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# Competence in European Policy Instruments: A Moving Target for Developing a National Qualifications Framework?

**Abstract:** This paper addresses competence as a European policy imperative in the adoption of competence-based vocational education and training (VET) and outcome-based higher education (HE). After tracing the development of the European Credit transfer system for VET (ECVET) and the European Qualifications Framework (EQF), this paper assesses the limitations imposed by continuing differences in national competence models and inconsistencies in European policy instruments. It concludes that there is an urgent need for those developing the European taxonomy of Skills, Competences, Qualifications and Occupations (ESCO) to establish a framework capable of transcending sector and national specificities, as well as reconciling the worlds of education and work. The taxonomy must have an adequate theoretical underpinning and be easy to apply in practice if the "Europe 2020" objective of global competitiveness driven by high skills is to become more than a policy ambition.

**Key words:** competence, European policy, European Credit Transfer System for Vocational Education and Training, European Qualifications Framework

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#### Introduction

There is much confusion in the literature concerning competence as a concept (Grzeda 2005; Hodkinson 1992; Hodkinson and Issit 1999; Hoffman 1999; Mansfield 2004; Norris 1991; Weinert 1999). Moreover, practitioners and policy makers frequently use competence and skills as generic terms interchangeably. There are also major differences in national competence models across Europe, even if most countries have adopted approaches that approximate to one of the three dominant models developed in the UK, France and Germany (Winterton 2009).

The need for continuous updating of knowledge and skills became apparent with the increasing emphasis on knowledge work and the accelerating pace of change (Hayes, Wheelwright and Clark 1988). Moreover, recurrent skills mismatches and insufficient labour mobility suggested that formal education and training were failing to meet labour market needs (Crouch, Finegold and Sako 1999). Towards the end of the last century a global policy consensus emerged on the need to adopt competence-based approaches to training and curricula designed in terms of learning outcomes in education. The objectives were to make education and training more relevant to the needs of the labour market; to promote labour mobility through establishing a common framework for understanding the competences that underlie different qualifications; and to increase permeability between vocational education and training (VET) and higher education (HE). International organizations (such as ILO and OECD) promoted these approaches in major policy initiatives (Competence Based Training ... 1997; Projects on Competencies in the OECD Context ... 1999).

Within Europe, reform of education and training was viewed as an essential requirement to support competitiveness objectives, by making education and training more responsive to labour market needs and by promoting labour mobility. Competence-based approaches to VET were adopted first in the United Kingdom (Rainbird 1990), then in France (Le Deist 2009) and later in Germany (Gehmlich 2009). A different model of competence was adopted in each country, rooted in the different systems of VET and cultures of work (Brockman et al. 2009). Other countries adopted competence models approximating to one of these three dominant approaches (Le Deist and Winterton 2005) and increasingly aligning with an emerging, but inadequately precise, European model (Winterton 2009).

The European Employment Strategy (EES) launched at the Luxembourg Summit in November 1997 put much emphasis on measures to improve employability and adaptability through developing the competences of the working population (Extraordinary European Council ... 1997). The Lisbon Summit in March 2000 established the key objective of making Europe by 2010 "the most competitive and knowledge-based economy in the world capable of sustainable growth and better jobs and greater social cohesion." (Lisbon European Council ... 2000, para. 5) In pursuit of this high skills agenda, the Commission published an "Action Plan for Skills and Mobility" in February 2002, emphasizing the need to increase occupational mobility of workers from the poorer regions to those of the wealthier regions of the EU (Commission's Action Plan ... 2002). Lisbon marked the origins of a new European policy framework for education and training, establishing targets and benchmarks against which progress was to be assessed and linking these with the EES and policy initiatives on Lifelong Learning. The Lisbon summit also called for "reflection on concrete future objectives of education systems focusing on common concerns and priorities while respecting national diversity" (Lisbon European Council ... 2000, para. 27). After consulting Member States, the Commission produced a report in January 2001, which proposed means for raising the standard of learning in line with the Lisbon objectives (Learning for employment ... 2003). Following the development of supporting lifelong learning initiatives, the Barcelona summit (March 2002) set the further objective of making European education and training systems a world quality reference by 2010 (European benchmarks ... 2002).

