

# From Bologna to Copenhagen: Progress towards a European credit transfer system for VET

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## **Abstract**

*The Lisbon summit (March 2000) set the objective for 2010 of making Europe 'the most competitive and knowledge-based economy in the world capable of sustainable growth and better jobs and greater social cohesion', while the Barcelona summit (March 2002) set the further objective of making European education and training systems a world quality reference by 2010. In line with these objectives, the Directors-general for vocational education and training in their autumn 2001 Bruges meeting agreed on further efforts to enhance European-wide cooperation and in the Copenhagen Declaration (30 November 2002) announced a strategy to support the development of qualifications and competences at European level. A key part of the strategy was to establish for vocational education and training a European credit transfer system, like that established for higher education under the Bologna Declaration. In 2003 a Technical Working Group was established by the European Commission to develop the principles of such a credit transfer system. In 2004, to support this work, CEDEFOP, the European Commission's agency for development of vocational education and training, commissioned three pieces of research to present proposals in relation to, respectively, reference levels for qualifications (the vertical dimension), a typology of knowledge, skills and competence (the horizontal dimension), and a system for credit transfer. This paper outlines the findings of the three research projects and discusses the road map agreed at the Ministerial meeting in Maastricht on 14 December 2004 which demanded completion of the model for the European Credit Transfer System for Vocational Education and Training (ECVET) in the first semester of 2005, testing in the second semester of 2005, and a formal proposal from the Commission at the end of 2005 to implement ECVET fully in 2006.*

The European Credit Transfer System (ECTS) in higher education (HE), introduced in 1989, has demonstrated the value of a system of credit transfer for enhancing transferability and mobility among students in HE. ECTS was given further impetus by the Bologna Declaration of 19 June 1999 under which the Ministers responsible for HE committed to establish a European-wide system of credit accumulation and transfer (Adam, 2001; EC, 2003).

Creating a parallel process for vocational education and training (VET) has become of crucial importance since the Lisbon European Council in March 2000 (EC, 2000). The Lisbon summit marked the origins of a new European policy framework for VET and lifelong learning, linking these to the European Employment Strategy, establishing targets and benchmarks against which progress can be assessed and implementing measures to facilitate cooperation. In establishing the objective for the next decade of making Europe 'the most competitive and knowledge-based economy in the world capable of sustainable growth and better jobs and greater social cohesion', the Lisbon summit also called for 'reflection on concrete future objectives of education systems focusing on common concerns and priorities while respecting national diversity'. Following the development of lifelong learning initiatives in pursuit of the Lisbon objectives, the Barcelona summit (March 2002) set the further objective of making European education and training systems a world quality reference by 2010 (EC, 2002).

Actions to increase cooperation in VET were initiated following the agreement reached by the Directors-general for VET in their autumn 2001 Bruges meeting. At the subsequent meeting in Santiago de Compostela in April 2002 the Directors-general agreed that increased cooperation in VET should be voluntary and 'bottom-up', actively involving the social partners, European Economic Area (EEA) countries and the candidate countries, with a long-term perspective and the objective of promoting mutual trust, transparency and recognition of qualifications, whilst raising the status of VET in quality and parity of esteem with HE. 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.

The priorities defined in the Bruges Process were given further impetus by the Copenhagen Declaration (30 November 2002), involving in addition to Member States, the EEA countries, candidate countries and the social partners. One of the priorities set by the Copenhagen Declaration was to investigate:

*how transparency, comparability, transferability and recognition of competences and/or qualifications, between different countries and at different levels, could be promoted by developing reference levels, common principles for certification, and common measures, including a credit transfer system for vocational education and training. (TWG, 2003: 5).*

The Technical Working Group (TWG) on credit transfer in VET was established in November 2002 to address this priority, investigating options for a system of credit transfer in VET at European level (ECVET) and common reference levels for competences and qualifications. The first report of the TWG (2003) elaborates the progress made up to October 2003, which has mainly focused on developing the conceptual basis for ECVET.

