



Competence and competency in the EQF and in European VET systems

Michaela Brockmann and Linda Clarke
University of Westminster, London, UK, and

Christopher Winch
Kings College London, London, UK

Competence and
competency

787

Received 31 October 2008
Revised 26 March 2009
Accepted 2 July 2009

Abstract

Purpose – Though the notion of competence is common terminology in European VET policy at national and supra-national level, understandings vary widely, both across countries and within. The particular conceptions of competence adopted in the EQF are themselves problematic and the framework allows for a variety of interpretations. The purpose of this paper is to clarify those applied in the EQF and the vocational education and qualifications systems of particular European countries and to contribute to the development of a transnational understanding of the term, one which is compatible with a rapidly changing labour market.

Design/methodology/approach – Drawing on evidence from work funded by the Nuffield Foundation entitled “Cross-national Equivalence of Vocational Skills and Qualifications”, the paper explores the various conceptions of competence in the EQF and the national systems – in particular in the sectors of construction, ICT and health – of England, Germany, France and The Netherlands.

Findings – Interpretations are located on a continuum from the comprehensive occupational model traditionally found in many European countries to the task-focused model of the English NVQ system.

Research limitations/implications – Much developmental work involving all stakeholders is necessary to arrive at a commonly agreed conception. A broad understanding of competence would relate to the potential of labour, itself determined through the occupational capacity embodied in the qualification.

Practical implications – Zones of Mutual Trust need to be based on transnational categories of VET.

Originality/value – The value of the paper is in seeking to go beyond identifying differences by developing transnational categories and suggesting the nature of Zones of Mutual Trust for implementing the EQF.

Keywords Competences, Europe, Qualifications

Paper type Research paper

Introduction: what is an umbrella concept of competence?

The term “competence” is now accepted common terminology, both within and beyond the vocational education and training (VET) systems of the European Union (EU). It might seem, therefore, that it has attained the status of a common currency that

The authors would like to acknowledge the invaluable contribution made to this project by our research partners: Dr Anneke Westerhuis of CINOP in the Netherlands; Dr Georg Hanf of the Bundesinstitut für Berufsbildung (BIBB) in Germany; and Professor Philippe Méhaut of the University of Marseilles.



guarantees mutual understanding across a wide variety of general and VET systems. It is our aim to show that this is far from being the case and that, as also identified by Le Deist and Winterton (2005), it is possible to identify a number of mutually inconsistent conceptions of competence within the EU, each referring to rather different realities. Furthermore, the European Qualification Framework (EQF) itself adopts a dual (and highly complex) conception of competence with its own special characteristics, distinct from those adopted by other EU countries. The implication of such a complex situation is that the possibilities for misunderstanding what is meant by the term “competence” and its cognates are considerable.

The linguistic and conceptual situation is particularly confusing. First there is an intralinguistic complication: there are different and often disputed interpretations of what competence means in English. Second, superimposed on this, there is an interlinguistic complication: we cannot assume that the correlates of ‘competence’ in, for example, French (*compétence*) or German (*Kompetenz*) necessarily mean the same as all, some or any of the competing usages available in English. It cannot be assumed either that the same thing is understood by the word “competence” in the translation of the EQF into each respective language or that “competence” can be readily translated into its cognate in another European language because the realities to which the term refers are not the same. This complex situation means that the implementation of EQF through the development of Zones of Mutual Trust (ZMTs) (Coles and Oates, 2004) will be based on differences in practice that need to be understood if potential mutual misunderstandings of the term competence are to be overcome. This paper is focussed particularly on these conceptual differences.

What is the EQF?

The EQF may be described as a “competence framework” which provides general descriptors for particular learning outcomes, themselves understood as independent of any pedagogical processes or curricular assumptions involved in their acquisition by any individual (EC, 2008). The descriptors are general because they apply to any sector or occupation that seeks to translate its qualifications in one national qualification system into equivalents in another. Therefore much detailed work is required to do this, some of which is currently being carried out in Leonardo-funded implementation projects, such as The AMOR Project (2007) concerned with qualifications within the electrical industry. The EQF is organised into eight levels, from primary education to doctoral level equivalents and for any qualification a level of achievement is assigned. Each level consists of three components of, respectively, knowledge, skill and competence, the latter being concerned with the qualification holder’s exercise of autonomy and responsibility in work situations[1]. We use the term “competence” for the conception that underpins the whole framework and “competency” for this latter category, denoting the exercise of autonomy and responsibility[2]. The EQF, therefore, implicitly integrates, at each level, the combined capabilities of an agent of knowledge, skill, autonomy and responsibility (the last two being “competency”).