### European Credit Transfer System for vocational education and training and the European Qualifications Framework

The Directors-General for VET in their autumn 2001 Bruges meeting agreed on further efforts to enhance European-wide cooperation and in the "Copenhagen Declaration" (2002) announced a strategy to support the development of qualifications and competences at European level. As part of these further efforts to increase transparency in VET, a strategy to support the development of qualifications and competences at European level was proposed through a sectoral approach, including European sectoral social dialogue. The "Copenhagen Declaration" also gave a commitment to develop a European Credit Transfer System for VET (ECVET) and in November 2002 a Technical Working Group (TWG) was established by the European Commission to develop the principles. The parallel European Credit Transfer Systems (ECTS) for HE, had been extended to all Member States under the "Bologna Declaration" (1999) but was based on notional workload input rather than competence which was seen as more appropriate for VET (ECTS – European Credit ... 2003; Winterton 2005). The secretariat for the TWG was provided by *Centre Européen de Développement de Formation Professionnelle* (CEDEFOP), who commissioned three pieces of underpinning research to design the ECVET architecture. A team from Kassel University was engaged to propose elements of a credit transfer system (Le Mouillour 2005); colleagues at the Qualifications and Curriculum Authority in London designed the vertical dimension of reference levels (Coles and Oats 2005); and the team at Toulouse Business School developed the horizontal dimension in terms of a typology of knowledge, skills and competence (Winterton et al. 2006). From the recommendations of these three studies, the ECVET system was designed and adopted at the Maastricht summit on 14 December 2004.

The competence typology for ECVET had to accommodate diverse competence models and be sufficiently comprehensive to capture different aspects of competence in a real work context. Our review demonstrated the growing influence of multi-dimensional frameworks of competence and our proposals identified four analytically distinct sets of competences as a way of reconciling the three main European competence models (ibid.). We recommended that ECVET adopt the terminology of cognitive competence, functional competence and social competence for analytical precision, arguing that wherever competence is used without an adjective it should be understood as an umbrella term including all three dimensions (plus the facilitating meta-competences) in a work context. Elsewhere, we represented this model as a tetrahedron, with meta-competence at the apex, both contributing to and arising from the development of cognitive, functional and social competences (Le Deist and Winterton 2005). The solid was chosen as a way of emphasising the holistic nature of competence, in a *Beruf* sense: occupational competence resides inside the tetrahedron. The four sets of competences were viewed as analytically distinct although in practice competence statements would involve elements of each dimension. The logic of separating these dimensions was to ensure that competence statements capture all dimensions relevant to the execution of work tasks.

Rather than adopting our recommendations, the TWG decided to retain the terms "knowledge, skills and competences" from the original remit, subsuming meta-competences under "competences", leading to the confusion that competence was an umbrella term, a dimension and, in the sense of meta-competence, a sub-dimension. In the Commission note issued in December 2004 (Towards a European Qualifications ... 2004), which formed the basis for the proposals for ECVET accepted at the Maastricht summit, the phrase "knowledge, skills and competences" was employed without further elaboration, as it was in the ECVET documentation prepared for the consultation exercise between October 2006 and March 2007.

While the ECVET development was underway, the "Berlin Communiqué" (2003) recommended the introduction of learning outcomes in HE, rather than simply notional workload time, and encouraged Member States "to elaborate a framework of comparable and compatible qualifications for their higher education systems, which should seek to describe qualifications in terms of workload, level, learning outcomes, competences and profile. They also undertake to elaborate an overarching framework of qualifications for the European Higher Education Area. Ministers call those working on qualifications frameworks to encompass the wide range of flexible learning paths, opportunities and techniques and to make appropriate use of credits." (Credit Transfer ... 2003, p. 4)