The Berlin Communiqué of September 2003 introduced the idea of seeking comparability of learning outcomes in HE, rather than simply notional workload, 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. (TWG, 2003: 4).*

The adoption of a learning outcomes approach, as advocated by some observers (Bergan et al, 2000) was a highly significant development, providing an opportunity to bridge the divide between VET and HE, integrating education and training, aligning each with the needs of the labour market and promoting mobility for individuals (vertical as in career progression, lateral as in movement between sectors and spatial as in geographically), especially for workers faced with job insecurity. Regulated professions such as medicine involve qualifications that are simultaneously both HE and the European conception of VET, so provide an existing pivotal link between the two systems. In 2002 the Commission proposed a draft Directive on recognition of professional qualifications [COM (2002) 119] to replace Directives 89/48/EEC and 92/51/EEC2 on recognition of regulated professions. Four qualification levels are included in this new Directive, which was approved by the Council and the European Parliament in spring 2004.

There is therefore an opportunity, perhaps unique at this juncture, to ensure an active interface between ECTS and ECVET, provided the two systems can articulate common reference levels, parallel learning outcomes and an agreed mechanism for credit accumulation and transfer. This also perhaps explains the urgency of the ECVET initiative, since the Ministers responsible for VET may be concerned that if they cannot implement a credible ECVET the Ministers responsible for higher education will be able to impose ECTS as the common framework for all education and training. The challenges are substantial because, for historical, political and economic reasons, there is much less commonality between the systems of VET than the systems of higher education in the 25

member states, despite the obvious fact that the needs of particular sectors are virtually identical in all countries. Nevertheless, the potential benefits, in facilitating a European Qualifications Framework (EQF, the subject of parallel initiatives) and encouraging mobility of those undertaking vocational training as well as those already qualified, are so enormous that there is a powerful will to succeed. The fact that the EQF is being elaborated in the context of ECTS and ECVET is encouraging as the development of national qualifications frameworks without credit transfer arrangements has been viewed as a lost opportunity (Gosling, 2001).

In 2004, to support of the work of the TWG, CEDEFOP (Centre Européen de Développement de Formation Professionnelle), the European Commission's agency for development of VET, commissioned three pieces of research to present proposals about, respectively, reference levels for qualifications (the vertical dimension), a typology of knowledge, skills and competence (the horizontal dimension), and a system for credit transfer. This paper reports the results of the three research projects undertaken by teams from the Qualifications and Curriculum Authority (QCA) in London, Toulouse Business School and Kassel University, and offers a prognosis for the ambitious road map agreed at the Ministerial meeting in Maastricht on 14 December 2004. The road map envisages completion of the ECVET model in the first semester of 2005 and testing the model in the second semester of 2005, so that the Commission is able to make a formal proposal before the end of 2005. In 2006 ECVET is to be prepared and implemented (EC, 2004).

It took several years for the ECTS to become established and despite the widespread policy support it enjoys from the ministries of education, some observers continue to question the wisdom of attempting 'harmonisation' (a word that has disappeared from Commission discourse in recognition of the importance of subsidiarity and the sensitivities of national governments) in HE. Sullivan Kirk (2002) criticises the use of ECTS in the SOCRATES Programme, for example, for its failure to acknowledge fundamental differences in the educational and assessment cultures of EU member states. Kivinen and Numi (2003) similarly note the contradiction in trying to standardise HE policy across Europe when the demand for education and graduate employment continues to diversify. While HE and VET are equally subject to distinct cultural and historic contexts, VET is considerably more heterogeneous and VET systems particularly distinctive in the locus of training provision and forms of regulation (Winterton, 2000). Given this complexity, the timetable for ECVET appears very ambitious; the conclusions discuss whether it is realistic.