Table I is a slightly adapted extract from the EQF grid of level descriptors relating to level (3) and therefore including descriptors of knowledge, skills and competency (EC, 2008). Both “competence” and “competency” here express particular conceptions of competence. Indeed the European Commission (EC) itself defines “competence” in these different senses, as meaning:

... the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development. In the context of the EQF, competence is described in terms of responsibility and autonomy (EC, 2008).

The phrase “autonomy and responsibility” encapsulates both the German notion of the autonomous and responsible individual worker and the English notion of a managerial hierarchy although it can be argued that the descriptors under this heading tend to favour the English conception rather than the German one. The scale of the challenge involved in working with a common understanding of competence across the EU is even more complex, given the requirement that each EU member state should relate its own national qualification system to the EQF by 2010, “where appropriate by developing its own national qualification framework in accordance with national legislation and practice” (ibid.).

The different conceptions of competence

In the German context competence is understood as *berufliche Handlungsfähigkeit*, referring to the ability or capacity of the individual to act within the labour process of a defined *Beruf* or occupation. One key element that is not explicitly included in the EQF is that of “occupational capacity” within an integrated labour process, an element intrinsic to VET systems such as the German and referring to the scope of activities encompassed within an occupation and the depth of knowledge implied. It is an element associated with the (often broad) potential of labour itself to perform particular activities and is arguably implicit in the EQF model through the presence of the overriding category of Competence. This notion of occupational capacity is however foreign to the English national qualification framework (NQF) (now Qualifications and Credit Framework (QCF)), where qualifications do not refer to clearly defined occupations in the sense of *Beruf*. The English framework is based not on occupational capacities but rather on work activities and on task-based skills, that is on work itself.

Autonomy and responsibility are intrinsic elements of competence, through the third EQF category of competency (Table I) which describes the degree to which they are present. The problem is that the English conception of competence does not recognise them as intrinsic except as a supervisory or managerial function at higher levels of the NQF. This means that the EQF competency category is interpreted in the English context as the degree to which the individual controls or is controlled by others, rather than as a category of independent agency. It has thus a different reference point, referring in the English case to the degree to which a worker is

	Knowledge	Skills	Competency
	<i>Knowledge is described as either theoretical or factual</i>	<i>These are described as either cognitive or practical</i>	<i>These are described as responsibility or autonomy</i>
Level 3	Knowledge of facts, principles, processes and general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and to solve problems by applying basic tools, methods, materials and information	Take responsibility for completion of task in work or study. Adapt own behaviour to circumstances in solving problems

Table I.
EQF level (3) competence

supervising or being supervised in the workplace and, in terms of EQF, to the degree to which labour itself is able to act autonomously and takes responsibility. The English understanding relates in particular to the distinction between National Vocational Qualification (NVQ) Levels 3 and 4, whereby Level 4 is assumed to contain an element of supervision. A critical point of interpretation for the QCF will, therefore, be the way in which the competency category is interpreted, at these levels. This problem is finessed where occupations are regulated by the EU, as in the case of nursing, but not all are, and with these there is a real problem in incorporating “competency” in the EQF sense into English qualifications.

It is assumed in the EQF that, at each level, the three elements of knowledge, skill and competency are internally related to each other as aspects of Competence. But such an *a priori* linkage cannot be assumed in individual VET systems, even where these are embedded in an NQF. In the construction of the English NQF, for instance, it is assumed that autonomy and responsibility are embedded within knowledge and skill. However, it is difficult to see how this can be the case since they are not recognisable components of either knowledge or skill, as conventionally understood within the English VET context, where knowledge is commonly associated with an educational component and skill with the workplace (Brockmann *et al.*, 2008a). The EQF’s assumption that this internal linkage exists could, therefore, lead to considerable difficulties in interpretation and implementation in relation to particular NQFs.