To develop proposals for a European Qualifications Framework (EQF) the Commission convened an Expert Group, which retained knowledge and skills in their typology but replaced competence with "personal and professional competence" (Markowitsch and Loumi-Messerer 2008, p. 37). Personal and professional competence was further subdivided into four categories; autonomy and responsibility; learning competence; communication and social competence; and professional and vocational competence. These sub-categories were evidence of further conceptual confusion. Autonomy and responsibility are normally seen as characteristics of a work situation,<sup>1</sup> not an individual, although a person would need certain competences to be able to exercise responsibility and autonomy. Professional and vocational competence is usually used as an umbrella concept incorporating all the knowledge, skills and behaviours associated with an occupation. A conference in Budapest in February 2006 convened to validate the EQF proposals reiterated the central importance of competence, defined as "learning outcomes in context" (ibid., p. 38). In response, the Commission invited another expert group to redesign the descriptors and this group abandoned competence in favour of "learning outcomes" (ibid., p. 42), which was seen as wider in encompassing knowledge of a non-applied nature and in distinguishing three types of learning outcomes: knowledge; skills; and responsibility and autonomy, under which there was a move to subsume "competence". A further TWG was established in May 2006 with representatives of the member states, who rejected this problematic third dimension, replacing it with competence, but retaining in brackets "responsibility and autonomy" (ibid., p. 44).

#### **Key competences for Lifelong Learning**

Following major EU enlargement in May 2004, a mid-term assessment of the Lisbon Strategy by the high-level group led by Wim Kok (2004) had found progress on growth, productivity and employment disappointing and recommended a revised strategy. The Lisbon Strategy was subsequently re-launched with the objective of fostering "stronger and lasting growth and the creation of more and better jobs" through measures to encourage firms and workers to adapt to change (Restructuring and employment ... 2005, p. 1). Among the key actions were increasing adaptability and flexibility to enable Europe to adjust to restructuring and market changes; simplifying mutual recognition of qualifications to facilitate

<sup>&</sup>lt;sup>1</sup> From the perspective of the literature on work organization, autonomy and responsibility have long been seen as structural characteristics of work (Trist and Bamforth 1951) and the continued relevance of this approach was demonstrated despite 40 years of technical change at the coal face (Winterton 1994). Principles for designing work to improve job satisfaction and performance (Hackman and Oldham 1980; Kelleher 1996) have focused on "responsible autonomy" (Trist et al. 1963) and "anthropocentric work" (Winterton 2004), ideas that have more recently been incorporated in the "high performance work systems" debates (Boxall and Macky 2009).

labour mobility; and investing more in human capital by improving education and skills. In November 2005, following the relaunch of the Lisbon strategy, the Commission proposed in the context of the Education and Training 2010 work programme a framework of "Key Competences for Lifelong Learning" (Proposal for a recommendation ... 2005). In this proposal, which included in annex a European Reference Framework developed by a Working Group on Basic Skills, competence was defined as "a combination of knowledge, skills and attitudes appropriate to a particular situation" (ibid., p. 2), while key competences were identified as "those that support personal fulfilment, social inclusion, active citizenship and employment."(Ibid., p. 3)

The revised Lisbon Strategy was overtaken by the 2008 financial crisis, to which the Commission responded with "A European Economic Recovery Plan" (2008). The Recovery Plan outlined four strategic aims: to stimulate demand and boost consumer confidence; to lessen the human cost of the economic downturn and its impact on the most vulnerable; to ensure that when growth returns the European economy is in tune with the demands of competitiveness as outlined in the Lisbon Strategy; and to accelerate the shift towards a low carbon economy, thereby contributing to combating climate change, creating new "green-collar" jobs and reducing Europe's dependence on foreign energy. The training and development implications were elaborated the following month in the "New Skills for New Jobs" (2008) initiative, which reiterated the need to enhance human capital and employability but also noted that the severity of the financial crisis had increased unpredictability of the world economy making it essential to ensure a better matching of skills supply to labour market demand.

"New Skills for New Jobs" (ibid.) was designed to anticipate future skills needs; to develop strategies to raise the overall skill level of the European labour force; and to reduce skills mismatches in the European economy. The expert group supporting this initiative recommended a T-shaped competence profile where transversal skills (the horizontal bar) are combined with job-specific skills (the vertical bar). Presenting interim findings in November 2010, the "Transferable Skills" project noted the continued absence of an agreed competence model at EU level and adopted the knowledge, skills and attitudes model of the European framework for "The Key Competences for Lifelong Learning" (2007) with the addition of individual "characteristics" (inborn or acquired psycho-social characteristics, talent, psychical and physical features), thereby confusing "input" characteristics with "output" competence.

