

European reference levels for  
education and training  
promoting credit transfer and mutual trust  
Study commissioned to the Qualifications  
and Curriculum Authority, England

Mike Coles  
Tim Oates

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A zone of mutual trust (ZMT) is an agreement between individuals, enterprises and other organisations on the delivery, recognition and evaluation of vocational learning outcomes (knowledge, skills and competences). It offers practical help with decisions about the value of qualification and certification, further learning and recruitment into employment. ZMTs 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.

# Foreword

The study on reference levels frameworks which was carried out by QCA's research team in late 2003 and early 2004 was commissioned by Cedefop on behalf of the Credit transfer technical working group (TWG) set up by the Commission in November 2002. The brief of this working group was defined in the Council's Copenhagen declaration on increased cooperation in VET from the same year.

The discussions of the TWG have so far indicated:

- (a) that education and training (qualification) levels/frameworks are a central issue for the further development and application of credit systems in both higher education and VET;
- (b) that, following the Bologna process, a wide consensus has developed concerning levels or degree structures within higher education (bachelor, masters and doctorate degrees). A comparable consensus in VET ought to provide an additional reference at national and European levels and an important step forwards in promoting transparency, comparability, transferability and recognition in VET.

The Commission has proposed a draft directive on recognition of professional qualifications (COM (2002) 119), which will replace directives 89/48/EEC and 92/51/EEC on recognition of so-called regulated professions. Four qualification levels are included in this new directive, which was approved by the Council and the European Parliament in spring 2004.

Establishing some form of quantitative accounting of achievement is, therefore, an important element likely to enhance recognition, trust and mutual cooperation. The wider (and the fewer) the qualitative zones, the higher the chances of recognition of prior achievements and the development of mutual understanding at both national and multi-national or European level. Respective zones of mutual trust should also be identified.

Such qualitative elements may be characterised as zones of mutual trust which, as in higher education, operate according to multi-lateral networks of institutions determining their mutual acceptance. Creating such zones of trust within broad vertical levels is significant and reduces barriers to credit accumulation and transfer.

The QCA study aimed to provide the necessary information for identifying and defining the zones in which mutual trust for credits transfer/accumulation in VET ought to exist or to be further developed.

The study focused on reference levels or qualification frameworks (perceived or officially defined within international, national, regional or sector VET systems) within transfer/accumulation processes, and on other necessary zones of mutual trust for developing European or international credit (transfer) systems.

The main task was to prepare recommendations for thorough definition and development of an outcome-based interpretation of reference levels for vocational learning, going beyond a structure or framework based primarily on duration of training or kind of certificate, with a view to defining a respective zone of mutual trust.

At the beginning of 2004, QCA, in close connection with the Commission services and Cedefop, organised, as part of the contract, two consultative meetings with high level experts from several Member States.

Cedefop appreciates the effective and efficient performance delivered. The final report was submitted for consultation and was regarded by the TWG members as very useful and forward looking. The wider dissemination of this report by Cedefop does not imply that the QCA report is officially endorsed either by Cedefop or by the European Commission. The outcomes and recommendations will be further discussed at both technical and political levels.

As this report is of value to practitioners, project managers or planners, irrespective of political follow-up, Cedefop decided to disseminate the findings to support the new Europass, transparency and mobility or exchange activities in VET and LLL throughout Europe. It seeks primarily to promote further development of credit transfer schemes.

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Thessaloniki, November 2004

# Preface

This report is the principal outcome of the Cedefop-funded study on Reference levels, zones of mutual trust for the accumulation and transfer of credits: definition of reference levels in vocational education and training. It focuses on two key areas:

- (a) the way in which zones of mutual trust (ZMTs) operate, and whether the concept of ZMTs is useful for both understanding how transparency arrangements operate and for framing public policy designed to enhance access and progression (in employment, education and training);
- (b) whether an agreed framework of levels would facilitate effective allocation of qualifications and of accumulated experience for the purpose of enhancing ZMTs, particularly in respect of increasing European cooperation in vocational education and training.

The authors of this report would like to thank the project reference group for their contributions and advice on the research. The reference group is:

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Meetings of the reference group were also attended by Burkart Sellin (Cedefop) and Simon Jones (European Commission).

A synthesis meeting was held at the Qualifications and Curriculum Authority (QCA), London, the United Kingdom, in early March 2004 with additional researchers from several Member States. The authors would like to extend their thanks to all who attended. The comments on the report and the examples provided were important to the completion of this project.

Background research, project management, and the production of the report were carried out by Jason Hall, Bonnie Howard, and Gill Taker at QCA.

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# 1. Executive summary

This summary outlines the principal outcomes of the Cedefop-funded study on ‘reference levels - zones of mutual trust for the accumulation and transfer of credits: definition of reference levels in vocational education and training’. It focuses on two key areas:

- (a) the way in which zones of mutual trust (ZMTs) operate, and whether the concept of ZMTs is useful for both understanding how transparency arrangements operate and for framing public policy designed to enhance access and progression (in employment, education and training);
- (b) whether an agreed framework of levels would facilitate effective allocation of qualifications and of accumulated experience for the purpose of enhancing ZMTs, particularly in respect of increasing European cooperation in vocational education and training.

For (a), the project has presented a new definition of ZMTs and concludes that the concept has considerable power in explaining how access and progression in employment and in vocational education and training operate.

For (b), the project concludes, on the basis of extensive scrutiny of the form and operation of existing levels frameworks, that a new framework and associated administrative arrangements for its effective implementation seem to be a prerequisite for the proper design and application of credit transfer schemes in VET (ECVET). As a result, the project has proposed a new eight-level framework, which is based on outcomes. The project team has striven to provide an adequate theoretical basis for the new framework, as well as ensure adequate practicability and utility.

In addition, the study team has identified the following emerging issues as areas which would benefit from further research and development work, and from the attention of policy-makers:

- (a) developing a technical manual for implementing the proposed levels framework;
- (b) establishing the links between the levels framework and credit systems;
- (c) developing effective administrative systems for supporting the implementation and operation of reference levels;
- (d) evaluating and monitoring the framework and its accompanying administrative systems.

On the possibility of ensuring effective implementation of the proposed framework, we conclude:

- (a) the existence of a levels framework is insufficient alone; even with the existence of (sectoral/national/transnational) frameworks and listings of recognised qualifications, decisions still need to be taken as to whether any given qualification or body of experience matches the stated requirements;

- (b) criteria are needed for the forms of assessing skills, knowledge and competences; they must be legitimate and be administered effectively in relation to specific outcomes;
- (c) decisions are needed on the forms of (and mechanisms for) public accountability and openness:
  - (i) in arrangements for assigning qualifications to levels;
  - (ii) in formal arrangements relating to licence to practice (backed by legislation);
  - (iii) which might be imposed on highly informal ZMTs which have arisen through short-term labour requirements (skills shortages/gaps).

## **1.1. Research methodology**

The project was undertaken by review of:

- (a) policy documents relating to developing credit and credit systems;
- (b) national and international levels frameworks, including ISCED 97, ISCO 88;
- (c) research literature on the differentiation of levels and taxonomies of occupational performance and education and training;
- (d) research literature on labour market mobility and the operation of factors that adversely affect or beneficially enhance mobility and access to, or cooperation in, vocational education and training.

There were also consultations with research agencies in Denmark, France, Germany, Greece and Ireland to validate the findings on ZMTs and the levels framework, in relation to the VET systems which exist in those countries.

## **1.2. Definitions**

From the outset of the work, definitions of a zone of mutual trust and reference levels were developed to help those involved in the project share a common understanding.

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). ZMTs offer practical help with decisions about the value 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.



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 their ability to condition VET systems and labour markets, therefore, we assign them a weaker influence and characterise them as ‘indirect formal mechanisms’.

We have categorised the mechanisms for ZMTs as follows:

<b>Direct formal mechanisms</b>	<b>Indirect formal mechanisms</b>	<b>Informal mechanisms</b>
Legislation Licensing Labour market agreements National accreditation systems Targeted funding	Credit structures Qualifications frameworks Mechanisms for recognition and accreditation of prior learning	Recruitment drives Employer-candidate information exchange Guidance processes Local validation systems

### **1.3.2. Purposes**

The research work has established that there are many reasons for the emergence of ZMTs. The key purposes are to:

- (a) design better qualification processes;
- (b) increase mobility of labour;
- (c) facilitate exchange of learners within and between systems;
- (d) create more flexible recruiting processes;
- (e) ensure progression for skilled workers;
- (f) help to meet economic targets;
- (g) generate a record of progress;
- (h) enhance Lifelong Learning (LLL) through improved access to learning;
- (i) enhance LLL through increased learner awareness of skills, etc.;
- (j) ease transition from one education/training provision/level to another;
- (k) reduce repetition in learning programmes;
- (l) improve efficiency of use of resources relating to VET;
- (m) provide a common language to users.

The purposes determine who are the key stakeholders, the time scale for the ZMT to operate and the level of formality required.

We examine informal and formal ZMTs, reviewing the purpose(s) of specific instances and exploring the operation of different mechanisms to support them. We conclude that public policy on ZMTs needs to be highly strategic regarding when to:

- (a) stimulate a ZMT where none existed before;
- (b) intervene strongly to support the operation of a ZMT;
- (c) provide 'light touch' support where a ZMT is operating relatively effectively but is in danger of decay and thus losing key public benefits;
- (d) take a deliberate decision not to intervene in a ZMT, since it is operating effectively without public policy support;
- (e) intervene to transform a ZMT (expand it, close it down, etc.).

### **1.3.3. International qualification frameworks**

In addition to the OECD and the EU, other international agencies are pursuing work related to qualifications frameworks; these include ILO (research project on frameworks), Unesco (ISCED) and the World Bank (VET qualifications systems). There are also several occupational classification systems that might be seen as frameworks, notably the national classification of economic activities (NACE) and its international counterpart ISIC. Three frameworks for qualifications stand out in the international literature: the Bologna structures for HE, ISCED 97 (covering all education), and the 1985 European structure of training levels for VET (see Annex 3). These three are designed to be inclusive for qualifications in their field and can be said to be metaframeworks in that national structures can be related to them.

The International standard classification of education was designed by Unesco in the early 1970s and adopted in 1978 to serve as a means of gathering and presenting statistics on education in individual countries and internationally. It has several limitations as a qualifications framework but is used widely and has a set of levels with descriptors. Any development of reference levels should build on the international understanding that has developed around ISCED 97. This will facilitate continuity in many ways, not least in statistical analysis of educational trends. Linked to ISCED is the international standard classification of occupations (ISCO 1988). This four level classification is also important in defining common reference levels since in VET and in HE the field of occupations is a key differentiating component.