Part of the problem is the limited recognition of the notion of occupational capacity within the English system. Here, qualifications generally comprise clearly set out competences that relate to the skills deemed necessary to carry out a job and therefore directly refer to the workplace (Clarke and Winch, 2006). More specifically, in the English NVQ system, competence is understood as the performance of a narrow set of tasks to a defined standard, and is thus bound to and reflects particular outputs. In this respect, in relating to the object of labour rather than being intrinsic to the capacity of labour itself, it is fixed and unresponsive to change. By contrast, the conception of competence in the French, Dutch and German VET and labour market systems denotes occupational capacity, focusing on what the individual can or should be able to do within a broadly defined occupational field, rather than on what the job requires. Competence in this continental sense is a multi-dimensional concept, relying on the integration of a person’s occupational knowledge, practical know-how and social and personal qualities, such as the ability to take responsibility for and reflect upon one’s own actions. In the case of apprenticeship, this integration may be achieved through simulated practice in a workshop, which provides a third learning location, in addition to and at the same time complementary to the college (as the main location of theoretical knowledge acquisition) and the workplace (associated with practical knowledge in an operational context) (Clarke and Winch, 2004). Competence in the workplace is defined as the ability of the individual to draw on multiple resources to deal with complex and often unpredictable tasks (Erpenbeck, 2005; Rychen and Salganic, 2003).

Central to this multi-dimensional continental conception is the notion of competence development, which includes the occupational, personal and civic development of the individual, both within an occupational field and in society as a whole. The conception posits the individual, as agent, active in the construction of knowledge through reflected experience, also referred to as “labour process knowledge” (Rauner, 2004).

The ability to direct one's own learning and an understanding of the whole labour process (rather than specified tasks) are deemed vital qualities in the context of accelerating change within the workplace and beyond (Boreham, 2002). Vocational qualifications in these countries are typically based on a comprehensive notion of occupation with VET designed to promote the multiple dimensions of competence, including civic and personal elements.

The German notion of *Handlungskompetenz*, or competence of action-taking, has been the defining principle of the dual system since the late 1980s and exemplifies the continental conception of competence. *Handlungskompetenz* encompasses the dimensions of *Fachkompetenz* (occupational competence), *Sozialkompetenz* (social competence) and *Personalkompetenz* (personal competence), *Methodenkompetenz* (procedural competence) and *Lernkompetenz* (learner competence). While *Handlungskompetenz* is perhaps the most comprehensive of notions, competence as the integration of *savoir*, *savoir-faire* and *savoir-être* in France, and of knowledge, know-how and "attitude" in The Netherlands similarly reflect the multi-dimensional nature of the concept. In France, competence is also particularly associated with continuing vocational education and human resource development (HRD) as operationalised in the *bilan de compétences*, a tool aimed at the development of the individual employee (Mériot, 2005). Every employee is entitled to a validation of the competences they have acquired in particular domains and phases of life (Haase, 2007), which again is symptomatic of the multi-dimensional, comprehensive and person-centred approach to competence development.

The English conception of competence

From the 1980s onwards the concept of competence has acquired a particular sense in English VET, being defined according to two distinct but convergent influences. The first of these came through task analysis or the close description of the actions (or behaviours) required of a worker to carry out a particular, tightly defined task. Such an approach has a venerable pedigree, stretching from Adam Smith's account of the pin factory to Frederick Taylor's scientific management theory (Smith, 1947; Taylor, 1911). It is odd, however, that it has become so prominent for the English concept of qualification at a time when Taylorist and Fordist conceptions of work organisation are becoming increasingly obsolete, given advances and changes in the labour process and demands for a deeper and broader vocational educational element (Clarke and Winch, 2006). In this respect, the association of competence with task analysis in the English conception denotes a growing discrepancy between the qualification system and the demands of the labour process. This English approach goes together, however, with the fact that NVQs in particular were devised in the context of a weak and sometimes non-existent VET system and tend to reflect employers' shorter-term interests rather than the broader range of interests of all the different stakeholders. These stakeholders, especially educationalists, employees and trainees, have longer term interests to be equipped with skills and qualifications needed for an often rapidly changing working life and for the development of a career. For the longer term development of a skilled workforce, an educational component is obligatory, giving the student the knowledge which can be applied in different situations and built on in the future to realise their potential. Thus English NVQ qualifications are increasingly at odds with developments in the labour process itself, simply because they reflect and

match competences formed outside the framework of VET, largely though a process of learning on the job rather than in a workshop. Indeed, the divorce of qualifications from VET makes for a lack of coherence in the VET and qualifications systems.