By 2010 it was evident that the centre of gravity of the global economy was undergoing a major transformation with the growing economic strength of Brazil, Russia and, particularly, China and India (O'Neill and Stupnytska 2009), as well as increasing evidence of the need for radical action to combat the effects of climate change. In response, the Brussels Summit in March 2010 endorsed "Europe 2020", a new strategy for sustainable growth and jobs, putting knowledge, innovation and green growth at the heart of EU competitiveness (Europe 2020 ... 2010). Described as a comprehensive roadmap for the EU's economic recovery, sustainability in both a competitive and environmental sense is added to the original goals of growth based on knowledge and innovation coupled with high employment and social cohesion.

A ministerial meeting in Bruges in December 2010 to consider strategic priorities in the Copenhagen process emphasized the key role of VET in supporting the aims of "Europe 2020" by providing relevant, high quality skills and competences (The Bruges Communiqué ... 2010). The Council of the European Union endorsed this view in March 2011, concluding that: "Education and training have a fundamental role to play in achieving the 'Europe 2020' objectives of smart, sustainable and inclusive growth, notably by equipping citizens with the skills and competences which the European economy and European society need in order to remain competitive and innovative, but also by helping to promote social cohesion and inclusion." (Council conclusions ... 2011)

The Council conclusions noted the particular relevance of two of the proposed "Europe 2020" "flagship" initiatives. The "Agenda for New Skills and Jobs" initiative (An Agenda for new ... 2010), designed to upgrade skills and boost employability, proposed measures to improve the identification of training needs, make education and training more relevant to labour market needs, and facilitate access to opportunities for lifelong learning and guidance, as well as improving transitions between education, training and employment. The adoption of qualifications based on learning outcomes and greater validation of skills and competences acquired experientially in non-formal and informal contexts were also emphasized for their contribution to enhancing employability. The "Youth on the Move" initiative (Youth on the move ... 2010), designed to help young people achieve their full potential and thereby improve their employment prospects, focuses on reducing drop-out from school, ensuring all young people acquire basic skills to facilitate further learning and increasing opportunities to learn later in life. In addition, the initiative is concerned to improve the quality and relevance of higher education, increase diversity in intake and enhance workplace and overseas learning opportunities.

#### Towards a common understanding of competence?

The value of developing a consensus definition of competence across Europe has been widely recognised (Brockmann et al. 2009; Garavan and McGuire 2001) yet despite progress made with the ECVET and EQF initiatives, "a convincing transparency of vocational competences has yet to be developed" (Markowitsch et al. 2008, p. 171). An overarching common framework of competences is, however, essential to permit transnational and sectoral comparisons as well as to promote permeability between VET and HE. In addition to the persistence of differences in national competence models, it is clear that competence is interpreted differently across sectors and between VET and HE. Moreover, different conceptions of competence are also apparent in the various EU instruments, which both limits the effectiveness of articulation between these instruments and confuses practitioners and policy makers that are expected to use them.

The EQF, formally adopted by the European Parliament on 23 April 2008. was designed to offer a facilitating framework for mapping qualifications (The European Qualifications Framework ... 2008) using knowledge, skills and competence descriptors. In the EQF, knowledge is described as "theoretical and/or factual knowledge", skills as "cognitive skills (use of logical, intuitive and creative thinking and practical skills (involving manual dexterity and use of methods, materials, tools and instruments)", and competence is described "in the sense of the assumption of responsibility and autonomy" (Sellin 2008, p. 15). Most countries are in the process of aligning their NQF with the EQF (Hanf and Rein 2008; Hozjan 2008; Tierney and Clarke 2008; Tūtlys and Winterton 2006), but difficulties have been encountered arising from differences in national competence models (Bohlinger 2008). Markowitsch and Loumi-Messerer (2008) explain the confusion surrounding the use of competence in the EQF by distinguishing three implicit hierarchies: an educational (or systemic knowledge) hierarchy; an occupational (or competence) hierarchy; and a skills (or individual attributes) hierarchy (ibid., p. 53). Through the lens of each hierarchy, the EQF takes a different aspect. Part of the difficulty derives from a misconception as to what the EQF is designed to achieve: "[...] the EQF is not a competence framework [but] a framework based on learning outcomes, whose descriptors describe all forms of learning outcomes." (Ibid., p. 42)