## Reference levels in VET

The study on reference levels frameworks was carried out by QCA's research team in late 2003 and early 2004. The QCA team undertook a review of policy documents relating to the development of credit systems, national and international levels frameworks and research literature dealing with taxonomies of occupational performance, education and training, and the role of VET cooperation in labour market mobility. The study focussed on the way in which 'Zones of Mutual Trust' (ZMTs) operate and the utility of the concept for framing public policy to enhance access and progression in employment, education and training. The authors also considered whether an agreed framework of levels would encourage ZMTs and increase European cooperation in VET. Definitions of a ZMT and of reference levels were agreed to ensure common understanding of those involved:

*A Zone of Mutual Trust is an agreement between individuals, enterprises and other organisations concerning the delivery, recognition and evaluation of vocational learning outcomes (knowledge, skills and competences). They offer practical help with decisions about the value or of qualification and certification, further learning and recruitment into employment. They may be dynamic in nature and may become more or less formal in scope and form according to the mutual confidence and needs of the stakeholders involved. The details of the agreements between organisations can be used to build a framework of recognition based on levels of vocational learning. These reference levels, with their associated descriptors, can form a framework and a language that can be used to compare vocational learning in different settings. (Coles and Oates, 2004: 8).*

The QCA team concluded that the concept of a ZMT helps explain how access and progression occur in employment and in vocational education and training. Having analysed the form and operation of existing levels frameworks, the authors conclude that a new framework and associated administrative arrangements for its effective implementation are prerequisites for the proper design and application of ECVET. They proposed a new 8-level framework including both outcome and process elements and concluded that the effective implementation of the framework would necessitate: some decision-making authority to determine whether any given qualification or body of experience matches the stated requirements; criteria concerning the forms of assessment of requisite outcomes (knowledge, skills and competences); and mechanisms for public accountability and openness in assigning qualifications to levels, including regulating informal ZMTs which have arisen in response to short-term labour market needs to address skills shortages.

The virtue of the concept of ZMTs is that they involve more than recognition arrangements; they are organic and therefore subject to mutation and development in line with changing environment and labour market needs, one

of the key issues in ensuring a more dynamic approach to recognition (Jefferies and Evetts, 2000). As Coles and Oates note, while regulation is one of the more formal dimensions of established ZMTs and crucial to the provision of adequate protection of all stakeholders:

*regulations are not in themselves ZMTs. Rather, regulation supports the social processes that constitute a ZMT. ZMTs exist through the behaviour of people who are participating in them – operating through, or anticipating, common values and concerns. ZMT's cannot be imposed; they are dependent on processes of consensus and on voluntary participation. Informal ZMTs are frequently established through the imperative of structural skill shortages. These ZMTs shift and change as skill shortages emerge and abate, with different mediating organisations. While we see legislation, labour market regulation, and labour market agreements as direct formal mechanisms, we see certification, credit frameworks, and processes of accreditation of prior learning as intermediate mechanisms. They have a formal element – usually being a part of public policy – but, are dependant on regulation, etc. for any pervasive purchase on the system. In the extent to which they condition VET systems and labour markets, we therefore assign them a weaker influence and characterise them as 'indirect formal mechanisms' (Coles and Oates, 2004: 25).*

Among the many reasons for the emergence of ZMTs, some of the most important were found to be: improved qualification processes; increased labour mobility and exchange of learners; and more general objectives such as enhancing lifelong learning and improving access to learning. The key purpose of a ZMT determines which stakeholders should be involved, the timescale for which it should operate and the level of formality required. The authors concluded that public policy on ZMTs needs to be highly strategic in deciding where and when to support and encourage a ZMT, when to intervene to improve its effectiveness and when to transform or close down a ZMT.

Following the Bologna process a wide consensus developed on the comparability of degree structures within HE (bachelor, masters and doctorate degrees). A parallel consensus in the field of vocational education and training (VET) ought to provide an additional reference at national and European levels and an important step forward in promoting transparency, comparability, transferability and recognition in VET. There are four international classifications developed for statistical or recognition/comparability purposes (EU-levels from 1985, ISCO from 1988, ISCED from 1997 and EU-levels from the 2002 draft directive) which are being used in parallel, each having different functions and tasks. In developing recommendations for reference levels for ECVET the QCA team examined existing work on qualifications frameworks by other international agencies, including the ILO, UNESCO and the World Bank. Three frameworks were found to be particularly important: the Bologna structures for HE; ISCED 97; and the 1985 European structure of training levels for VET.