## **1.4. Background to qualifications framework development**

While the policy underpinning qualifications frameworks and credits may share a more or less common set of goals, the frameworks themselves are emerging in very different forms. Through the study of existing national and international frameworks, we have identified the following dimensions of variation:

- (a) outcome based evaluation (explicit competence and/or learning outcomes) versus learning input (process or content of programmes);
- (b) levels without descriptors (equating framework) versus levels based on descriptors (descriptor framework);
- (c) integrated (no separate tracks or lines) versus differentiated in terms of two or more tracks or lines;
- (d) whole qualification level versus unit/module level;
- (e) large number of levels or sublevels, some of which may be vacant versus few levels, all of which are populated with qualifications.

Of particular importance is the distinction between descriptor-based frameworks and those which have no descriptors for levels, known as equating frameworks. Both are ‘theory driven’ in that implicit theories lie behind assigning levels to respective qualifications in an equating framework and matching qualifications to descriptors.

One problem that afflicts qualifications frameworks arises when they are used as tools for rationalisation. From this follows the question of the extent to which policy use of the framework seeks to accommodate existing arrangements (passive function) or to change existing arrangements (active function). The accommodation strategy (passive function) suggests a larger number of levels and more generic descriptors, or use of an equating framework with no descriptors at all. The prescription strategy (active function) suggests a smaller number of levels with more tightly specified descriptors. In practice, most (national and transnational) frameworks have been a mix of the two approaches. However, it is vital that policy-makers and developers are conscious of these different orientations.

## **1.5. VET and higher education**

Work on levels of qualifications and programmes and on credit (Socrates and ECTS) has advanced well in higher education (HE), at least regarding input (student workload) considerations. Collaboration by institutions to bring about the ‘three cycles of HE understanding’ and the more recent Tuning project on curricula agreements in HE together with the three core elements of the ECTS system (course information, mutual agreement between institutions and use of ECTS systems) are model European ZMTs. While frameworks for non-HE qualifications are gaining ground, credit transfer in VET is generally less developed.

## **1.6. Theoretical considerations**

We have reviewed literature from a range of sources to support developing a robust set of reference levels.

First we consider the work of Jaques, *Requisite organisation* (1996). This suggests that the demand, complexity, prior knowledge and importance of tasks lie in the time scale over which they are normally expected to take place. In determining European reference levels, it is possible to use Jaques' work to support an eight level framework, defining within each level the kind of activities one would expect to find.

More theoretical insight into hierarchies of performance is available from Dreyfus (1992). Work on reference levels can be informed by Dreyfus' definition of a sequence of 'expertness'. While he offers a qualitative hierarchy in capability, other writers have embellished it with descriptions of learning modes that may also be useful to European reference levels. It is interesting to note the use of a qualitative descriptor for levels. Despite the need for user-friendly terminology for European nations (numbers are simple to use) the key attribute of this qualitative approach is a blurring of the boundaries between one type of work and another.

We have also examined credit-assigning systems such as Interskills (<http://www.interskills.info>), formal national frameworks of qualifications from Australia, Ireland, New Zealand, Scotland, South Africa, and the classifications of qualifications and/or training in Denmark, France, Germany, Greece, Italy and Sweden.

## **1.7. Creating a new metaframework of levels in Europe**

It would be relatively easy to define a set of reference levels using the main international reference systems described earlier. However, while this would build on any ZMTs associated with these frameworks, it is likely that tensions would grow as a result of national differences of interpretation of descriptors and possible insensitivity to the nature of VET, particularly its breadth. Given that the reference levels are required to sustain a credit transfer and accumulation function, the need to look for more grounded reference levels was clear. Rooting a reference level framework in its potential uses provides us with a logical flow of ideas from purpose through to design considerations.

First we consider the purposes of a European reference levels framework. These originated from examining questions which users may want the framework to answer. Our aims are:

- (a) a means of understanding the provision of knowledge, skills and competences in different VET systems across the wider European Unity;
- (b) a way of developing a convergent trend in European VET systems so barriers to movement of people, skills and enterprises are reduced;

- (c) the basis of developing ZMTs across country boundaries and possibly across sectors within a country;
- (d) a means of structuring sector activity so that it becomes coherent and integrated with work in other sectors;
- (e) the basis for equating qualifications, training and work experience across countries;
- (f) the basis for ECVET;
- (g) a means of linking VET and HE in a single qualifications framework;
- (h) supporting target setting and planning for the medium term;
- (i) facilitating cooperation between providers of VET in Europe;
- (j) providing a means of recognising progression in learning between levels and within levels.

Research suggests that development of reference levels without stakeholders is likely to be limited, protracted in time and heavily focused on overcoming issues and differing interests. It is essential that we consider possible users when designing the framework. Users are likely to be:

- (a) European policy-makers;
- (b) national policy-makers (in ministries, in government organisations and major independent players);
- (c) regional policy-makers;
- (d) universities and other HE institutions;
- (e) professional bodies (sectors and trade unions);
- (f) analysts (for example labour market researchers);
- (g) employers;
- (h) training providers, VET managers, designers and recruiters;
- (i) applicants for courses and jobs in another country.

Having identified purposes, stakeholders and some key issues that reference levels need to address, the project examined the options for defining the reference level framework. This should have certain qualities if it is to fulfil the purposes. For example it should:

- (a) be easily understood in terms of what it is, what it can do and what it cannot do;
- (b) enable increasing development of ZMTs so that it builds on current practice and takes account of the ways reference level frameworks become popular and influential;
- (c) be consistent with existing widely used frameworks;
- (d) cover all aspects of VET, i.e. training provision, qualifications development, assessment of work based knowledge and skills, certification;

- (e) be especially conducive to linking quality assurance and assessment with a level;
- (f) be capable of offering a meaningful reference point within different contexts for VET such as occupational sectors and fields;
- (g) recognise social reality regarding labour market conditions and wider social goals and be capable of evolution to meet pressures for change;
- (h) include HE frameworks and levels;
- (i) facilitate sector involvement.

Alongside this, there are structures which cannot be ignored in defining European reference levels:

- (a) a common framework with ISCED that has already established a level system for equating initial education systems;
- (b) an accepted qualifications structure for qualifications awarded in HE;
- (c) NACE (ISIC) has become a foundation for sector definition;
- (d) the emerging EU level system for recognising regulated professional qualifications.

In addition, it must be allowed to accommodate input models of VET and models based on assessed outputs and it needs to be flexible in allowing a European credit system to develop.

In the light of these requirements, and on the basis of the theoretical and empirical enquiry undertaken in the project, we propose a system with eight discrete levels. Additional sublevels may tentatively be defined as follows:

- (a) partial: indicates that the qualification or completed training programme or job experience, while predominantly matching the specific descriptors, has some significant gaps that need to be acknowledged;
- (b) modal: indicates that there is a good match of the qualification or completed training programme or job experience to specific descriptors;
- (c) exceeds: indicates that there is a complete match of the qualification or completed training programme or job experience to the requirements of the specific descriptors at this level and some additional elements that exceed the requirements of the descriptors at this level.

The eight-level structure has the merit of clarity and simplicity. However, the variety of qualifications and VET programmes is such that programmes which are significantly different in character would still 'qualify' for the same level, e.g. level 3. Sublevels may be essential for discriminating between these significantly different programmes and the outcomes which are derived from them. For example, on the basis of research regarding the level of study and of outcomes, we would suggest that the Danish apprenticeship scheme should be located within level 3. However, it is significantly broader and deeper in its content and coverage than the United Kingdom apprenticeship, also a level 3 programme. While both should be

located in level 3, there must be some means of discriminating sensitively between them; sublevels allow location at different sublevels within the same level. This also tackles the severe political problems which have emerged with frameworks such as ISCED, where different national governments have felt uncomfortable about the location of significantly different programmes in the same level.

The sublevels may be important to the operation and integrity of the proposed framework. They enable a broad, eight level overall structure to be used - underpinned by research on the structure of work performance and with the merit of clarity - and at the same time allow sensitive location of different programmes and outcomes within each level and within the overall structure.

Although there are several benefits to assigning qualitative labels to levels we propose that the TWG continues to use numbered levels and leave individual nations to decide whether they wish to assign qualitative names for levels (e.g. ‘basic’; ‘technician’, etc.).

*Table 1: Model of the proposed reference level framework*

<b>European reference level <sup>(1)</sup></b>	<b>General descriptor</b>	<b>Dimension A qualification</b>	<b>Dimension B experience of work</b>
<b>1</b>	Learning normally acquired during compulsory education and considered as contributing to a general knowledge and development of basic skills. Learning is not usually contextualised in work situations.		
<b>2</b>	Completion of compulsory education which includes an induction to work. Basic knowledge of work can be acquired at an educational establishment, in an out-of-school training programme, or in an enterprise. Generally it is not occupation-specific. The range of knowledge, skills and competences involved is limited. Qualification at this level indicates a person can perform basic tasks and exercise skills in a controlled environment. All action appears to be governed by rules defining allowable routines and strategies.		
<b>3</b>	Completion of a basic vocational training qualification introducing the idea of job competence. It is normally considered part of upper secondary education. This qualification shows a person has basic skills suitable for many job functions and the capacity to carry out tasks under direction. Most action of people at this level of qualification is deliberate repetitive application of knowledge and skills.		

4	Qualification at this level normally includes upper secondary education and a work based training programme in an alternance or apprenticeship scheme and involves developing knowledge linked to a specific occupational field. People qualified at this level are able to work independently on tasks and have the capacity to apply specialist knowledge, skills and competences. They will have extensive experience and practice in both common and exceptional situations and be able to solve problems independently using this experience.		
5	Completion of a main vocational training qualification such as apprenticeship or further education and training. This form of qualification involves significant theoretical knowledge and involves mainly technical work that can be performed independently and entail supervisory and coordination duties. Qualification at this level indicates a person can deal with complex situations and their performance can be a benchmark for others. They will have considerable experience and practice across a wide range of work situations.		
6	Qualification at this level covers a high level of theoretical and practical knowledge, skill and competence, entailing a mastery of the scientific basis of an occupation. It means a person can deal comfortably with complex situations, is generally autonomous and can assume design, management and administrative responsibilities. Such qualification is equivalent to the first Bologna cycle of higher education.		
7	These qualifications recognise specialist theoretical and practical learning that is required for work as (senior) professionals and managers. People qualified at this level will have a wide breadth and depth of knowledge and be able to demonstrate high levels of specialist competence in an area. They will operate independently and supervise and train others where they can be inspiring. These qualifications are equivalent to the second Bologna cycle of higher education.		
8	These qualifications recognise people as a leading expert in a highly specialised field dealing with complex situations and having the capacity for long-range strategic and scientific thinking and action. Such experts develop new and creative approaches that extend or redefine existing knowledge or professional practice and often teach others to be experts and masters. The qualifications are equivalent to the third Bologna cycle of higher education.		

(<sup>1</sup>) Training providers or bodies responsible for accreditation/assessment may subdivide a level into sublevels, e.g. partial, modal or exceeds.