Competence-based occupational profiles and/or national qualifications frameworks (NQFs) already exist or are under development throughout Europe and most countries adopted learning outcomes and competence-based qualifications. The ECTS in HE was originally based on the assumed equivalence of Bachelor, Master and Doctoral programmes and was associated with notional learning time (input). The implication of the "Berlin Communiqué" was that HE would have to adopt a learning outcomes (output) approach. This effectively stimulated the adoption of outcome based curricula common to HE and VET. Arnold and Pätzold (2008) noted that in the past VET had a 'supply orientation' with the aim of complete preparation for an occupation with a clearly defined profile and widely established standards and curricula (ibid., p. 335). The modern approach, they characterized as a "demand orientation", where the emphasis is on lifelong learning to develop cross-occupational content and key competences designed to meet the demands of enterprises of the region (ibid, p. 337).

Rauner (2008) describes how task analysis methods of curriculum development were used in Bremen to replace discipline-based training plans with others based on developmental theory using the concept of work process knowledge, defined as including the "practical, theoretical, action-governing and explaining knowledge." (Ibid., p. 365) Work process knowledge appears key to understanding the interaction between learning outside and inside the work context and the integration of theory and practice (Fischer et al. 2004). Blings and Spöttl (2008) similarly argue for a bottom-up approach developing European occupational profiles from empirical analysis of work processes. Projects in the Leonardo da Vinci Programme have provided a platform for the last 15 years by developing new European-level qualifications, and more recently through ECVET and EQF pilots and testing. Occupational profiles reflect the actual tasks undertaken in specific jobs and these are sometimes highly comparable between countries but this is no guarantee of inter-sectoral and international comparability.

Learning outcomes are defined in the EQF as "statements of what a learner knows, understands and is able to do on completion of a learning process, which are defined as knowledge, skills and competences." (The European Qualifications Framework ... 2008, p. 11) European policy encouraged the shift to learning outcomes, provided the conceptual underpinnings (The shift to learning ... 2008) and argued that the move was important for assuring the quality of VET provision (Assuring the quality ... 2008). Uptake in terms of policies and practices was far from uniform, however (The shift to learning ... 2009). Krichewsky, Frommberger and Milolaza (2010) found differences in the extent to which learning outcomes had been introduced in VET curricula, and in the way that learning outcomes are defined and operationalized. At a political level curricula define the overarching goals of VET, at an administrative level they define the expected KSC as defined in gualifications standards and at the practical pedagogical level they define the content, learning place, timetable, teaching methods and learning programmes. Input-oriented curricula are based on the technical/scientific knowledge assumed to be required to undertake a work task, whereas output-based curricula are based on analysis of work. Therefore the input approach separates theory and practice whereas in the outcomes approach experiential learning involves the integration of theory and practice.

Markowitsch and Luomi-Messerer (2008) viewed learning outcomes as more comprehensive than competence, since the latter depends on the work context while the former can exist independently of the work context (ibid., p. 41). Such inert knowledge, to use Polanvi's terminology, has no corresponding practical competence, so "the debate on whether the qualifications framework should be based on learning outcomes or competences could actually also be interpreted as a debate on the status of inert knowledge." (Ibid.) This pursuit of inert knowledge is robustly defended by the educationalists, most elegantly and eloquently by Michael Young (2007), but accepting this principle does not negate the arguments in favour of competence-based *elements* of the curriculum to increase labour market relevance. Indeed give the uncertainties concerning what competences are needed for the future it is difficult to say that any knowledge is devoid of labour market relevance (without introducing the obvious example of teaching the same inert knowledge to the next generation). In a CEDEFOP briefing note on the EQF, Bjørnåvold and Coles (2009) corroborate the interpretation of Markowitsch and Luomi-Messerer and offer some useful clarification: "Some people prefer to use the term competence-based qualifications when referring to qualifications that are described in terms of learning outcomes. The concept of competence has wide application in defining performance and certainly in vocational education and training it is a critically important and central concept. Competence-based qualifications take into account the influence of the learning (or working) context when learning outcomes are defined and assessed. This context has a strong influence on the range of learning outcomes that are considered important, the interaction between them, the way the learner learns, how the outcomes are assessed and, most importantly, the value attached to qualifications in the field. Competence-based qualifications are fundamentally a statement that a person is qualified to work in the field. Some formulations of learning outcomes may not be able to satisfy this requirement for contextual specification. For this reason it is important that in qualifications frameworks we can define levels in terms of expected learning outcomes when these outcomes are achieved by a person in certain conditions." (Ibid., pp. 11-12)