The Bologna structures for HE have led to significant work on levels of qualifications and programmes and on credit (Socrates and ECTS) based on learning input (student workload). HE institutions and Education Ministries have collaborated extensively across the EU and the recent Tuning project on curricula agreements in HE along with the three core elements of the ECTS system (course information, mutual agreement between institutions and use of ECTS systems) are viewed as 'model European ZMTs' (Coles and Oates, 2004: 38).

The International Standard Classification of Education (ISCED) was designed by UNESCO in the 1970s for gathering and presenting statistics on education and despite its limitations as a qualification framework, it is used widely as such, so ISCED 97 was seen as an essential basis for developing reference levels for ECVET, especially for continuity in statistical analysis of educational trends. The International Standard Classification of Occupations (ISCO 1988) is linked to ISCED and is a four-level classification that differentiates fields of learning.

Existing national and international frameworks, irrespective of common driving forces and goals, vary significantly according to whether they are based on learning outcomes (including competence statements) or learning inputs (defined in terms of programme content); whether the levels are established with descriptors (descriptor framework) or without (equating framework); whether they are integrated (no separate tracks) or differentiated (into different tracks); whether they relate to whole qualifications or sub-units/modules; and according to the number of levels and sub-levels. The first two sets of variations are especially important and difficult to reconcile. In addition to considering existing frameworks in and beyond Europe, the QCA team drew upon a wider literature to develop a robust set of reference levels, particularly the work of Jacques (1956) on the 'time span of discretion' and of Dreyfus and Dreyfus (1986) on defining expertise. On these foundations, the authors recommended a new European Reference Level framework designed to meet the objectives of ECVET by enabling qualifications, training and work experience to be equated across countries and by providing a route to linking VET and HE in a single qualifications system and facilitating cooperation between providers of VET in Europe.

Having identified purposes, stakeholders and some key issues that reference levels need to address, the authors argued that the reference level framework should: be easily understood; facilitate ZMTs building on current practice; be consistent with existing frameworks (especially ISCED 97); cover all aspects of VET; be conducive to linking a unit of assessment with a level; offer a meaningful reference point within different contexts for VET such as occupational sectors; recognise the reality of labour market conditions and wider social goals; be capable of evolution to meet pressures for change; link with HE frameworks and levels; and facilitate sector involvement (Coles and Oates, 2004: 47).

In the light of these requirements, and on the basis of their theoretical and empirical enquiry, the authors proposed a system with eight discrete levels and three sub-levels for each main level (reflecting the extent to which there is a match of the qualification, training programme or experience to the specific descriptors). The eight-level structure was adopted on grounds of clarity and simplicity and is consistent with the hierarchy proposed by Jacques. The diversity of existing qualifications and VET programmes means that significantly different qualifications may be allocated to the same level so sub-levels have been added to discriminate between these different qualifications. Hence while Danish and German craft apprenticeships are located at level 3 along with UK apprenticeships, the former are significantly broader and deeper in content so would appear at a higher sub-level within level 3. By using sub-levels it is hoped that ECVET can avoid some of the political problems associated with ISCED.

## **Prototype typology of knowledge, skills and competence**

The study to develop a prototype typology of knowledge, skills and competence, forming the basis for defining the horizontal dimension, was undertaken by the Toulouse Business School team from May 2004 to February 2005. The study traced through a review of the literature the origins of definitions of knowledge, skills and competences (KSC) from underlying intellectual abilities required for their acquisition, contrasting psychological measures of intelligence with elements important in work such as practical intelligence, social intelligence and emotional intelligence. Knowledge is viewed as the result of an interaction between intelligence (capacity to learn) and situation (opportunity to learn), so is more socially-constructed than intelligence and includes underpinning theory and concepts, as well as tacit knowledge gained experientially. A distinction can be made between declarative or propositional knowledge (know-that), holistic knowledge or understanding (know-why) and tacit or procedural knowledge (know-how).