For example, construction was one of the sectors studied in our Nuffield project. One of the peculiarities of the British construction industry is that many areas of work, including concreting and groundworks, remain unrecognised as “skilled occupations”, though requiring considerable skill and expertise and the subject of extensive lobbying by concreting contractors for a comprehensive and recognised VET scheme (Clarke and Wall, 1998). Any training that exists relates to specific activities or jobs carried out, for instance operating particular machines. Other occupations, attached to more recognised occupations such as bricklaying, tend also to be narrow and largely focussed – in this example – on just laying bricks, though on sites we find bricklayers undertaking a much wider range of activities, including stonework and concreting. As a result, and another peculiarity of the English system, unlike their counterparts in Germany or Poland, British workers tend to be “single-skilled”, rather than trained and unskilled for a greater range of activities within a broadly-defined occupation and in social and problem-solving skills. Given this restrictive occupational capacity, it can be very difficult for employers to recruit those with appropriate skills, in part because occupations are too narrowly conceived and NVQs give only limited ability to extend experience (Clarke and Gribling, 2008). Often migrant workers – whether from Poland or Germany – may be preferred simply because they are more “multi-skilled” in the sense of having “occupational capacity”, more adept at problem-solving and with more transferable skills to move on to different activities and projects.

The second influence on the English notion of competence is behaviourism as set out by Skinner and his successors (Le Deist and Winterton, 2005). In the behaviourist programme, attributions of mental activity and agency are logically reducible to descriptions of bodily (molar) behaviour (Taylor, 1964). Learning is a process of conditioning, not of a completely inert body but of a body that has certain basic drives. However, this form of conditioning (operant conditioning) depends exclusively on positive and negative reinforcement and a successful outcome of an episode of learning is the production of the specified behaviours. Fortunately, the strictly Skinnerian conception of behaviourism is not adhered to in training programmes; indeed, the use of conditioning as a means of learning would be considered unethical. However the idea that competence is demonstrated in behaviour rather than in action or judgement is embedded in the conception of competence that is inscribed in the lower levels of the NVQ qualification. It often receives a more pragmatic justification to the effect that one can only judge whether someone can do something by their actually doing it (Jessup, 1991), a claim that is only plausible in the context of assessment of a small number of narrowly defined tasks.

It can be seen, therefore, that the English notion of competence is conceptually related to the performance of tasks, to output in the workplace, rather than to any notion of an individual’s occupational capacity, echoing Biernacki’s “embodied” labour whereby labour is conceived in relation to its output in the product (Biernacki, 1995). The issue for the EQF, however, is whether or not task-based conceptions of competence are compatible with occupationally-based conceptions. The problem is particularly acute in matching the English QCF to the EQF as the former does not contain the concept of competency embedded in the latter which, as we saw, identifies

the exercise of some degree of autonomy and responsibility as essential components of Competence. In this respect, the English approach, whereby learning outcomes are based on task analysis and behavioural descriptors, is out of tune with the continental occupational model. Difficulties can, therefore, be envisaged in aligning qualifications within the English QCF with other qualifications that, like the German for example, presuppose an occupationally – as opposed to a task-based concept of competence.

Relation between integrated competence and discrete competences

The learning outcomes-based approach adopted by the designers of EQF superficially appears to match quite closely with the NVQ approach. An important distinction has, however, to be made between an integrated conception of competence as in the German tradition of *Handlungskompetenz* and discrete competences identified in relation to specific tasks, as in the Anglo-Saxon tradition (Table II). This distinction is linked to that between the “input” and the “output” approach of qualification frameworks, approaches which do not represent a simple dichotomy but are located at two ends of a continuum. The EQF is interpreted and intended differently by actors coming from both traditions, a problem increasing the scope for misunderstanding, and ultimately raising questions about the usefulness of the framework. Thus, while the four countries we have studied represent divergent approaches (the output-orientation of the English NVQ system; the input-orientation of the German dual system; and a hybrid approach