In March 2009 an Expert Group was established to propose ways of developing the "New Skills for New Jobs" (2010) initiative in the context of "Europe 2020". Their report, published in February 2010, demonstrates continued confusion surrounding the EQF, with a surrealistic definition in which skill appears first as an overarching generic term, second as a subset of itself and third as a dimension of competence: "Throughout this report, the term 'skill' subsumes knowledge, skill and competence defined in the European Qualifications Framework, where 'skills' means the ability to apply knowledge and use know-how to complete tasks and solve problems, and 'competence' means the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development." (Ibid., p. 4)

Markowitsch and Plaimauer (2009) argued the need to develop a truly standardized international standard classification for skills and competences facilitating recognition of qualifications not only across Europe but on a global basis. Their proposal appears to have had a major influence on recent European policy. One of the key deliverables of the "New Skills for New Jobs" initiative was to create a European level "multilingual dictionary linking skills and competencies to occupations" (Presentation fiche ... 2010, p. 1). In the preamble to the document proposing European Skills, Competences and Occupations taxonomy (ESCO), the Commission argued that "skills, competencies and capabilities complement formal qualification-based approaches in dialogues with employers" (ibid).

The ESCO taxonomy has the aim of linking the EQF to occupational groups as defined by the ILO International Standard Classification of Occupations (ISCO), yet instead of using the EQF terminology of "knowledge, skills and competences", it introduced further confusion with "skills, competencies and capabilities" (ibid). In suggesting that "skills, competencies and capabilities complement formal qualification-based approaches" (ibid) it also neglects the role of qualifications as the formal certification of competence. A stakeholders' conference in Brussels on 17-18 March 2010 resolved some of these anomalies and focused on the objective of creating "a common language between education/training and the world of work" (Overview of ESCO ... 2010, p. 1). A subsequent description of work in progress on ESCO referred to "skills and competences" as the link between on the one side occupations and the labour market and on the other side qualifications and education/training (ibid.). Expanding the scope to include gualifications, ESCO henceforth became the European taxonomy of Skills, Competences, qualifications and Occupations. The development of ESCO has subsequently drawn on classifications already in use through the EU job mobility portal, EURES, and the research undertaken by the project DISCO.

Independently of the ESCO initiative, an ad hoc expert group was convened in May and June 2010 to draft guidelines for developing a common understanding of how competence can be interpreted across these different instruments. This work was intended to inform a Commission Communication in early 2011, but at the time of writing (July 2011) nothing yet appears to have been published. If a common understanding of competence is to be developed, it must be theoretically grounded and needs to reconcile Bloom's taxonomy, Jacques's time-span of discretion and the Drevfus ladder of professional expertise. The three principal competence dimensions we proposed for ECVET were reasonably consistent with Bloom's taxonomy of learning (Winterton et al. 2006). Jacques's categorisation of levels of jobs in terms of responsibility influenced the determination of reference levels for ECVET (Coles and Oates 2005). Markowitsch and Loumi-Messerer (2008) proposed new groups of "competencies" based on work-related tasks and contexts, mapping these to the Drevfus ladder of professional expertise (ibid.). These three approaches are overlapping and do not appear to correspond neatly with the three hierarchies of the EQF identified by Markowitsch and Loumi-Messerer (ibid.), so substantial work remains to be done.

It is essential that ESCO offers a conceptually sound framework capable of transcending sector and national specificities as well as reconciling the worlds of education and work. Until such a framework exists, the "Europe 2020" objectives of global competitiveness driven by high skills will remain no more than an elusive policy ambition.

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