## 2. The research and the European context

The Lisbon European Council in March 2000 set the European Union the strategic goal of becoming the most competitive and dynamic knowledge-based society in the world. The development of vocational education and training is a crucial and integral part of this strategy. The Barcelona European Council in March 2002 reaffirmed this important role. The conclusions give a mandate to introduce instruments to ensure the transparency of qualifications and, in parallel to the Bologna process in higher education, to develop closer cooperation in VET. Barcelona also set the objective of making European education and training systems a world quality reference by 2010 (points 43 and 44 in the European Council presidency conclusions, Barcelona 15 and 16 March 2002).

The cooperation effort needs to include all major actors, irrespective of level or institutional context. Legal and administrative mechanisms for coordination and control, as typified by national qualifications systems, need to be supplemented by other instruments and approaches such as exchange of good practice, dialogue and peer review. In their discussion of the principles for increased cooperation, the Directors General for Vocational Training (DGVT) of EU Member States underlined that work must be based on the principles of transparency and mutual trust. Furthermore, at the meeting of the DGVTs in Santiago de Compostela, Spain, 23-24 April 2002, there was general agreement on the following points:

- (a) there is a need for increased cooperation in VET, on a voluntary and ‘bottom-up’ basis, and according to Articles 149 and 150 of the Treaty, to fulfil the mandate of the Barcelona European Council;
- (b) the active involvement of the social partners, the EEA countries and the candidate countries is essential to the success of this initiative;
- (c) a long-term perspective should be applied;
- (d) the aim of increased cooperation should be to promote mutual trust, transparency, and increased recognition of qualifications on the one hand, and to raise the status (regarding quality) of VET on the other.

Following the conclusions of the European Council meetings at Lisbon and Barcelona, ministers responsible for VET in 31 countries, the social partners at European level and the Commission meeting in Copenhagen in November 2002 adopted the so-called Copenhagen declaration on enhanced European cooperation in vocational education and training. The declaration covers several key domains for the success of the Lisbon and Barcelona strategy, such as building up a true European Labour Market through transnational recognition of competences and qualifications and improving the quality of VET.

Various administrative structures were put in place following the Copenhagen declaration, one of which was establishing a technical working group made up of representatives from Member States and social partners to investigate the setting up of a European credit transfer system for VET (ECVET). This group has given a mandate to Cedefop and the Commission

to launch two research projects to feed its discussions towards defining principles and approaches to ECVET.

One study is based in Kassel University in Germany and aims to assess how far, and under which conditions, existing approaches may be relevant to the development of ECVET. The main expected outcomes are a comprehensive overview of different applicable schemes, options and/or models for credit transfer systems, together with proposals for a set of common principles for ECVET and for a pilot scheme to be tested in different countries.

The second study was given to QCA and is concerned with determining a possible European framework for defining and allocating reference levels (see mandate of the TWG) that are based on an understanding of zones of mutual trust. The last phrase refers to the arrangements where qualifications carry currency across sectors and across national boundaries.

The QCA project team has examined literature for the ways in which mutual trust for transparency and credit transfer in national VET systems currently exists. Particular attention has been paid to the potential of further developing zones of mutual trust with a view to supporting the introduction of reference levels to support ECVET. The zones of mutual trust (ZMT) project was commissioned by Cedefop running from September 2003 to March 2004. The study aims to identify and define zones in which mutual trust is necessary for enabling credit transfer/accumulation in VET and focuses on:

- (a) reference levels or qualification frameworks which allow credit transfer/accumulation;
- (b) other necessary zones of mutual trust for developing credit (transfer) systems at the European or international level.

The study has engaged in:

- (a) defining zones of mutual trust (ZMTs) and an analysis of how such zones operate; this includes providing examples of ZMTs from different EU countries;
- (b) how national and transnational arrangements might be managed to enhance the operation of formal and informal ZMTs;
- (c) how a new set of reference levels might be formulated to enable credit transfer and accumulation.

The aim is to produce policy support to national and European level stakeholders to enhance labour mobility, to ease access to and increase cooperation between vocational education and training provision.

By engaging with the concept of ZMTs and developing reference levels the Commission recognises the existence and value of bottom-up developments in these matters. It is vital to understand the complex links between policy instruments such as qualifications frameworks, administrative systems designed to implement such instruments (such as qualifications approval systems, quality assurance arrangements, etc.) and the negotiations and discussions which precede and accompany such instruments. In many national settings, frameworks are the consequence of such discussions; they represent a carefully derived set of agreements and

relationships. These agreements and relationships frequently relate to discussions which have taken place over decades (Cockrill, 1997). In other words, a framework of levels by itself can best be seen as a necessary but not sufficient instrument. It only has purchase where it is embedded in these wider, deeper processes. This has not always been made clear in nations which have only recently considered the production of a qualification framework. Great attention has been paid to the form of the framework, and little to the administrative apparatus or necessary mechanism for its implementation, or to the negotiations on agreements between different industrial sectors, social partners, education and industry interests, etc. (Millar, 1997).

The focus of the work of this project has been on understanding not only the interplay of these elements, but also on the contextual factors which affect the creation of zones of mutual trust. The proposed levels framework (see section 5) has focused carefully on an outcomes-orientation, on allowing access to recognition independent of training pathways (in line with the Commission's work on informal and non-formal learning), and concentrating on levels of working activity (*Beruf; profile; metier*). The work also emphasises the importance of using a common language for occupations (i.e. type of work related activity and necessary skills) as well as skill levels.

Although the project focuses on initial and continuing VET and LLL, the work on defining and operating zones of mutual trust has also considered similar work in respect of higher education and the regulated professions. The concept of zone of mutual trust emerges as a powerful tool for understanding arrangements in these areas as well as in initial and continuing VET.

## **2.1. The approach**

The topic is timely, in the light of the gathering pace of developments in credit frameworks, national qualifications frameworks and transnational classification. International mobility of labour is increasing; it is important to establish systems that secure the twin aims of facilitating access and mobility (for the person) and protection (in respect of consumers). This is a delicate balancing act. With an overarching aim of increasing the availability of skills to society, the economy and individuals, new systems can as easily and unintentionally erect artificial barriers as they can allow better communication of individuals' attainments. Indeed, the recognition of achievements and attainments is hampered by both major and minor differences in recognition systems (the size of qualifications, their content and scope, differing occupational classifications, etc.). The project has explored whether a metaframework can be developed (recognising that ISCED and ISCO already strive to offer transnational tools for comparison) which cuts through these problems.

QCA's interest in the project stems particularly from the attempts in England to develop a national qualifications framework, and a failure to date to relate national developments in this area to other transnational classifications and frameworks. Work with higher education

interests is in hand across the four nations of Ireland and the United Kingdom to align qualifications frameworks and enhance qualification transparency for people who want to work or study in a country other than the one in which they were educated or trained. A metaframework holds the promise of enabling relations between these frameworks to be established without necessarily altering the separate frameworks themselves, while the project’s work on ZMTs may allow administrative arrangements to be developed which enhance access and mobility through mutual recognition systems operating in specific communities and sectors.

The project has been undertaken through review of:

- (a) policy documents relating to the development of credit and credit systems;
- (b) national and international levels frameworks, including ISCED 97 and ISCO 88;
- (c) research literature on levels and taxonomies of occupational performance and education and training;
- (d) research literature on labour market mobility and the operation of factors that adversely affect or beneficially enhance mobility and access to, or cooperation in, vocational education and training.

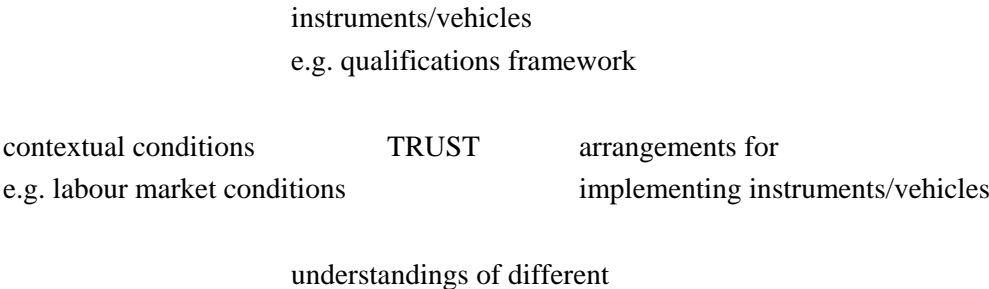
This review process resulted in a series of technical working papers that were considered in a technical seminar held in London in January 2004, with a specially convened reference group of experts from research agencies in Denmark, France, Germany, Greece and Ireland. This synthesis report was subsequently drawn up from the technical papers and the discussion from the technical seminar (January 2004), and was reviewed at a synthesis seminar with additional experts in London in March 2004.

**2.2. Definitions**

From the outset of the work a definition of a zone of mutual trust was developed to help participants share a common understanding.

The model which underpins the definition is as follows:

*Figure 2: Zones of mutual trust*



parties within the system

The current form of this definition is as follows:

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). ZMTs offer practical help with decisions about the value 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.

Details of 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.

The research team has been careful in its use of the term ‘sectors’. This term is used variously in different national debates and by different researchers and agencies to refer to: sectors in provision of education and training (e.g. the ‘private training sector’, the ‘higher education sector’); sectors in economic activity (e.g. industrial sectors such as mining, healthcare); and different occupations or labour market segments (e.g. occupational families or fields). In this report we are careful to prefix the term sector with other words, when a restricted meaning is intended, for example the ICT occupational sector.

Finally we intend the word qualification to follow the Cedefop definition. A qualification is an official record (certificate, diploma) of achievement that recognises successful completion of education or training, or satisfactory performance in a test or examination, and/or the requirements for an individual to enter, or progress within an occupation.

We recognise that ‘qualification’ has primarily a personal dimension beyond official recognition: the notion of ‘personal profile’; the set of skills, knowledge and competences which an individual has built up through formal, informal and non-formal processes. Through these, someone may be ‘qualified’ to undertake a role or to complete tasks by virtue of skills and knowledge additional to or different from those recognised formally through certification.

## **3. Understanding ZMTs**

### **3.1. Causes, architecture, variability and evolution**

The concept of a ZMT is relatively new. Few researchers, even in VET, seem to be familiar with the term. However, after establishing a formal definition, the QCA researchers have found it to be a powerful means of understanding the operation of selection processes and credit recognition arrangements. By developing greater understanding of the operation of these processes, it is possible to suggest strategies that national and European administrations or agencies can put in place for enhancing them.