	Integrated concepts of competence	Discrete conceptions of competence	Discrete conceptions of competence
National conceptions of competence	The German <i>Handlungskompetenz</i> , includes a social, moral and civic dimension and integrates various aspects of competence within an occupational context	French and Dutch conceptions, although task-based, assume an integration of knowledge, skill and attitude in practice	“English” competence, entails task performance to an acceptable standard which may, but need not, involve the application of underpinning knowledge
EQF conceptions of competence	The EQF competence framework implicitly integrates knowledge, skill, autonomy and responsibility, but excludes the moral and civic dimensions. It can also be described as a “learning outcomes” framework	The EQF third column “competence” (in this paper referred to as “competency”) involves autonomy and responsibility as separate categories from knowledge and skill and is therefore potentially non-integrative i.e. could refer merely to seniority in the workplace	

Notes: *Competence as framing concept:* covers different, and often contested, conceptions of competence; *Conceptions of competence:* these are often incompatible and relate to each other on a continuum from occupationally based rich descriptions of action capacity to restricted task-based descriptions of operational adequacy

Table II.
What is meant by
“competence”?

inherent in the Dutch and French qualifications systems), qualifications from all systems are to be aligned to the EQF.

An occupation, by its nature, presupposes a scope of activity, the ability to perform a wide range of distinct but related activities within a common epistemic, ethical and industrial/sectoral framework. Whether or not the EQF presupposes an occupational model depends on the way in which it is operationalised or transposed. If the framework serves to align entire qualifications, and each qualification is defined in terms of knowledge, skills and competence (autonomy and responsibility), it may be more or less occupational, depending on the breadth and depth of knowledge and skills involved, as well as the exercise of autonomy and responsibility. It would not fully align with the continental occupational model since the notion of competence does not encompass broader social, personal and civic dimensions but has been narrowed down to the more pragmatic attributes of autonomy and responsibility, which, on one interpretation, could merely refer to seniority in the workplace (Grollmann, 2008).

In a strongly outcomes-based approach in the Anglo-Saxon sense, qualifications are defined in terms of individual competences based on an analysis of tasks. This idea, that competences can be defined in relation to a set list of tasks, implies a Taylorisation of work processes and is in direct conflict with notions of occupational capacity and individual potential in the continental countries, thereby opening up confusion about the very nature of EQF (Grollmann, 2008; Brockmann *et al.*, 2008b). The occupational model amounts to more than the total of individual competences. In this approach, the reflective individual worker is expected to exercise professional judgment, make independent decisions, and resolve conflicts in often unpredictable work situations on the basis of the integration of multiple resources into practice, including theoretical knowledge and social and personal competences. In contrast, the output or task-based model, as exemplified in particular by the English NVQ levels 1 to 3, requires the worker to perform narrowly defined individual tasks to a prescribed standard, without or with only minimal reflective use of knowledge, which can be inferred from performance. The NVQ can be awarded independently of whether or not the candidate has undertaken a study of the knowledge base relating to the tasks for which he or she is assessed.

The German dual system represents an input-based system, where a comprehensive curriculum is developed to achieve *Handlungskompetenz*. Individual competences (*Fähigkeiten*) are specified in the occupational profile (*Berufsbild*) but there is no direct one-to-one match to individual skills and knowledge. Assessment is based on a sample of competences, serving as standards or indicators of whether the overall aims of the VET programme – learning outcomes in the conventional sense – have been achieved. In the vocational school, the different dimensions of *Kompetenz* are developed in relation to actual work situations but they constitute a didactic tool, which involves the decontextualisation of what is learnt.

At the other end of the continuum, the conception of competence in the English NVQ model is that of discrete “competences”, i.e. relating to narrowly defined tasks (Table II). These are strongly characterised by the notion of skills, the worker with skill possessing a narrowly task-related form of know-how appropriate the job in hand (Clarke and Winch, 2006). They typically rely on minimal underpinning knowledge, are divorced from a learning process, with assessment based on performance of existing

skills. Crucially, an integrated conception of competence as in the term *Handlungskompetenz* is absent from this model.

The competence-based qualifications systems in France and the Netherlands illustrate within-country tension between the integrated concept of competence in the workplace and the specification of individual competences. As in the English NVQ system, qualifications are developed on the basis of competences identified through task analysis. Also, through the adoption of accreditation of prior experiential learning (APEL), individual competences are disassociated from formal learning. However, the systems still correspond to an occupational model due to the breadth of activities involved and the application of a multi-dimensional conception of competence. Competences themselves are much more broadly defined than in the English approach. Importantly, they form the basis for curriculum development. Thus, occupational capacity is typically developed through a structured programme of VET and according to a curriculum that involves occupational, general and civic education. Unlike the English model, assessment, though based on the performance of prescribed tasks, requires students to demonstrate their ability to plan and co-ordinate tasks by explaining relevant underpinning knowledge. These systems could be defined as a hybrid model, combining outcomes and input-based elements.

