work area represented by the NVQ. NVQs are based upon occupational standards that are statements of performance that describe what competent people in work roles are expected to do. NVQs do not have to be completed in a strict time frame, they can be taken by full time employees, part time or college students with no age restrictions or entry requirements. NVQs are achieved through assessment and training. Assessment is normally through, on the job, observation and questioning supported by a portfolio of evidence demonstrating competence. Approved assessment centres, including
company workplaces provide the environment in which assessment takes place. Trainers and verifiers within this system are required to be “qualified”.

Some countries are undertaking efforts to redefine their occupational standards in a more EQF-compatible way, defining clearly the learning outcomes in terms of EQF descriptors. Germany, for example, is currently running pilot projects to reformulate the occupational profiles of two professions as well as defining a model process for future EQF-compatible formulation of occupational profiles.

Work process descriptions

The second factor of importance is a transparent reference to work processes. Occupational profiles, i.e. official qualifications and the respective surrounding systems hereto differ so widely from country to country that it makes little or no sense to rely on them in order to achieve greater comparability of such throughout Europe. At the same time, it becomes clear that the work processes and therefore the work contents are more or less the same throughout Europe, a “web designer” in Greece has more or less the same work processes as a “web designer” in Spain or the UK. It is therefore much more viable to use the similar work processes as a basis for deriving competencies and / or abilities, therefore making European qualifications comparable throughout. If there is common ground for determining the required learning outcomes (this also implies a common understanding of the work process to which certain abilities are related), this should narrow the spectrum of construing EQF descriptors.

The comparison of countries has highlighted, that all countries have included some form of reference to work process descriptions in their occupational standards. What is apparent is the lack of regulated processes to ensure that work processes and the competence requirements derived from those are continually monitored and updated.

It is for those reasons that a clear link between occupational standards and work processes relating hereto is crucial in the process of EQF-adaptation of national standards and profiles. This becomes even more relevant in lieu of the debate of risks of fragmentation of occupations through the sole focus on learning outcomes in the EQF. This debate has taken place especially in Austria and Germany, where the dual system has brought about a holistic understanding of occupational profiles as professions that cannot merely be characterised through isolated learning outcomes. The totality of berufliche Handlungskompetenz, a holistic amalgamation of professional competence that can also be characterised as professional identity was in the focus of this debate. The risk of fragmentation of such holistic competence approaches seems evident in a mere addition of isolated learning outcomes divided into knowledge, skills and competencies. Defining the work process, as the subject of work in which professional competence unfolds, could avert such fragmentation.


Recommendations

1. Improving mutual trust through increasing transparency of national processes of developing occupational standards (transparency at national level).

The ways in which elements of qualification systems in Europe have been described differ a lot from country to country. This spans all aspects of those systems, applying to categories, granularity of designs, involvement of organisations, etc. A review of approaches used in some of the EU member states could help to identify some of the key characteristics that can best support that adaptation of systems towards EQF-compatibility, providing for a maximum degree of unambiguousness, thereby preventing mutual mistrust. Shared methodologies do not exist in Europe. The question is whether there is enough understanding of the design and make-up of occupational standards in other systems in order to create the level of trust required in the process of referencing national systems and frameworks to the EQF. This does not imply the replacement of national traditions with one European model but the suggestion for complementing national procedures with definitions that can be read and understood throughout Europe. A precondition for mutual trust is the knowledge and understanding of different systems’ processes of developing NOS (and other elements of qualification systems such as training contents, quality assurance standards and the like which are addressed in other EQF Predict documents).

2. Improving mutual trust through more in-depth definitions of and information about concepts and indicators of the EQF (transparency at European level)2

There is a lack of common understanding about underlying concepts and descriptors of the EQF, in particular in relation to the concept of learning outcomes. Professionals involved in qualification design and development of qualifications are often less familiar with the LO approach to qualification design and more familiar with describing qualifications in an input-oriented manner.

Whilst the concept of LO orientation appears to be widely adopted, there does not seem to be a shared or universal understanding of it. When broken down to its components of knowledge, skills and competencies. Other concepts and terms identified in the process of definition and development of NOS such as the concepts of "qualification", "validation" and "recognition" also appear to require further explanation according to specific national contexts in order to develop a common understanding of a European definitional context. There is a lack of in-depth information available on qualification processes and processes of development of NOS which may explain the different translations and understanding of various terms and concepts used in the European context.

It is recommended that a specific glossary be developed and included in the European Recommendation. This glossary ought to provide a description of each of the key concepts according to the specific context of each country. Provision of

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2 As recommended by the EQF Network Testing Project (Call proposal DG EAC/22/06)
such information should help to ensure mutual trust.

3. **Exchange of experience in the process of development of National Qualifications Frameworks and their referencing to the EQF**

An exchange of practice and experiences made in the process of developing and testing NQFs will highlight factors positively and negatively influencing EQF adaptability which will necessarily differ from country to country. The experience made with overcoming and / or utilising those factors through the consideration in the respective NQF will provide important information to other countries. The fact that countries are at different stages in the development and testing of their respective NQF further highlights the benefits of such exchange of information. Moreover, an increased understanding of different nations’ NQFs will positively influence mutual trust.

4. **Creating transparency through the inclusion of clearly defined work processes and learning outcomes in occupational standards.**

It is evident that most countries still have a long way to go in the process of EQF-adaptation of their national qualification systems. This applies not only to the description of occupational profiles in an EQF-compatible way but spans the entirety of education systems including the continuation of the process of developing NQFs. With regard to the formulation of occupational profiles, the recommendation is consequently to include clear definitions of learning outcomes in order to create a direct and visible link between national occupation profiles and the logic of the EQF.

The referencing of occupational standards with work processes is another important step towards EQF-adaptability. In spite of the facts that most countries have include some form of reference to work processes in their occupation standard, there is no sufficient guarantee that these work processes and especially the competence requirements derived thereof continue to be relevant. A well-regulated monitoring process through stakeholders of each sector should ensure that work processes are continually updated and that competence requirements derived from those are interpreted and implemented in a meaningful way. Within this process, it ought to be borne in mind that occupational profiles are more than just the mere accumulation of units of learning outcomes.

It makes little sense to attempt to achieve greater European transparency and comparability through solely relying on the comparison of occupation standards. One necessary step for EQF-compatible occupational profiles is thus a clear definition of learning outcomes as well as the incorporation resp. consideration of work processes in the formulation of official profile.
5. Promoting the EQF’s principal aims at national level – revision of approaches and priorities

Last but not least, decision-makers and stakeholders should not lose sight of the principal aims of the EQF: to promote citizen’s mobility between countries and to facilitate their lifelong learning. With regard to occupational standards, these aims can be better achieved through a review of national traditions and approaches. It is not sufficient to merely list the learning outcomes for each qualification or occupation as has been done already in most countries. In order to achieve the mobility and permeability that is intended in this process, countries need to make a greater effort to implement the logic behind outcome orientation, meaning the opening of occupational standards to individuals who have attained the learning outcomes relating thereto, independent of how they were acquired.