Skill is usually used to refer to a level of performance, in the sense of accuracy and speed in performing particular tasks ('skilled performance'). Skilled performance has long been a subject of psychological studies which consider both physical psychomotor abilities and mental cognitive abilities. The early finding that (diminishing marginal) performance improvements continue indefinitely has been confirmed in later research, which led to the conclusion that learning can be described as a linear function of the logarithms of times and trials. Recent skills research has included broader cognitive skills such as problem solving and decision making, demonstrating the difficulty in regarding such cognitive competences as 'knowledge' rather than 'skill'. Proctor and Dutta (1995: 18), in what is arguably the most authoritative text on skill acquisition

and performance, define skill as 'goal-directed, well-organized behavior that is acquired through practice and performed with economy of effort.'

Competence is a term that is subject to such diverse use and interpretation that it is impossible to identify or impute a coherent theory or to arrive at a definition capable of accommodating and reconciling all the different ways that the term is used (Mangham, 1986; Mansfield, 2004; Weinert, 1999). After exploring these different interpretations, the common position is that if intellectual capabilities are required to develop knowledge and operationalising knowledge is part of developing skills, all are prerequisites to developing competence, along with other social and attitudinal factors. An influential generic typology of KSC was developed by Bloom and colleagues from the 1960s for use in educational establishments (Bloom et al, 1964). Generally known as Bloom's taxonomy, it is based on three domains of educational activities: cognitive, affective, and psychomotor (which was added later). The cognitive domain relates to mental skills (knowledge), the affective domain for growth in feelings or emotional areas (attitudes), while the psychomotor domain is concerned with manual or physical skills (skills). This taxonomy reappears in training vocabulary as KSA (knowledge, skills and attitudes) and strongly influenced the development of the Irish qualifications framework.

The use of generic KSC typologies and frameworks in enterprises, as opposed to education, has been promoted by efforts to link development to organisational strategy and to retain core competence as a key source of competitive advantage (Pralhad and Hamel, 1990). There is an apparent paradox in this, since if concentrating on core competences that are 'distinctive and specific to each individual organisation' is what gives competitive advantage, the scope for generic frameworks is limited (Lindsay and Stuart, 1997). The idea that generic KSC are transferable across different knowledge domains has been widely questioned and regarded as mechanistic and reductionist. Moreover, since most definitions of KSC are centred on the individual, these are viewed as independent of the social and task-specific context in which performance occurs, but the level of skill is a characteristic not only of a person but also of a context; people do not have competences independent of context. In recognition of this, constructivist interpretative approaches derived from phenomenology argue that competence is governed by the context in which it is applied, so worker and work form one entity through lived experience of work (Dreyfus and Dreyfus, 1986; Sandberg, 1994).

Individuals evidently attain different levels of expertise and experts have been found to display a greater capacity to invoke and refine schemas of interpretation than novices, who do little more than attempt a literal perceptual interpretation. While innate abilities are important in the development of expertise, the special characteristics that define expertise are usually specific to that domain, suggesting that practice is more important, although certain

characteristics appear to apply to experts in a range of domains. Conceptual competences, including both cognitive and meta-competences are often associated with higher level jobs involving more responsibility, although there is evidence that all workers become more effective when they reflect on their actions at work (Gerber and Lankshear, 2000: 4). This notion is reinforced with an interpretative approach capable of incorporating tacit skills and knowledge.