Thus, the different conceptions of competence co-exist not only across but within national VET and labour market systems. The difficulty with the EQF is that it can mean all things to all people. This is epitomised in the translation of the descriptors of the framework. For example, “knowledge”, “skills” and “competence” have been translated into *Kenntnisse*, *Fertigkeiten* and *Fähigkeiten* in the German version, terms representing common parlance in the work-based or company-side of learning within the dual system to refer to the components of competence in the workplace. As *Kenntnis* refers to singular and non-systematic, rather than systematically organised, knowledge, it appears closer to the English conception of competence. However, this translation disguises the fact that the German system is based on a comprehensive VET programme which encompasses both systematic (*Wissen*) and non-systematic (*Kenntnisse*) knowledge, a distinction that is elided in official documentation, which tends to avoid going into distinctions which may cause political problems (e.g. CEDEFOP, 2008).

Elements of the EQF suggest a continental occupational model, particularly the category of competency and the implicitly integrated nature of knowledge, skill and competency. On the other hand, it is also the case that critical elements of the continental model are lacking in the EQF, in particular, the personal, social and civic elements of awareness and action that characterise continental systems. On one interpretation, the notion of competency (autonomy and responsibility) may diminish into a managerial function as in the English system where employer interests prevail. Without a common transnational category of competence, there is clearly ample room for differences of interpretation and potential conflict.

Zones of mutual trust

EQF is an instrument designed to enable the translation of qualifications and qualification systems between willing partners in order to promote labour mobility between countries and to facilitate lifelong learning (EC, 2008). A precondition of such co-operation is recognised to be mutual trust. Hence it is envisaged that the

implementation of EQF will take place through the initiation and expansion of Zones of Mutual Trust (ZMT) (Coles and Oates, 2004). The idea of ZMTs is that groups of countries or cross-national industrial sectors or occupations will work together within the framework of EQF to establish a working system for the mutual recognition of qualifications. A number of conditions need to be put in place in order for a ZMT to develop.

First, much developmental work will be needed in order to arrive at a commonly agreed interpretation of what the EQF actually means and how learning outcomes can be framed at sectoral and occupational levels. Second, in order for meaningful discussion to take place and trust established, transnational categories need to be developed and agreed on, describing how key notions such as competence, knowledge, skill, qualification and vocational education may be broadly understood in relation to the development, status and identity of labour in society. In practice, it is unlikely that the first condition can be fulfilled without the second. Transnational categories need to refer not to specific definitions, but to broad understandings of what the roles of VET, qualifications and competence are in society. For instance, VET is about the social development of labour, about nurturing, advancing and reproducing particular qualities. Qualifications in turn represent an agreed and recognised approximation of these qualities, related to the division of labour in society and to particular occupations identified within sectors of economic activity. And competence refers, as we have indicated, to the potential of labour, itself dependent on the occupational capacity embodied in the qualification. Differences in these notions at national level can only be located in relation to transnational categories such as these. As apparent from this paper, the EQF as it stands does not embody categories that can be agreed and applied trans-nationally.

We can infer from this that ZMTs will first develop on the basis of pre-existing mutual understanding and agreement on how particular categories are to be applied, given that without understanding there can be no trust. In this respect, the strength of social partnership (employers and trade unions) arrangements in implementing EQF through social dialogue will be crucial to the way in which it develops. For example, trade union participation in a social partnership framework is important to ensuring an occupationally-based definition of competency. Thus, the type of ZMT envisaged may also vary, whether establishing cooperation between national VET systems, industrial sectors or particular occupations. The current framework of the EQF is sufficiently flexible to allow for all these possibilities to be realised, facilitating implementation on a piecemeal basis by those interested parties who see an immediate common interest in making it work. One approach that might be adopted is where two or more countries with very similar VET systems, such as the Germanic countries, agree to bring these into alignment, making it possible to be assessed for equivalence within the EQF template. Another might be for the social partners within an industrial sector with significant cross-national labour mobility, such as construction or ICT, to attempt to make the operation of that labour market easier and more transparent for some at least of the constituent occupations. This will improve some existing practices of cross-national recruitment and bilateral exchanges between countries involved in developing a sectoral ZMT.