There is a tendency for national governments to think in terms of unitary systems that operate through centralised rules, underpinned by legislative arrangements (Green, 1997). However, labour markets evolve and change in ways that contradict simple models and show extreme diversity in how different training providers and occupational sectors or segments operate; contrast for instance the highly structured and regulated world of medical practice and the rather informal employment practices in the hospitality sector. Even in advanced economies, the existence of the ‘shadow’ economy - ‘black’ labour and production - shows a sustained tendency for economic systems to include informal and ‘hidden’ activities alongside more regulated, overt employment systems. The formal and the informal have a habit of coexisting and evolving in tandem. This study suggests that concepts of formal and informal can helpfully be applied to the agreement arrangements that characterise ZMTs. There exists a range of mechanisms and practices that establish and sustain zones of mutual trust (ZMTs), which span a spectrum from formal to informal. This applies to national as much as to European or international contexts.

Zones of mutual trust involve more than recognition arrangements. The latter can be relatively straightforward and instrumental as would be described by, for example, an agreement to swap a loaf of bread for a half kilo of butter. Recognition arrangements can be described in law and leave little room for change in exchange value. ZMTs go beyond this and are more organic. They can establish themselves and change with changing conditions. They involve perceptions and accommodate community values. Sometimes they are ‘owned’ by no one but basically understood by everybody.

### **3.2. Regulation support for ZMTs**

Regulation - i.e. a more formal dimension to established zones of mutual trust - is crucial to providing adequate protection for both workers and consumers. Recent EU proposals to allow medical practitioners to work for short periods of time in a country other than the one in which they were initially trained and licensed have met with opposition from both individual

medics and their professional bodies. One key issue is concern that medics under suspension or investigation in their own country would be able to practice in another, since there currently is no transnational sharing of information on these matters. Simply showing evidence of successful initial and further training and certification risks falling short of the trust requirements of medical practitioners and does not, in the practitioners' view, provide adequate protection to patients (consumers of health care). This raises an interesting theoretical issue; 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. ZMTs can not be imposed; they must be based on consensus and voluntary participation. This is applicable also for any European qualifications framework or levels structure.

To illustrate further the implications of this last observation, ZMTs can be considered to operate in the same way as financial systems, through complex, mediated, common consent. This is exemplified in the way in which currency secures its exchange value. A one-euro coin is not in itself worth one euro, as the metal which makes up the coin is worth considerably less than one euro. What makes the coin worth one euro is the common consent between people within the market that the coin is worth that much. The whole banking system is based on this mutual consent and agreement, reinforced by the complex, formal and elaborate arrangements which control borrowing and exchange. The reinforcement through such mechanisms is vital; it allows a banker's draft (written on a piece of paper worth a fraction of a cent) to be worth, for example, EUR 10 000.

This helps understand the function and operation of ZMTs:

*Table 2: ZMT financial system analogue*

<b>Financial system</b>	<b>Zone of mutual trust</b>
Coins, notes and drafts	Skills, knowledge and competence
Assigned value for purchasing and exchange	Assigned value for access and reward within education and/or employment
Supported by mechanisms such as exchange rates, banking, etc.	Supported by mechanisms such as sector-level skills agreements, qualifications frameworks, etc.
Operating in a context of national and EU monetary and fiscal policy, etc.	Operating in a context of skill supply and demand, national and EU education and training policy, labour market regulation, etc.
Quality assurance through national treasuries, compliance agencies, central bank, etc.	Quality assurance processes managed by government agencies, sector bodies, professional bodies, etc.

We suggest that this is not just a crude comparison: behind these elements are complex social systems which operate through the exercise of analogous mechanisms. It is important to examine how monetary exchange is supported by highly practical mechanisms which exist in both private and public domains and thus how exchange value can be assigned and supported in respect of skills, knowledge and competence in vocational education and training.

### **3.3. Stimulating informal ZMT mechanisms**

While regulation and licensing is the most prominent contextual factor affecting ZMTs, skills shortages frequently stimulate selectors to adopt proactive approaches, to recruitment for instance, which result in new ZMTs being set up. An example of this is in the construction sector in several Member States. With the emergence of acute and chronic structural skills shortages in areas such as steel fabrication and carpentry, employers have used employment agencies to recruit skilled workers in countries from the former Eastern bloc. As there is little understanding of the certification arrangements in those countries, recruitment is on the basis of employment history, i.e. work experience and practice. Informal ZMTs are thus established through the imperative of skill shortages, though they can be provisional in character and last only as long as such shortages exist. These ZMTs change with skill shortages in different sectors, e.g. in ICT, mining, building industries and involve temporary actions, such as when recruitment offices were set up for teachers and nurses in South Africa, for recruitment to the United Kingdom.

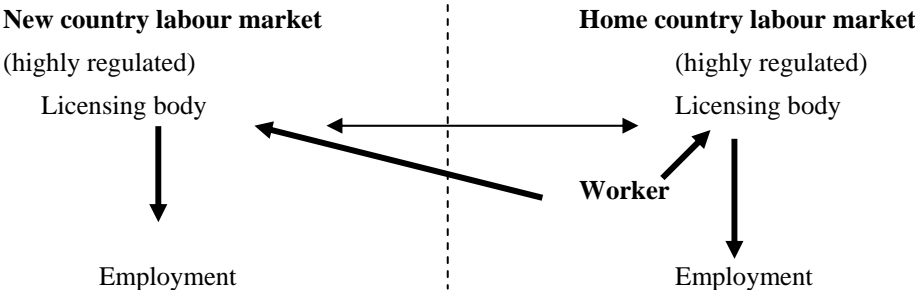
### **3.4. ZMTs, signalling and labour market mobility**

Econometric perspectives on licensing and legislation focus on the extent to which these allow appropriate labour market mobility and access to education and training. In some instances, such measures may enhance mobility by giving a clear signal that an individual has appropriate knowledge and skills (Coles and Collar, 2003). In others, they may have negative effects: the signalling may be too strong and may prevent selectors in education and employment from looking outside the pools of 'traditionally-labelled' labour. In addition, there may be implicit or explicit restrictions on entry to learning programmes which result in a given label: the area may be stereotyped as 'male' or 'female' labour or ethnic groups may be excluded from a given route, as may people from particular social and/or cultural backgrounds (Clayton, 2000).

Transnational ZMTs can operate through different patterns of interaction at formal and informal levels, or through formal and informal mechanisms. This is illustrated in the following diagrams which represent progressive weakening of regulation arrangements around employment. The situations described below include occupations covered by directives on regulated occupations.

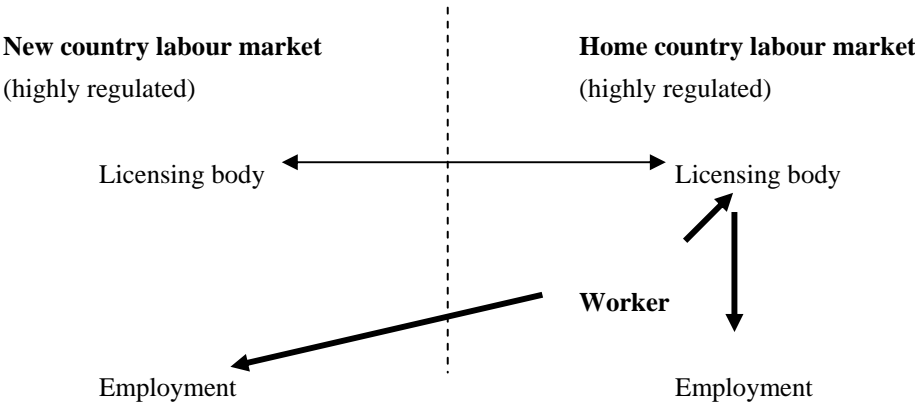
Note that the thin arrows (  $\longrightarrow$  ) relate to control of access, while the main transaction in accessing employment is indicated by the thick arrows (  $\longrightarrow$  ).

Figure 3: *Highly regulated access*



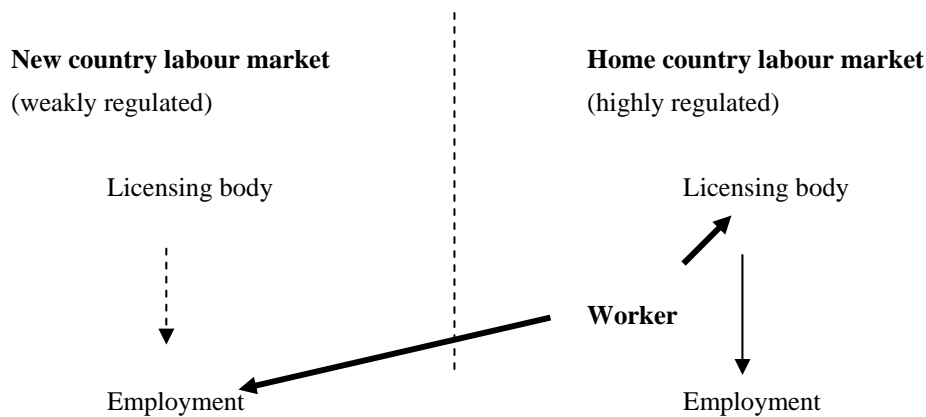
This illustrates the current situation in general medical practice within the EU, where a general medic must be fully certificated within a national setting to practice. Although reciprocal recognition exists between the licensing bodies, workers must meet additional requirements set by the licensing body in the United Kingdom before they can gain access to employment. There is much controversy in the profession in the United Kingdom regarding current proposals to remove the additional requirements, and move to a system dependent on licensing from the home country (within the EU). It is argued that problems may arise where a medic is under investigation in the home country for potential malpractice, with this information being held confidentially by the home licensing body until any case is proven. This may be resolved through formal information exchange arrangements between the licensing bodies in the different nations and without retention of the existing additional requirement. This indicates the importance of administrative arrangements in ZMTs.

Figure 4: *Liaison at licensing level*



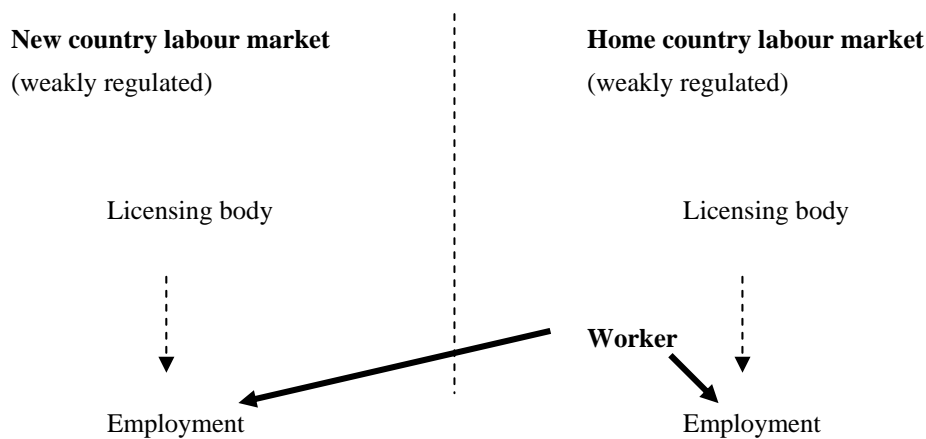
In this situation, the reciprocal arrangements between licensing bodies allow direct access to the labour market in the new country labour market.