Given the different traditions of VET systems and economic conditions between EU member states, there is currently no common approach to defining learning outcomes and it was necessary to obtain information on the approaches in each country from members of the TWG or the ministries or agencies responsible for VET (Delamare Le Deist and Winterton, 2005). The UK approach, largely centred on functional competence as defined in occupational standards, can be contrasted with the more holistic approach in France, considering *savoir* (compétences théoriques, i.e. knowledge), *savoir-faire* (compétences pratiques, i.e. functional competences) and *savoir-être* (compétences sociales et comportementales, i.e. behavioural competencies). The German system approach is more complicated and while competence (Kompetenz) is implicit in the system, the main tradition of occupational competence is rooted in the concept of *Beruf* (occupation but including its culture). Kompetenz refers to the capacity of a person to act, is subject-oriented and is more holistic, comprising not only content or subject knowledge and ability, but also extra-subject or transversal abilities (Schlüsselqualifikationen). In 1996 the German education system adopted an 'action competence' (Handlungskompetenz) approach, moving from subject (inputs) to competence (outcomes) and curricula specifying learning fields (Lernfelder) rather than occupational knowledge and skills. The standard typology of competences adopted in 2000 requires vocational training curricula to be elaborated in terms of Handlungskompetenz, including domain competence (Fachkompetenz and Methodkompetenz), personal competence (Personalkompetenz) and social competence (Sozialkompetenz). General cognitive competence (Sachkompetenz), the ability to think and act in an insightful and problem-solving way, is a pre-requisite for developing Fachkompetenz, which therefore includes both cognitive and functional competences.

In recent years many other member states have moved towards learning outcomes and competence-based VET systems and qualifications, sometimes following quite closely one of the above models and occasionally developing distinctive approaches. Since multi-dimensional frameworks of KSC are gaining influence, a unified typology was proposed for ECVET with three dimensions: cognitive, functional and social competences, which is consistent with the longstanding KSA (knowledge, skills and attitudes) of the training profession. Given the TWG decision to retain 'knowledge, skills and competences' (KSC) as a unified statement, meta-competencies have been retained within the social competences category. Competence is too problematic a term without a further

adjective: in the UK-Irish context competence is generally understood as the ability to demonstrate in work the necessary skills (functional competences), usually with appropriate underpinning knowledge (cognitive competences) and sometimes appropriate social competences (behavioural and attitudinal competences). It was therefore recommended that in the interests of analytical precision, ECVET adopts the terminology of cognitive competence, functional competence and social competence.

The outline of the broad typology of KSC is a starting point for developing a prototype typology of learning outcomes for ECVET. For the typology to be of practical use there remains a major task of assessing the extent to which existing typologies of learning outcomes and qualifications frameworks can be accommodated within such an overall typology. National and sector frameworks must be examined in more detail to test the practical potential of the typology in specific sectors and occupations. The report concludes that the challenge of developing a consistent and coherent typology of KSC is to acknowledge the value of the diversity of approaches and not to prescribe a 'one size fits all' typology unadapted to the needs of a specific labour market or training and education system.

## **Credit Transfer Systems**

The third study set out to provide an assessment of the applicability of existing credit systems to a European credit transfer system for VET, using various mapping exercises to explore the extent to which existing approaches could form the underpinning of ECVET. Two complementary methodological approaches were employed: a literature review of current publications in English, French, German and Spanish and an empirical web-based quantitative and qualitative survey addressed to 360 VET experts in different European countries. While the experience of ECTS is clearly relevant to ECVET, it was found that 53 per cent of experts in the on-line survey associated the term 'credit' with HE, compared to 40 per cent with VET. Two main types of credit systems are contrasted: transfer-oriented credit systems and accumulation-oriented credit systems. Whereas the former was developed in Europe with the ECTS, the latter is typified by the US. The UK Credit Accumulation and Transfer System (CATS), as the name implies, is a mixture of transfer and accumulation functions. Whereas early credit systems only concerned HE, most of the recent qualifications frameworks (Scotland, Ireland, Australia and New Zealand, for example) encompass both HE and VET, and some of these have explicit credit transfer arrangements.

The Le Mouillour report argues that a credit system sets the rules for calculating the credit value of learning outcomes, so comprise credits, levels, learning outcomes and modules. Because credit frameworks facilitate accumulation and transfer of credits, they readily permit international compatibility because 'each

credit system is embedded in principles and rules determining the fields of application and of validity and the contents/processes of studying (particular contents, teaching, learning or examination styles, etc.)' (Le Mouillour, 2004: 30).