It will be more difficult to establish ZMTs across sectors that have not had experience of the cross-recognition of qualifications and between countries with

dissimilar VET systems. However, cognate occupations and occupational families may establish ZMTs across national boundaries even where, in other respects, their VET systems are disparate, or where their initial vocational education is more similar to that in other countries than it is to the rest of the VET system in their own. Such an occupational family could be the health allied professions, for instance podiatry or radiography as well as nursing, or software engineering, where the binding agents could be similar initial VET routes in each country, cross-national employers and vendor qualifications. Most problematic is, however, that – as presently conceived – ZMTs are based on learning outcomes, which are in themselves understood in different ways.

Just as there are factors that will lead to the development of ZMTs, so there are also factors that will militate against them. More generally, the greater the differences between occupations, sectors or VET systems, the less likely it is that a ZMT will develop. Divergent conceptions of VET, including above all conceptions of competence, will militate against such a development. In particular VET systems that assume what can be broadly called a holistic conception of competence, involving the integration of practical know-how and knowledge as well as social and personal aspects will find it easier to find common grounds for trust and mutual understanding than will systems based on task and behaviourally-specified outcomes. On the other hand, as we have seen, moves towards competence-based approaches in France and the Netherlands open up new possibilities for confusion and tensions in relation to the meaning of competence in VET and the labour market.

Conclusions

We have seen that, not only are there two concepts of competence built into the EQF, but each country has its own particular definition and its own understanding of the EQF. At one end of this conceptual continuum is the Anglo-Saxon notion, closely associated with skills, and, at the other, the German notion of *berufliche Handlungsfähigkeit*. Key to understanding the multi-dimensional competence embedded in many of the continental systems is the concept of occupational capacity, focussing on what an individual is able to do within a broadly-defined occupational field, rather than on what the job requires. The individual becomes an active agent in the construction of knowledge through reflective experience, whereas in the English NVQ model the individual is assumed to perform narrowly defined tasks to a prescribed standard. This current task-based English notion is at odds with the continental approach, though is itself in a state of flux as qualifications fail to reflect the developing and changing division of labour and the long-term requirements of the labour process. Though tensions do exist within the competence-based qualification systems of France and The Netherlands, between integrated concepts of competence in the workplace and the specification of individual competences, these systems nevertheless still correspond to an occupational model. At the same time, the EQF also suggests this continental occupation model, though lacking personal, social and civic elements.

Thus, whilst ZMTs, establishing cross-national equivalence of qualifications within the EQF, can be envisaged, these still need to be based on transnational categories of VET, qualifications and competence related to the divisions of labour in society. In this

respect, competence can be seen to refer to the broad potential of labour, itself dependent on the occupational capacity embodied in the qualification.

Notes

1. Similar problems to the ones that we have identified for “competence” exist also for “knowledge” and “skill” but we will not deal with these unless they are directly relevant to our current purpose.
2. However, it has been argued that this term “competence”, although meant to take account of practical ability, is best understood to mean “learning outcomes” related to three dimensions of knowledge, practical ability and autonomy/responsibility (Markowitsch and Luomi-Messerer, 2007).