Figure 5: Uneven regulation



This illustrates the set of relations between management level work in the hospitality sector, where work in the home country (e.g. Germany) requires licence to practice through initial VET, yet employment in another country is only weakly regulated. This enables open access to employment. There may be financial benefit for employers in the new country labour market, since they can readily gain workers with high skill levels which are securely signalled by formal certification in the home country, but outside formal wage structures, owing to the weakness of licensing in the employment setting.

Figure 6: Weakly regulated arrangements



The weakness of regulation in the two countries means that a worker can gain access to employment in both settings without formal licensing. For construction workers, labour migration under these weak arrangements can be high, where skill shortages exist in the new country setting and strong economic differentials between countries stimulate home country workers to seek employment in the new country setting.

Into this comes the crucial issue of self-perception, a much-neglected area in the study of mobility. Most models assume action on behalf of selectors (in education and training, and in employment), within a context conditioned by legislation and prevailing market conditions relating to labour flows. Often omitted is the issue of self-nomination. A person may have the skills which would enable movement to a new occupational area, but their self-conception (identity) suppresses any self-recognition that this might be possible, or places restraints on them feeling that any such movement is desirable or possible (Koniordos et al., 2001). Even where employers and selectors for education and training adopt active measures to try to overcome these constraints - such as targeted recruitment drives - self-perception can operate as a fundamental constraint. This is evident in the failed attempts to broaden entry to higher education in England in terms of social background, despite the overall significant growth in numbers progressing to higher education in that country (Deane and Watters, 2004; West, 2000). It is also evident in the coexistence in certain urban areas of high levels of unemployment in certain social groups, alongside skills shortages in areas into which these workers could be recruited.

This issue of self-conception (identity) is vital to the concept of 'mutual' in zones of mutual trust.

### **3.5. Intermediate mechanisms**

While we have conceptualised 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 their ability to condition VET systems and labour markets, therefore, we assign them a weaker influence and characterise them as 'indirect formal mechanisms'. Measures such as credit frameworks, etc. have been viewed in a positive light by some economists (OECD, 1996).

The apparently shifting role of formal qualifications is vital in understanding the balance of informal and formal mechanisms. A literature survey by QCA (Coles and Collar, 2001) suggested that while each person's level of initial qualifications is crucial to occupational progression, the role of qualifications in subsequent progression and mobility is reducing and employment history (accumulated experience) is becoming more significant. This has important informal elements: the way in which curriculum vitae are constructed; the way in which a 'narrative' is constructed and represented through interviews, etc.; and the networking which results in getting an interview. With these informal mechanisms, cultural and social capital come into play. Some individuals have greater skills than others in representing their employment history as a coherent narrative, identifying relevant and irrelevant elements, contextualising language, etc. to the selection processes. This differential in cultural and social capital may be having a concentration effect in respect of employment opportunities, income, etc. Figures suggest growing disparities between the most- and least-

well-off in key nations; those who already have extensive and relevant employment histories are those most likely to be given (and exploit) opportunities for progression and mobility (Brown and Keep, 1999).

‘Power’ thus has a key role in understanding ZMTs, concerning how, where and why they are set up and how they operate. It is important not only to the relationship between an individual and the selector(s) in employment and education/training - the gatekeepers to progression and mobility - but also in respect of the differential power held by different social groups.

### 3.5.1. Informal and formal

Any effective theorisation and description of ZMTs should include consideration of the full spectrum of formal and informal mechanisms, as well as underlying mechanisms which can potentially create inequalities:

Table 3: *Kinds of mechanisms*

<b>Direct formal mechanisms</b>	<b>Indirect formal mechanisms</b>	<b>Informal mechanisms</b>
Legislation	Credit structures	Recruitment drives
Licensing	Qualifications frameworks	Employer-candidate information exchange
Labour market agreements	APL <sup>(1)</sup> mechanisms	Guidance processes
National accreditation systems		Local validation systems
Targeted funding		

<sup>(1)</sup> APL: accreditation of prior learning.

This classification of mechanisms enables better understanding of how policy can be designed and adjusted to give greater support to ZMTs. In particular, the following are key issues:

- (a) in which areas (educational and labour market) will formal legislation/licensing enhance or counteract the building of ZMTs?
- (b) are existing data and review systems able to detect when formal measures and regulations are inhibiting or enhancing mobility, and how is it possible to detect patterns of inequality based on a lack of mutual trust?
- (c) how and what kind of informal mechanisms could be supplemented by formal measures and would this be generally a good step?

- (d) should informal mechanisms be supported - and/or stimulated - by state financial and/or political support, etc.?
- (e) what other measures could increase the chances of constructing effective ZMTs?
- (f) are there further forms of ZMTs that should be identified and supported as a means of increasing sustainable cooperation in VET and LLL within Europe, both for providers of, and participants in, training?

### **3.6. Context and purpose**

Understanding context and purpose is vital in analysing the functioning of ZMTs. The context of a recognition system is unlikely to be neutral: it can facilitate or hinder recognition. For example, in a rapidly expanding occupational sectoral environment, where jobs are being created and skills demand is outstripping supply, enterprises may establish informal working relationships with a greater number of training providers or deeper, formal agreements with some core providers. Another example of the influence of context is in an occupational sector with heightened public attention to health and safety, such as the childcare sector, where strict quality assurance processes may condition minimum acceptable levels of recognition of relevant skills.

Purposes influence ZMTs. There are many motives for establishing a ZMT; among them are to:

- (a) design better qualification processes;
- (b) increase mobility of labour;
- (c) facilitate exchange of learners within and between systems;
- (d) create more flexible recruiting processes;
- (e) ensure progression for skilled workers;
- (f) help to meet economic targets;
- (g) generate a record of progress;
- (h) enhance LLL through improved access to learning;
- (i) enhance LLL through increased learner awareness of skills, etc.;
- (j) ease transition from one education/training provision/level to another;
- (k) reduce repetition in learning programmes;
- (l) improve efficiency of use of resources relating to VET;
- (m) provide a common language to users.

The purpose determines who are the key stakeholders, the time scale for the ZMT to operate and the level of formality required.

### **3.7. Basic architecture**

The wide range of ZMTs has common elements and these provide the basic architecture. All ZMTs have:

- (a) shapers: people behaving in ways that shape the ZMT;
- (b) responders: people whose behaviour is being shaped by ZMT;
- (c) vocational knowledge: an area of vocational knowledge that is common to those involved;
- (d) nature of agreement: stakeholder agreement or understanding about the levels or value associated with specific vocational learning outcomes;
- (e) means of communication: a medium of communication between stakeholders.

We can take each of these elements and expand them to show the types of ZMT.

#### **3.7.1. Shapers**

These include: regulators, professional bodies, trade unions, recruiters in industry, selectors in education and training. The agenda and perceptions (of market conditions, of priorities, etc.) of shapers have a crucial impact on the form and operation of a ZMT. This can be seen, for example, in: the need to increase supply of ICT teachers (Greece); the need to open access from the vocational route into higher education (Germany); the need to increase the mobility of key professionals (agreement between Belgium, Greece, Italy and Hungary); the need to increase participation in vocationally-related higher education (England). Although their behaviour and views heavily condition the form and operation of a particular ZMT, the shapers may themselves feel that they are constrained or determined in what they are doing and what action they can take. For example, employers may be experiencing a crisis in recruitment (due to labour market conditions over which they have little or no control) but nonetheless they have considerable influence over the form of ZMT which is set up to respond to this crisis. A similar situation applies to admissions staff in education and training institutions, who are instructed by central government to address the gender imbalance in recruitment to specific training programmes. The targets and imperatives may not come from them (and so they experience them as an external pressure), but they have considerable control over the arrangements they set up for a new set of access arrangements.

#### **3.7.2. Responders**

These include employees, job seekers, learners, and communities of practice. Although generally subordinate, the power of responders increases in situations of skill shortages; bargaining power increases as the value of skills and knowledge increases. In respect of shifting power relations, some interesting processes of 'valuation' of prior learning are emerging as bottom-up developments rather than state-initiated. In Switzerland, the CH-Q

development has been initiated through an association rather than through state initiative, and is oriented towards learner empowerment. The CH-Q process is a portfolio-based approach to recognition (valuation) of prior experience and achievement. The portfolio is produced through processes of counselling and systematic identification of skills and knowledge. It is designed to help workers/learners to access new employment, rejoin the labour market or gain access to education and training. Consistent with many other portfolio-based developments in recognition of prior learning, CH-Q is notable because of its origin as a bottom-up development.

As outlined in Figure 4, the self-perception of workers and learners is a crucial and often-neglected area, where certain groups may simply not see themselves as ‘appropriate’ for a given profession (women in engineering and construction; men in the care professions). Thus they may not possess overt bargaining power, but may condition the possibility of setting up a ZMT. Recruiters may be aware that non-traditional groups have skills which may be utilised, but the self-perceptions of such groups may mean that few from the non-traditional group come forward to take advantages of the new opportunities for access and progression which have been set up.

### **3.7.3. Vocational knowledge**

ZMTs can operate in a highly specific vocational field. For example, when an enterprise is experiencing a skills shortage it may develop new ZMTs to recruit trained workers with specific skills in the area of shortage, a ‘specific exchange value’; there are numerous examples in construction, care, ICT, oil production, etc. This can include action to remove an ‘administrative’ blockage which has inhibited mobility and access, as in the work in Germany to encourage progression from the vocational track into higher education. Here, there is no fundamental reframing of knowledge or skills requirements but a renegotiation and promotion of routes to allow enhanced progression and mobility.

Interesting examples occur where VET providers and employers consider how to access skills in groups among whom they have not previously recruited. This can include both trying to find specific skills and/or identifying more generic skills that can be adapted to new demands, a combination of ‘specific’ and ‘general exchange value’.

ZMTs operating at the level of ‘general exchange value’ - rather than specific knowledge and skills - are common in higher education (US credit systems, ECTS, etc.) but also are emerging in other phases of general education. One example is the Nordic credit recognition system at general upper secondary level, where students who have completed upper secondary education in another Nordic country may continue study at a higher level in their own home country, based on the credit that they have obtained.