Adam and Gehmlich (2000) suggest that the evolution of the ECTS system should lead to a set of arrangements for lifelong learning based on a system of credits, as simple and transparent as possible, taking into account, among other things, diplomas, professional knowledge and skills and the accreditation of prior experiential learning. However, the extension feasibility project concluded that ECTS instruments and procedures would need adaptation before they could be applied to lifelong learning (ECTS Extension Feasibility Project, 2003). Le Mouillour (2004: 30) notes specifically it would require a redefinition of the notion of credit, taking into account competences and outcomes rather than learning inputs (or notional learning time) and a rethinking of assessment procedures, introducing more qualitative approaches.

Reviewing earlier analyses of different credit systems in HE and VET (Le Mouillour, Jones and Sellin, 2003; Hannken-Illjes and Lischka, 2003; Schwarz and Teichler, 2000), Le Mouillour (2004: 31) lists the functions that a credit system must fulfil:

- Transfer of learning outputs/outcomes within and between various national VET systems and between formal, non-formal and informal VET, thus providing bridging mechanisms between various learning pathways;
- Accumulation and mutual recognition of training/education/learning activities (modules), or qualification units/programmes towards a partial or a complete qualification, by contributing to the definition, assessment and certification of parts or full qualifications; this independent of when and where this learning has taken place;
- Cooperation between training providers, teachers and learners beyond national frontiers;
- Transparency of learning processes and outcomes in terms of knowledge, skills and competences acquired by the individual learners, of the structure of VET study programmes;
- Mobility within training/education/learning processes and professional mobility by improving the description of complete qualifications;
- Flexibilisation of learning periods, of content and of study programmes;
- Simplification of certification and recognition procedures: Possibility for partial/full certification, recognition of study performance in case of mobility.

This list was subject to scrutiny by an on-line community of experts who rated as most important: the definition of qualification framework and reference levels including VET and HE; the documentation of knowledge, skills and competences with the help of the new EUROPASS; the consideration of workload as criteria to define VET credits; and the formulation of principles similar to the ones available for ECTS.

The constituent parts of a credit transfer system are identified and then defined. The first component is credits, defined as 'quantitative measurement of parts within a whole', which in ECTS refers to the study course or programme, whereas in ECVET the focus is on the VET programme and the learning outcomes in KSC associated with occupational profiles. Noting that the UK Adult Education sector uses the concept of 'notional learning time' related to the time an average learner would take to achieve specified learning outcomes from a given baseline, Le Mouillour argues that this approach may act as a bridge between ECTS and ECVET. The second constituent is levels and standards, and within each national VET system Le Mouillour suggests that credits can be associated with levels and existing qualifications in 'the requirements for an individual to enter, or progress within an occupation' (Tissot, 2003: 96). The third aspect concerns modularisation and unitisation and ECVET must be based on units of a size appropriate for anchoring in the VET system and vocational profile, sequencing along the reference levels and linked with modules and locus of learning (whether workplace, school or elsewhere). Fourth, and perhaps most important, is the question of recognition and validation for certification at individual level. A credit system must facilitate recognition of prior experience and learning, whether in formal or informal settings, according to certification processes and procedures established within member states, whilst promoting European mobility. Developing ECVET must therefore accommodate regulations in different countries as well as the *acquis communautaire* of European mobility of individuals and associated European instruments such as EUROPASS (CEU, 2004). Le Mouillour (2004: 54) notes a major obstacle in the use of similar terms in different languages, citing *validation des acquis de l'expérience* in France as equivalent to accreditation of prior learning in the UK, and noting that these have nothing to do with accreditation procedures in the sense of legal and quality management at institutional and programme level.