References

- (The) Amor Project (2007), “Approach for the matching process of outcome-based Curricula to the EQF in vocational education”, available at: www.amor-project.eu/index.php?option=com_content&task=view&id=28&Itemid=53&lang=en (accessed 14 May 2008).
- Biernacki, R. (1995), *The Fabrication of Labor: Germany and Britain, 1640-1914*, University of California Press, Berkeley, CA.
- Boreham, N. (2002), “Work process knowledge in technological and organizational development”, in Boreham, N., Samurcay, R. and Fischer, M. (Eds), *Work Process Knowledge*, Routledge, London, pp. 1-14.
- Brockmann, M., Clarke, L. and Winch, C. (2008a), “Knowledge, skills, competence: European divergences in vocational education and training (VET): the English, German and Dutch cases”, *Oxford Review of Education*, Vol. 34 No. 5, pp. 547-67.
- Brockmann, M., Clarke, L. and Winch, C. (2008b), “Can performance-related learning outcomes have standards?”, *Journal of European Industrial Training*, Vol. 32 Nos 2/3, pp. 99-113.
- CEDEFOP (2008), *Terminology of European Education and Training Policy*, CEDEFOP, Thessaloniki.
- Clarke, L. and Gribling, M. (2008), “Obstacles to diversity in construction: the example of Heathrow Terminal 5”, *Construction Management and Economics*, July.
- Clarke, L. and Wall, C. (1998), *A Blueprint for Change: Construction Skills Training in Britain*, Policy Press, Bristol.
- Clarke, L. and Winch, C. (2004), “Apprenticeship and applied theoretical knowledge”, *Educational Philosophy and Theory*, Vol. 36 No. 5, pp. 509-21.
- Clarke, L. and Winch, C. (2006), “A European skills framework? – but what are skills? Anglo-Saxon versus German concepts”, *Journal of Education and Work*, Vol. 19 No. 3, pp. 255-69.
- Coles, M. and Oates, T. (2004), *European Reference Levels for Education and Training an Important Parameter for Promoting Credit Transfer and Mutual Trust, Final Report*, Qualifications and Curriculum Authority, London.
- Erpenbeck, J. (2005), “Positionspapier für BIBB Workshop zum 1. EQF Entwurf vom 16.11.2005”, unpublished paper.
- European Communities (EC) (2008), “The European Qualification Framework”, available at: http://ec.europa.eu/education/policies/educ/eqf/eqf08_en.pdf (accessed 14 May 2009).

-
- Grollmann, P. (2008), "Professional competence as a benchmark for a European space of vocational education and training", *Journal of European Industrial Training*, Vol. 32 Nos 2/3, pp. 138-56.
- Haase, K. (2007), "Kompetenzdiagnostik durch Kompetenzbilanzierung – ein Blick zu den europäischen Nachbarn", *Berufsbildung in Wissenschaft und Praxis*, Vol. 6, pp. 10-14.
- Jessup, G. (1991), "Implications for individuals: the autonomous learner", in Jessup, G. (Ed.), *Outcomes: NVQs and the Emerging Model of Education and Training*, Falmer, Brighton.
- Le Deist, F.D. and Winterton, J. (2005), "What is competence?", *Human Resource Development International*, Vol. 8 No. 1, pp. 27-46.
- Markowitsch, J. and Luomi-Messerer, K. (2007), "Development and interpretation of descriptors of the European qualification framework", *European Journal of Vocational Training*, Vol. 43 No. 1, pp. 33-58.
- Mériot, S.-A. (2005), "One or several models for competence descriptions: does it matter?", *Human Resource Development Quarterly*, Vol. 16 No. 2, pp. 285-92.
- Rauner, F. (2004), *Praktisches Wissen und berufliche Handlungskompetenz*, ITB, University of Bremen, Bremen, ITB Forschungsberichte 14/2004.
- Rychen, D.S. and Salganic, L.H. (2003), "A holistic model of competence", in Rychen, D.S. and Salganic, L.H. (Eds), *Key Competencies for a Successful Life and a Well-Functioning Society*, Hogrefe and Huber, Göttingen, pp. 13-40.
- Smith, A. (1947), *The Wealth of Nations*, Volumes 1 and 2, Everyman's Library, London.
- Taylor, C. (1964), *The Explanation of Behaviour*, Routledge, London.
- Taylor, F.W. (1911), *Principles of Scientific Management*, Routledge, New York, NY.

About the authors

Michaela Brockmann is a Senior Research Fellow at the University of Westminster. She has been working on major studies on vocational education and training across Europe and has published widely, including in the Oxford Review of Education. She is a member of the Core Group of the Nuffield 14-19 Review of Education in England. Her research interests include qualitative methods and biographical approaches to youth transitions and learning and identity. Michaela Brockmann is the corresponding author and can be contacted at: brockmm@wmin.ac.uk

Linda Clarke is Professor of European Industrial Relations at the Westminster Business School, University of Westminster, where she undertakes research on training, skills, wage and labour relations in Europe, particularly in the construction sector. Her publications include *Vocational Education: International Approaches, Developments and Systems*, with Christopher Winch, Routledge (2007).

Christopher Winch is Professor of Educational Philosophy and Policy at King's College, London. He carries out research on different aspects of vocational education, including the relationship between practical and theoretical knowledge in professional and vocational contexts. His publications include *Vocational Education: International Approaches, Developments and Systems*, with Linda Clarke, Routledge (2007).