#### **3.7.4. Nature of agreement**

ZMTs include an informal or formal agreement. These can include:

- (a) input models using time-based criteria: major educational programme completion such as duration of initial (formal) education and training, and module time allocation including different types of learning. Both of these can be referenced to subsidiary quality assurance systems, such as recognition of institutions and use of criteria governing education/training programmes (e.g. general, academic, technical, vocational, occupational);
- (b) outcome models: often based on standards or competences or criteria which could be general education outcomes or general descriptions of competence or specific skills to allow performance of a given job, profession or task;
- (c) mixed input/outcome models requiring the use of occupational standards to shape a training programme;
- (d) operational context dependent models requiring the setting out of levels of complexity of working situations in which people practise their skills;
- (e) reference point models, e.g. using equation statements referencing qualifications to predefined levels and the criteria on which they are based, e.g. relationship to an overarching framework;
- (f) accumulation models based on CVs, work experience, time served;
- (g) aggregation rules for competences;
- (h) transfer arrangements model: using a specified code of practice for moving from one area to another, e.g. VAE (the French accreditation of experiential learning system).

#### **3.7.5. Means of communication**

The negotiations which form the heart of a ZMT are carried out at different levels in different settings:

- (a) collection of states;
- (b) individual states;
- (c) industrial sectors/professional bodies internationally;
- (d) industrial sectors/professional bodies nationally;
- (e) enterprises/VET providers internationally;
- (f) enterprises/VET providers nationally;
- (g) individual enterprises/VET providers;
- (h) individual worker/learners.

### 3.8. Exchange value

On 6 December 2003, in the bibliophile of *The Guardian* newspaper - a polemical comment column on the book trade - the anonymous 'EK' wrote of '... the strange disparities in the prices of (second-hand rare books) - on the web and elsewhere'. Seeing the very same book frequently offered for pennies and pounds, he asks, 'Isn't there a little book - one that tells the true value of everything? ... well ... there isn't ...' In credit frameworks, qualifications frameworks and transfer agreements, there is an analogous search for 'a little book that tells the true value of everything'. Can there ever be such a book on qualifications and work experience? Would its existence be enough (like the philosopher's stone) to enable everyone to understand the value of each and every qualification and thus how all qualifications relate one to another. The evidence is that current systems operate in a more complex manner than this. A single reference point is not enough to enable effective 'exchange value' of qualifications, or work experience, to be established. Here 'exchange value' is understood as the mutual value which the holder of the qualification asserts and the value that the gatekeeper (selector in education and employment, consumer, etc.) ascribes to a qualification or to specific work experience. The exchange value satisfies the selector that they should let the person onto a course or into employment, and satisfies a user of the person's services (e.g. in the case of a surgeon, dentist, gas fitter) that they are of a proven quality.

Two concepts are vital in understanding the way in which exchange value qualifications and experience operate; general exchange value and specific exchange value.

General exchange value relates to progression or access which is enabled by virtue of having qualifications or experience which denote a general level or broad area of achievement; there is no attempt to get a precise match between the achievements to date and the specific competences required for effective performance in the job or learning programme for which the person is applying. An example is a course requiring that the applicants have a degree in any subject; there is no specific subject which is required. The degree is taken as a signal that a person has reached a general level of education, or is a 'certain type of person'. It can be associated with ideas of 'potential'.

This contrasts with specific exchange value where there is an attempt to match with a degree of precision the achievements to date and the specific skills required for effective performance in the job or learning programme for which the person is applying. This is the case where a person must have the necessary mathematics and science qualifications to go on to a science-based technical education programme; they need a specific, current licence to practice in the specific trade or profession, etc.

Obviously these can be combined. Gaining access to a specific university degree programme might require some attainments possessing general exchange value (a level of general education as indicated by a bundle of qualifications at particular levels) and some attainments possessing specific exchange value (maths and English to a given level, and high attainment in the same subject as the subject to be studied).

Returning to the notion of the ‘little book on the true value of everything’, this manifests itself in national systems in the form of ‘approved lists of qualifications’.

These are held principally by the following institutions:

- (a) universities, particularly their admissions services, who have lists of domestic and national qualifications, giving those which will be accepted as entry qualifications and those which will not. Many of these lists started over 50 years ago as a result of foreign nationals applying for engineering and medicine in Northern European and US universities;
- (b) other training and education providers (schools, colleges, training providers) who have lists of qualifications relating to access to specific courses, with the aim of ensuring that they select people who are capable of success on each course;
- (c) professional bodies and chambers, who hold lists of those elements which they consider suitable or conditional for licensing and conveying designated professional status, which may have a public mandate to control or even regulate access;
- (d) employment agencies (engaged in national and international recruitment) who hold lists to enable them to headhunt, broker and search effectively. For example, European agencies who are recruiting nursing staff from South Africa, on behalf of health services in Northern European countries;
- (e) government ministries and agencies, which are responsible for approval of qualifications, maintaining lists of qualifications that attract public funding, etc.;
- (f) agencies encouraging transnational cooperation, who are committed to helping people to move from one economic area to another, or who are promoting education and training development.

Do these approved lists assume the same status of the ‘little book of the true value of everything’? No, since they are partial in several ways. First, there are many lists. These are held by different organisations that have different purposes. Second, the lists frequently refer to specific sectors, since professional bodies are concerned with licensing in a specific area. Third, the lists can vary in their focus; some are outcomes focused, others focus instead or additionally on approved learning programmes. Fourth, no list relates all qualifications to all others, so the ‘map of exchange value’ is incomplete and in some cases inconsistent. Two similar bodies - for example professional bodies for social care and for health care - or different universities, may place a different apparent value on the same qualification, or one may include qualifications which the other does not.

The registers held by professional bodies for professional licensing frequently relate to requirements laid down in law. They focus on specific credit, since they state precisely the qualifications which are admissible - with a concern for public and consumer protection - and by corollary, protection of the reputation of the profession. In some cases they protect the interests of the professions or trades (e.g. by reducing entry and thus maintaining or increasing wage levels and/or protecting certain segments of the labour market).

By contrast, national qualifications frameworks tend to construct relations of general credit between qualifications, i.e. a given level in a framework may contain a wide range of qualifications in contrasting subjects or occupational areas. For example, a range of qualifications can populate 'level 3' in a framework and be regarded as worthy as a level 3 qualification. Crucially, for both the more general credit of frameworks and the specific credit of professional bodies' licensing lists there are admission decisions: what criteria should a qualification meet to be allowed into the framework or onto a list?

But the lists and frameworks are nothing more. It is the control of the list, the very different ways in which different bodies run admissions to the lists, handle new and special cases and build up case law, which are crucial in explaining how these ZMT mechanisms operate, are maintained and stay credible.

Lists of approved qualifications have an interesting ontological status; they communicate and contain past decisions. Employers, workers and learners can access a list held by a body and see in it the previous agreements. If a person has a qualification which exists outside the list this is treated differently in different countries or by different sector bodies. They have different arrangements for dealing with new cases; people holding non-approved qualifications trying to enter sectors in some nations can have much greater difficulties than when entering other nations. Likewise, occupational bodies' responsibilities and scope are defined differently in different systems, leading to different boundaries and recognition disputes, depending on cultural and traditional value systems.

Finally, lists can themselves be highly informal, as with a 'list' held implicitly in the mind of an individual employer, who will search for certain types of people but exclude others. By contrast with the formal lists held by professional bodies - which are public, can be criticised, and have processes for considering new cases - these implicit lists may be adversely affected by (gender and ethnic) stereotyping, narrow conceptualisation of necessary skills, etc. At the same time, there are examples of employers being highly innovative in the implicit lists that they use for searching for labour, particularly in the context of skills shortages or skills gaps. Examples are senior managers in a company promoting rapidly young members of the company who display particular innovation and commitment or companies using automated production processes emphasising more IT and production control skills than the sector-specific skills when recruiting and offering rapid further training in job-specific production skills. Established lists or registers of trades and professions <sup>(1)</sup> come under threat in times of rapid change of occupational requirements and increased decentralisation or individualisation of training opportunities. A new kind of transparency mechanism and/or zone of mutual trust seems to be necessary to ensure credibility and sustainability of such lists on the one hand and their openness towards new developments on the other.

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<sup>(1)</sup> Such registers are always linked to some kind of regulated training provision or certain quality assurance mechanisms and are based on either implicit or explicit agreements of current and former generations of respective holders of skills.

## **4. Qualification frameworks**

Frameworks of qualifications are becoming established in many countries, in Europe and beyond (OECD, 2003). Most of these cover mainstream initial education, some are based in occupational settings and others straddle both of these. Developing some kind of overarching framework of qualifications features in the Bologna process and is proposed by the European Commission in connection with the Lisbon goals and the Copenhagen process. In a research review (Dean and Watters, 2004) for the National qualifications authority for Ireland (NQAI) it is reported that the idea of some form of integrated framework of qualifications is gaining ground at European level and in an Irish presidency conference (NQAI, 2004) covering higher education and VET the notion of a unifying European reference framework for qualifications was strongly advocated (see conclusions of the Director General of DG Education and Culture, van der Pas, 2004, <http://Cedefop.communityzero.com/credittransfer>, and look for conclusions Dublin 080304).

### **4.1. Need for a qualifications framework in Europe**

Research (OECD, 2003) shows that the drivers for change in nations introducing qualifications frameworks include the challenges of internationalisation and economic factors and agendas for social and technological development. Also underpinning the emergence of frameworks is the growing recognition of the way in which compartmentalisation of qualifications development can adversely affect transparency and mutual recognition, thus erecting barriers to mobility (in the labour market), access (to education and training), progression (in employment and education), and equity (pay systems, etc.). They are considered influential in various respects.

#### **4.1.1. Access and participation**

Frameworks can help address demographic skill supply problems. They can open up qualifications to wider sets of learners by making clear what qualifications are available and how they relate to progression routes, facilitating non-standard forms of access. People with recognisable skills can move into skill shortage areas more easily.

Frameworks can include elements that help to specify learning styles and assessment methods. These might encourage participation by reluctant learners or increase the options provided by teaching or training institutions.

Qualifications frameworks which include credit systems can reduce the time spent by learners relearning material to reach outcomes already achieved in other contexts.

#### **4.1.2. Transfer of skills**

A framework can act to ease the transportability of skills from one occupational area to another, thus enabling further skills development.

Frameworks can help provide clarity about knowledge, skills and competences that are needed by enterprises for employment. They can show how employment opportunities are evolving to meet needs and thus strike a balance between flexibility and sustainability, between skills supply and demand.

International comparability through qualifications frameworks facilitates and promotes mutual cooperation and understanding as well as mobility and exchange.

#### **4.1.3. Targeting and transparency**

Learning can be more easily focused on learning and skill needs if information embedded in qualifications frameworks is clear and generally accessible. Coherent and simple structures for qualifications frameworks can simplify complex arrangements. Frameworks can counter the complexity that arises when there is an intersection between localised (decentralised or sector-specific) qualifications systems.

#### **4.1.4. Guidance and quality assurance**

Guidance material for users is easier to develop and disseminate if it is based on a well-known structure such as a framework. Qualifications frameworks can also contribute to quality assurance arrangements, for example being used for accrediting non formal or self organised learning.