Finally, the report considers an implementation toolkit, arguing that ECVET must be positioned in relation to existing national qualification frameworks and frameworks for credit-based qualifications, as well as with the existing ECTS in HE. ECVET must take into account the impact of the challenges of lifelong learning and the Lisbon objectives for education and training and be guided by a set of principles to encourage acceptance and trust of the framework in member states. The principles outlined reflect three defining characteristics of VET: the heterogeneity of learners' biographies, learning pathways and motives; the multiplicity of stakeholders; and the diversity of

mobility schemes. The implementation recommended therefore involves using standards and regulations in force at national level with existing documentation and information structures, such as occupational registers and catalogues (*Berufsbilder* in Germany; *Catálogo Nacional de Cualificaciones Profesionales* in Spain; *répertoire national des certifications professionnelles* in France)

## Conclusions

The three reports for the TWG established the foundations for constructing ECVET but considerable detailed work remained to be done. To operationalize and implement ECVET further actions were needed, remaining problems had to be addressed and further research undertaken, which raised the question of whether it would be feasible to introduce ECVET so quickly.

The necessary actions were undertaken with the involvement of the main actors in VET. An overarching framework is important for inter-sector and international mobility, and the role of ECVET is primarily as a 'top down' facilitating guiding framework to ensure there is sufficient inter-sector comparability and commonality. This must be complemented by the 'bottom up' creation of sector level ZMTs to ensure relevance to workplace needs. Ministries and agencies responsible for VET are endeavouring to ensure that the learning outcomes in national qualification frameworks can accommodate their qualifications within the reference levels and typology as a facilitating template to enable comparison with other countries. Social partners and training bodies at sector level are working on the detail because sector needs are relatively uniform across different countries. The Leonardo da Vinci Programme has already contributed to substantial progress in this respect, since many Leonardo projects have developed new EU-wide qualifications. Further work is continuing to 'harvest' the results of these projects and incorporate them within the ECVET work programme.

The greatest remaining challenge has been the objective of creating seamless lifelong learning, which requires the typology of competence adopted in VET to dovetail with learning outcomes in HE. Conceptual problems are also evident from the work completed to date, which has shown that the difficulty is not simply in establishing an agreed terminology, but ensuring that a common vocabulary is underpinned by common meaning. Differences in VET systems and cultures present additional difficulties and the typology must be sufficiently flexible to accommodate this diversity since it would be counter-productive to attempt to harmonize systems that have developed to suit different socio-economic conditions. Where fundamental conceptual differences are apparent, as a result of the underlying theoretical models and assumptions, further work is needed to reconcile these and reach a common understanding without imposing a single approach.

Further research is required extending the breadth of countries to include all 25 EU Member States and ultimately researching practice beyond Europe. It is necessary to extend the depth of analysis, investigating competence in greater detail in specific occupations. Further work is still to be undertaken at sector level by sector specialists but it is evident that several occupational frameworks appear particularly suitable for testing and operationalising the typology. Two are also important because the labour force manifests extensive mobility between member states: the health sector (with particular emphasis on nursing) and tourism.

Finally, while the need for ECVET has been driven by the economic (and social) imperative of promoting greater labour market mobility, the speed with which it has proceeded has led some to conclude that the particular urgency evident when the Ministers responsible for VET adopted the guiding principles for ECVET at their meeting in preparation for the Maastricht summit in December 2004 was a result of the decision to create in 2006 a European Qualifications Framework (EQF) embracing HE and VET (EC, 2004). Since ECTS was already in operation, Ministers responsible for HE were expected to have more influence in establishing the EQF than Ministers responsible for VET unless they could introduce a parallel ECVET capable of interfacing with ECTS. From this perspective, the threat of an EQF serving the interests of HE and not VET was a serious incentive for ensuring the success of ECVET in 2005. At the time of writing, ECVET and the EQF appear to be developing according to plan and while there is much detailed work still being done there is a general consensus on the framework principles. Irrespective of political considerations, this progress is to be welcomed because the ultimate beneficiaries of ECVET will be those participating in learning at work and seeking mobility in the EU labour market.

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## **Acknowledgements**

I am grateful to Burkart Sellin at CEDEFOP for his coordination of the research projects to which this paper refers and to Barry Nyham also at CEDEFOP for further comments on an earlier version of this paper presented at the *Sixth International Conference on HRD Research and Practice across Europe*, Leeds, 25-27 May 2005.

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