### **4.2. Qualifications frameworks development**

While the policy underpinning qualifications frameworks and credits may share a more or less common set of goals, the frameworks themselves are emerging in very different forms. It is important to focus on the precise way in which frameworks are expressed, since this conditions people's conceptualisation of education and training, with the clear implication that any weakness in the representation of a system may lead to deficiencies in the framework as a policy instrument. Most obviously, if a qualification framework fails to provide enough levels to describe existing arrangements, it will lack both credibility and utility. Qualifications frameworks are most commonly expressed as two-dimensional grids, with the vertical axis in the form of levels, and the horizontal as different strands or different 'routes' through education and training, knowledge, skills or competences linked to certain job profiles or clusters of skills.

Through the study of existing national and international frameworks, we have identified the following dimensions of variation:

- (a) outcome based evaluation (explicit skill and/or learning outcomes) versus learning input (completion or content of programmes);
- (b) levels without descriptors (equating framework) versus levels based on descriptors (descriptor framework);
- (c) integrated (no separate tracks or lines) versus differentiated in terms of two or more tracks or lines;
- (d) whole qualification level versus unit/module level;
- (e) large number of levels or sublevels, some of which may be vacant (this affects the capacity to ‘future proof’ specific frameworks and allows different types of qualifications to be accommodated in the same framework, one populating some levels and the other populating a different set) versus few levels, all of which are populated with clearly defined qualifications.

Of particular importance is the distinction between descriptor-based frameworks and those which have no descriptors for levels, known as equating frameworks. Both are ‘theory driven’ in that implicit theories can lie behind assigning levels to respective qualifications in an equating framework (e.g. this qualification is lower than that one because this one has a higher content of management skills) and matching qualifications to descriptors (e.g. increasing specialisation in technical skills characterises progression at the higher levels of the framework). Most descriptor-based systems do not flag with precision their underlying theoretical assumptions. Most frequently, they have an implicit, eclectic theoretical base, rather than reference to a single theoretical construct (such as Bloom’s taxonomy or Jaques’ work on occupational hierarchies or Dreyfus’ work on becoming an expert, see Annexes 4 and 5 and further below).

The focus in equating frameworks is not on whether a particular qualification meets a given description, but how it relates to other qualifications. Qualifications that might have little or nothing in common regarding aim, focus, scope and content can be set at the same level. By contrast, in a descriptor-based framework, qualifications can only be admitted to the same level as a result of meeting a required specification, which usually is more or less detailed.

#### **4.2.1. The purpose of qualifications frameworks**

One key problem that afflicts qualifications frameworks arises when they are used as tools for rationalisation. The essential problem is that complex, messy and diverse qualifications systems precede an agreement on qualifications frameworks. Then follows the question of the extent to which policy use of the framework seeks to accommodate existing arrangements (passive function) and the extent to which it seeks to change existing arrangements (active function). The passive function merely requires the administering bureaucracy to devote

effort to developing a system that allows accommodation of existing qualifications and existing arrangements, without changing the content of the qualifications. This typically requires a large number of levels and is most readily served by an equating framework, since this places less demand on any qualification in respect of its 'fit' into the framework. Even here, the relations between qualifications within such a framework can still remain contentious and incite a high degree of conflict and debate, e.g. where one body/organisation/nation feels that 'their' qualification has been wrongly allocated. The active function is quite different in its implications and requirements, requiring instruments of intervention, negotiation, control and maintenance.

Qualifications frameworks are commonly expressed as diagrams, and it is the diagram that is frequently referred to as 'the framework'. Such a diagram is an abstraction; a representation of real arrangements. Coles reports that three main forms of frameworks exist according to the stakeholder position: diagram, concept and quality assurance process. Students and their parents see it as a diagram, teachers and careers advisers see it as a concept and regulators and awarding bodies see it as a quality assurance process (QCA, 2001).

In the complexity of the labour market and admission to education and training, informal ZMTs can exist which treat qualifications in a way that confounds formal frameworks. Additionally, qualifications can exist in a given nation, have important functions, yet not be recognised in the framework. This often applies to employer-based certification and to international qualifications issued by companies such as the large IT transnationals. Also, the framework does not exist by virtue of being a diagram. It exists in two ways: by the arrangements which admit qualifications to the framework and in the extent to which it is used by people in conditioning the way they behave and the way they treat qualifications. Within this, the arrangements that admit qualifications to the framework are crucial. Who (or what machinery) makes the decision that qualification X is at level 3 and not level 2 or 4? If the framework is oriented towards change - e.g. making more similar (regarding skills, knowledge, etc.) the qualifications at level 3 which are currently unlike - who makes the decision on the extent of change required and who is able to control whether the changes have been sufficient?

#### **4.2.2. Accommodation or prescription**

The intention to accommodate existing qualification arrangements, coupled with the need to gain purchase (credibility) with existing stakeholders, suggests that a framework should be sensitive to existing differences between qualifications; this includes situations where those qualifications are competing or in conflict (for example, despite similar content, two qualifications from different sources are of different status and ranking in the framework). To adopt this more descriptive position is to try to accommodate these differences and to locate the qualifications in the framework before attempting any rationalisation and alignment. Adopting a more prescriptive position means refusing to admit qualifications until the contradictions have been resolved. A framework of this sort does not aim to be sensitive to

existing relationships, but aims to assert a new, desired order of relationships between the respective qualifications.

The accommodation strategy suggests a larger number of levels and more generic descriptors, or use of an equating framework with no descriptors at all. The prescription strategy suggests a smaller number of levels with more tightly specified descriptors. In practice, most (national and transnational) frameworks have been a mix of the two approaches. In some national contexts, the need to gain purchase with the existing system has given rise to frameworks that have accommodated existing arrangements, but only at the expense of compromising the change agenda, leading to a confused and contradictory framework.

Careful, deliberate management of the accommodation and prescription functions of any framework is crucial to the success and sustainability of any qualifications framework used as an instrument of policy and practice. Getting the framework established may be a priority, but if general acceptance of the framework is a prime objective, this can lead to decisions about the form and nature of the framework (number of levels, nature of descriptors) which can compromise intentions regarding medium and longer-term rationalisation, credibility and sustainability.

#### **4.2.3. VET and higher education**

Work on levels of qualifications and programmes (Adam, 2001) and on credit (see: Socrates information at <http://www.europa.eu.int/>) has advanced well in HE, at least regarding input (student workload) considerations. The collaboration of institutions to bring about the three cycles of HE understanding and the more recent Tuning<sup>(2)</sup> project on curricula agreements in HE together with the three core elements of the ECTS system (course information, mutual agreement between institutions and use of ECTS systems) are model European ZMTs.

While frameworks for non-HE qualifications are gaining ground, credit transfer in VET is generally less developed. However, there are some good examples of schemes, such as credits for upper secondary schooling in Sweden, which include VET units; details are available at the (Swedish National reference point for Vocational Qualifications) SENRP website, [www.senrp.se](http://www.senrp.se). There are also some well worked out plans for imminent implementation, such as credits in the SCQF in Scotland (see SCQF Handbook, 2003).

There is a considerable overlap between qualifications considered to be HE based and those that are essentially professional and linked to occupations and the workplace. There is also a considerable overlap regarding perceptions of 'levels' covered in each area; countries with inclusive qualifications frameworks have faced the issue of marrying qualifications from these two areas into one transparent framework. There are some good examples of attempts to do this within occupational sectors (in ICT for example) and there is evidence in the literature

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<sup>(2)</sup> See [http://europa.eu.int/comm/education/policies/educ/tuning/tuning\\_en.html](http://europa.eu.int/comm/education/policies/educ/tuning/tuning_en.html)

that unitisation and internationalisation through trade and enterprises will encourage this marriage to take place sooner rather than later.

The barriers that exist preventing a common reference level credit system to develop are largely traditional in nature and based on the absence of collaboration through a ZMT. They are also institutional, in the sense that institutions are often gathered in separate clusters with competition between clusters rather than cooperation. In the discussion on reference levels that follows, the aim is to build an inclusive set of levels that will allow users to see a place for integrating HE based qualifications, VET qualifications and recognised (LLL) learning wherever it happens.

#### **4.2.4. Existing international metaframeworks**

In addition to the OECD and the EU, other international agencies are pursuing work related to qualifications frameworks; these include ILO (research project on frameworks), Unesco (ISCED) and the World Bank (VET qualifications systems). There are also several occupational classification systems that might be seen as frameworks, notably the national classification of economic activities (NACE) and its international counterpart ISIC. Three frameworks for qualifications stand out in international literature: the Bologna structures for HE, ISCED 97 (covering all education), and the 1985 European structure of training levels for VET (see Annex 3). These three are designed to be inclusive for qualifications in their field and can be said to be metaframeworks in the sense that national structures can be related to them. The need to review these frameworks and to adapt these to new requirements was fully recognised by the credit transfer technical workgroup. The Cedefop study on European structures of training levels published in 1999 and 2000 (in three volumes) supported this appreciation.

ISCED 97 ([www.unesco.org/education/information/nfsunesco/doc/isced\\_1997.htm](http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm) and OECD, 1999) is designed to embrace all learning. The international standard classification of education was designed by Unesco in the early 1970s and adopted in 1978 to serve as a means of gathering and presenting statistics on education in individual countries and internationally. It has its limitations as a qualifications framework since it is primarily a framework for quantifying education provision; even with this limited purpose it struggles to maintain a simple structure that will be inclusive of all educational developments. It is essentially an input framework that serves to benchmark countries by educational provision and enable comparison. However, it is used widely as a qualifications framework and it does have a set of levels with descriptors. Any development of reference levels should build on the international understanding that has developed around ISCED 97. This will facilitate continuity in many ways, not least in statistical analysis of educational trends. The structure of ISCED 97 is included in Annex 1.

Linked to ISCED is the international standard classification of occupations, ISCO 1988 (Elais and Birch, 1994). This four level classification is also likely to be important in defining common reference levels since in VET and in HE the field of occupations is a key

differentiating component. The relationship between ISCED and ISCO is provided in Annex 2.

The European Union's 1985 European structure of training levels for VET was published and used as references for the comparability exercise (European Council, 1985). It is interesting to look closely into the reasons for the publication of these levels. At the time the absence of a more formal comparability of training qualifications was considered to inhibit freedom of movement for workers and trainees within the EU. While recognising the diversity of training systems in the Member States the Commission thought it possible to draw up broad points of reference in the form of five training levels. These five levels were agreed as a reference allowing allocation of all kinds of training provision. It was expected to support essential and rapid progress towards comparability of vocational training qualifications for skilled workers, thus enabling them to make better use of their qualifications, in particular for the purposes of obtaining suitable employment in another Member State. The European levels are described in Annex 3. Contrary to the interpretation of this regulation in some Member States, these levels were never intended to be imposed top-down. The lessons to be learnt from this approach (which was not further pursued after the Maastricht Treaty became applicable and the subsidiarity principle was commonly agreed) are that any reference levels framework on the European or international level has clearly to be based on a voluntary participation of institutions and stakeholders in Member States. They may have an interest in reference levels for the purpose of increased cooperation and exchange with other countries or for the further development of their own internal provision of education and training.

Recently the EU has been working towards a level system for regulated professional qualifications. Four levels and associated guidance are proposed and are intended to facilitate recognition processes across member countries. For VET, the levels proposed cover most of the range of current qualifications.

For this study it should be emphasised that we propose the descriptors and framework below with no other purpose than to support the cooperation between VET providers (including higher education providers) with a view to establishing a credit transfer system<sup>(3)</sup>. If other purposes arise, for example in relation to the wider Lisbon goals and for agreeing an overarching European qualifications framework, then these descriptors will have to be discussed further, especially at the political level.

#### **4.2.5. Theoretical considerations**

Literature about framework development tends to be largely empirical in nature. Occupational sector frameworks are derived from the study of workplaces and jobs held. Most published research explores the policy and rationale for frameworks and then evaluates the effects of the framework on users, normally learners. Framework development has generally been part of a

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<sup>(3)</sup> See the mandate of the TWG on credit transfer.

rationalisation of current education and training provision to make the latter clearer, coherent and user-friendly; generally it is not driven by theory or principles originating outside the world of qualifications. A major exception is the development of the South African qualification framework that has a strong social reform agenda embedded within it. Theoretical work linked to qualifications frameworks springs from studies of business practices, the study of the professions, and, more indirectly cognitive science including assessment research.

We have reviewed literature from a range of sources to support the development of a robust set of reference levels. In this section we present a brief overview of the outcomes of this review process. Further details of the sources can be found in the annexes.

Elliott Jaques is a leading thinker in organisations and their effectiveness. Much of his work is about the management of labour and other economic aspects of businesses and public services. He developed an enduring concept of stratified systems theory, now better known as requisite organisation (Jaques, 1973). At the heart of requisite organisation is the simple notion that the demand, complexity, prior knowledge and importance of tasks lie in the time scale over which they are normally expected to take place. The theory goes on to explain that the natural structure of organisations, complex and simple, can be optimised by task analysis that is based on determining the time scale of the longest task a person is charged with carrying through. From the viewpoint of determining European reference levels it is possible to use Jaques' work to support an eight level framework of vocational learning within each of which it is possible to define the kind of task one would expect to find - the first stage covering general knowledge and basic skills acquisition. Jaques explains these tasks in detail but for simplicity we can adapt his work into a simplified table (see Annex 4). Jaques offers us a business model that might prove useful in defining level descriptors for particular types of qualifications or training outcomes. His work on types of thinking is also useful. It is based on four main categories as described in Annex 4.

More theoretical insight into hierarchies of performance is available from Hubert Dreyfus (Dreyfus, 1992; Dreyfus and Dreyfus, 1986), an American researcher who worked in information science. His insights into how people become expert was driven by the belief that computers will always fall short of human expert performance. His work has stood the test of time; he first published in 1972 and more recently he has been writing about why distance learning courses available on the Internet will not fully deliver the learning needs of professionals. Work on reference levels can be informed by Dreyfus' definition of a sequence of 'expertness'. While he offers a simple qualitative hierarchy in capability, other writers (e.g. Denning, 2002) have embellished it with descriptions of learning modes (see Annex 5) that may also be useful in our pursuit of European reference levels. It is interesting to note the use of a qualitative descriptor for levels. Notwithstanding the issue of the need for user-friendly terminology for European nations (numbers are simple to use) the key attribute of this qualitative approach is a blurring of the boundaries between one type of work and another. Approaches based on number give the illusion of a clear threshold and this can create some difficulties in making judgements at the boundaries of one level and another. As noted above

this can create the need for multiplicity of levels to allow easier matching of qualifications to levels.

Another well-researched area that may be useful for defining reference levels is language learning. The Council of Europe has published extensive accounts (Council of Europe, 2001) describing how a common reference framework for languages is based on such research. It is stated that a consensus has developed for a six level system after leading European linguists and pedagogical specialists said that there was a need to promote and facilitate cooperation among educational institutions throughout Europe and provide a basis for the mutual recognition of language qualifications. This consensus has been formed over 10 years of research by leaders in the field from the 41 states of the Council of Europe. (Raffe (2003) points out that the highly regarded, inclusive and well-grounded SCQF has taken 15 years to reach its current status.)

It would be easy to dismiss evidence from language framework development as empirical and based on consensus building. However the fundamental structure of the language reference levels has been well researched and the literature linked to linguistics, pedagogy, assessment and other fields are fully referenced.

One of the aims of the language framework is to aid comparisons between different systems of qualifications. For this purpose a scheme of common reference levels and descriptors has been developed. There are three main levels, each of which has two sublevels. It is interesting to note that there are general descriptors for these six sublevels. There is also a self-assessment grid for the student user and then more illustrative descriptors that provide a bank to be used by different users for different purposes. It is appreciated that no given situation will require reference to all descriptors; the user is required to decide which ones are relevant. The descriptors have been designed so that they are context free, i.e. applicable to all contexts. They are based on theory but designed to be user friendly. This system of sublevel descriptors can inspire the development of European reference levels. The extent to which the form of sublevel descriptors for European reference levels can be left to national stakeholders and professional bodies needs careful consideration.

One of the principal functions of the framework is to aid communication between the different partners in language teaching and learning processes regarding their aims and objectives, the methods used and results achieved; the language reference levels alone are not considered enough to fulfil this purpose. The framework, therefore, includes chapters on how the requirements described in the categories can be developed in learners, the role of tasks in language use and learning, plurilingual competence and its implications for the diversification of language teaching and policy and, importantly, the use of the descriptors in assessment. This kind of supporting material may be an important tool for establishing European reference levels.

This framework for language education offers recognition of existing qualifications and has the potential to shape future qualifications, i.e. it has both an active and a passive function. One of the main aims of the framework is to provide a basis to compare different

qualifications; this is clearly the passive function. This comparison is facilitated by several descriptors as discussed above. These descriptors however are also used to facilitate the active function in that they can be used to plan language learning and assessment.

#### **4.2.6. Bilateral qualification reference systems**

Across the world there are systems for translating the value of one qualification into a value or 'credit' for a course or job. Most of these systems are invisible and operate informally or are unpublished institution-based systems. Interskills (<http://www.interskills.info>) is an organisation claiming to have an overview of VET systems in 43 countries worldwide and offers a benchmarking service for linking foreign qualifications to those in a home country. The interesting aspect of this operation is that only four levels of 'occupational outcomes' are defined (see Annex 7). These correspond to the ISCO levels described in Annex 2 and also to the five European training levels (European Council, 1985).

Interskills currently operate effectively with these four levels and presumably this signals that these levels are the ones most frequently referenced by users (see Annex 7). There might be lessons here regarding priorities for developing European reference levels and a ZMT associated with them. However, it is also likely that lower level workers will be the least likely to use the service, as they might believe they have little to offer to match to foreign qualifications, and higher level workers will need little assistance from a service such as this as they already belong to a community of practice that will appreciate achievement in qualifications.

#### **4.2.7. Recent national experience of developing qualifications frameworks**

In recent years we have seen the relatively rapid development of national frameworks of qualifications that include some associated with VET. These countries have structured their frameworks according to existing internal ZMTs. Some have been pragmatic in the extreme (latterly England), others have used consensus building (Australia, Scotland) and others have extended this with a more fundamental belief in the reforming power of frameworks (Ireland, New Zealand, South Africa, Spain). While it is possible to count levels and scrutinise arguments for one number of levels over another, it is suggested that the nature of the level descriptors are likely to be more useful resource for setting European reference levels. The Irish Framework is the latest to emerge (NQAI, 2003) and uses descriptors that span the full range of qualifications over a ten level framework. The descriptors are divided into three sets under the headings knowledge, know how and competence. These are then subdivided further (see below) thus making eight fields in which levels are defined:

- (a) knowledge, divided into breadth and kind;
- (b) know how, divided into range and selectivity;
- (c) competence, divided into context, role, learning to learn and insight.

These fields are useful for defining the nature of European reference levels.

#### **4.2.8. Typologies of knowledge, skills and competences**

Work in this area is developing through a separate study, commissioned by Cedefop. At this point in a review of methods of forming reference systems it may be useful to take note of a wide range of typologies applicable to VET. The vast majority are occupational sector descriptions but these often employ categories of knowledge, skills and competences agreed, formally or informally, at the level of professional body or national government agency. Generic job profiles (see <http://www.career-space.com> and look up skills profiles to see a range of examples) of knowledge, skills and competences ought to be related clearly to reference levels since they are often used to define training, structure qualifications and allocate individual job profiles applicable in the respective industry or labour market segment.

Considerable effort is being made to establish profiles and frameworks to enable IT workers to gain appropriate skills and maintain an awareness of a rapidly changing field and work organisation (Mucke, 2001; Cedefop, 2002). In an example of a well-developed credit scheme for Baden Wurtemberg (Rocher and Sachs, 1999) there are three main domains that are linked to levels; these domains are further divided as shown in Annex 8. This work is particularly interesting for three reasons. First the categories and the sublevel criteria have been developed from local work practice, so giving the scheme bottom-up credibility. Second the reference scheme is designed to be active and inform on curricula. Finally, the scheme supports the assessment process, which is based on credits. The scheme draws heavily on the work of Dreyfus (see earlier).

Looking at a range of literature on sector profiles reveals a structure based on the following categories:

- (a) general education (covering full-time school education, qualifications gained at school, post school education, part-time study);
- (b) specialised training (covering professional experience and specialised skills);
- (c) experience (covering details of current job and other jobs held in the past);
- (d) technical expertise (covering a range of specific skills that are part of an occupation, in some countries these are defined, in others they are defined by the individual according to experience; specialisations also appear here);
- (e) general competences (these cover the skills, qualities and attributes that make it possible to work with others in teams and to apply technical skills productively);
- (f) personal characteristics (covering specific abilities like dexterity, eyesight, coping with heights);

- (g) social involvement (covering commitment to causes, social activities, interests outside work);
- (h) working arrangements (covering the kinds of conditions that the person works in such as working with children, dealing with high temperatures or use of toxic substances).

These categories indicate the range of VET characteristics that ought to be considered when typologies are defined.

#### **4.2.9. A bottom-up approach to defining reference levels**

The TWG on credit transfer for VET saw the dangers of a top-down imposition of a credit framework; uppermost in the minds of members was the core notion of a ZMT or a set of ZMTs developing around reference levels. We have assumed that the TWG has seen the development of reference levels as a means of supporting existing ZMTs where it judges them to be sound and useful, promoting fledgling ZMTs where it perceives development is needed, and stimulating new ZMTs where it recognises a gap in mutual qualification recognition.