CEDEFOP
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EN

THE SHIFT TO LEARNING OUTCOMES

Conceptual, political and practical developments in Europe

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Foreword

European countries are increasingly referring to learning outcomes when setting overall objectives for their education and training systems and when defining and describing qualifications. Instead of focusing on input factors such as the duration, location and particular pedagogical method underpinning a qualification, attention is directed towards what a learner knows and is able to do at the end of a learning process. Considerable experience has been gained in European countries and more countries are setting up national qualifications frameworks based on learning outcomes, with other countries considering moving in this direction. Launching a European qualifications framework (EQF) and a European credit system for vocational education and training (ECVET) – both based on learning outcomes – has increased attention on learning outcomes which may be seen as catalysts for national reforms. Expectations of the learning outcomes approach are thus higher than ever before and many see this shift as an opportunity to tailor education and training to individual needs, improve links to the labour market and improve the way non-formally and informally acquired learning outcomes are recognised.

While work on learning outcomes has attracted particular attention in recent years, the theme is not new to Cedefop. Our work on transparency of qualifications and competences during the 1990s illustrated the importance of the learning outcomes perspective and its relevance for education and training policies and practices. The 2003-04 Cedefop study on reference levels for vocational education and training provided the basis for the EQF and use of learning outcomes as a basis for this framework. The work of Cedefop on validation of non-formal and informal learning during the past 10 to 15 years has contributed to the spread and implementation of methods and institutions across Europe; all relying on and promoting the concept of learning outcomes.

This booklet, which is an extract of an extensive comparative study conducted by Cedefop in 2007 (the complete study to be published), analyses the influence of the learning approach in 32 European countries. We believe this text will prove helpful for policy-makers, researchers, social partners and practitioners working in this field.

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Director of Cedefop

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Executive summary

Cedefop's forthcoming study on learning outcomes ([1]) demonstrates the increasing importance of learning outcomes for defining and guiding education, training and lifelong learning strategies.

In key respects, learning outcomes form part of an innovative approach to teaching and learning, which some have identified as part of a new learning paradigm. Learning outcomes are the focus, and provide a key role in organising systemic aims, curricula, pedagogy, assessment and quality assurance. Increasing use of learning outcomes is expected to have profound implications for making systems more learner-centred, organising institutions, curricula and for the roles and training of teachers and trainers.

The environment in which learning outcome approaches are becoming more prominent is the shift in European education and training systems towards lifelong learning strategies. This gives them a pivotal position in redefining qualifications and VET, general and higher education curricula.

Learning outcomes are best understood as a collection of useful processes and tools that can be applied in diverse ways in different policy, teaching and learning settings. It follows that there is no single correct or apt way of approaching them. The term can have a range of connotations and denotations, precisely because it is used in different contexts. The evidence contained in the 2007 Cedefop study strongly suggests the need to be sensitive to the particular context in which learning outcomes are brought into use. Notably, learning outcomes are also required to perform multiple functions in national education and training systems in European countries: recognition of prior learning, award of credit, quality, learning plans, key competences for life, credibility for employers as well as modernising the governance of education and training as systems are reformed to encompass lifelong learning.

The emphasis is on defining learning outcomes to shape the learner's experience, rather than give primacy to the content of the subjects that make up the curriculum. The identification of clear and apt learning outcomes acts as an organising principle for good practice in schools. Learning outcomes take

([1]) Cedefop, 2008 (forthcoming).

a prominent place alongside the aims, objectives and ethos of the system or institution. They have a direct and formative impact on the curriculum and pedagogy, contributing significantly to what and how people learn, and should have an impact on how learning is assessed.

Across Europe, the post-compulsory phase of general education is the phase that has been least influenced by reforming ideas about learning outcomes. If they begin to have a formative impact on university curricula and pedagogies, this may in due course have a consequential effect on the curriculum, pedagogy and assessment in upper secondary general education.

It is to be expected that learning outcomes will have an impact on styles of assessment. However, evidence gathered for the study suggests that learning outcomes currently have a limited impact on the ways in which learning is assessed.

Learning outcomes are prominent in developing national qualification frameworks (NQFs) in Europe. Development of the latter has to be planned actively to engage the main stakeholders in a process of ongoing negotiation and, probably, compromise at different levels in the system. An NQF owned by an administration and whose use is limited largely to official publications probably serves little purpose. Here, identification of learning outcomes can provide the organising factor to make explicit the achievements of a wide range of learners, irrespective of the types or modes or duration of learning and training that they engage in.

Growing priority is being given to recognition of informal and non-formal learning in many European education and training systems. This is supported both by increasing use of learning outcomes, and attempts to make qualification systems more coherent and more legible.

Policy-makers are necessarily using learning outcomes somewhat differently at different levels of the conceptualisation and reform process. They now have to work with a range of stakeholders (social partners, teaching and training professionals, research communities, learners and the wider community). While other partners have been recognised as active stakeholders for some time, learners should now also be an identified stakeholder, as is happening in some settings. The key actors involved in defining learning outcomes are not the same for VET, general and higher education.

The main stakeholders in the fields of education and training all have a role both in forging change and in developing and implementing learning outcomes. There is a need for strong stakeholder participation in developments at the system level and developing learning outcomes in relation to national policy development should be a careful and quite open process, not one owned exclusively by the administration. Interaction between top-down and

bottom-up interventions are an important part of the process and identifying learning outcomes has to be a collaborative effort, if it is to be meaningful.

Learning outcomes are flexible and evolving tools which function within policy and structural contexts. For them to become an embedded and effective part of lifelong learning strategies that contribute to the individual's opportunities for learning there is a need for a dynamic interplay between policy frameworks, institutions and mechanisms in place and the tools developed.

1. Introduction

This booklet addresses the ongoing shift to learning outcomes in European education and training policies and practices. The current text builds directly on the comprehensive comparative study (to be published separately) conducted by Cedefop in 2007, covering 32 European countries that participate in the Education and training 2010 programme.

Interest in learning outcomes has widened from the domain of pedagogy to include other settings, notably governance of education and training systems. This main conclusion of the 2007 study was based on extensive research covering developments in general education, vocational education and training and higher education. This research took as its point of departure the following three sets of questions:

- conceptual clarification: how can the concept of learning outcomes be made clearer, particularly when used in conjunction with terms such as competences and learning inputs? How is the term used in different countries, cultures and subsystems of education and training?
- learning outcomes as an aspect of policy reform: which policy initiatives linked to learning outcomes can be identified in European countries and how do these influence strategies at national, local and institutional levels?
- learning outcomes impacting on practical reform at the levels of institutions and learners: what is the effect of learning outcome approaches at the micro level of learners in their institutions – whether schools, workplaces or another learning situation?

This short extract – focusing on the conceptual basis and main developmental trends – aims to introduce the theme and the challenges facing it.

2. The learning outcomes concept

In sectors of education and in countries where the term 'learning outcomes' is actually being used, there is a good deal of agreement about how to define the term. The Tuning project for higher education (González and Wagenaar, 2003) defines learning outcomes as 'statements of what a learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning'. In Canada, and for school education, the British Columbia Ministry of Education (Adam, 2006) describes learning outcomes as 'statements of what students are expected to know and to do at an indicated grade'.

The definition of learning outcomes used in the European qualifications framework is in common usage and commands widespread acceptance. It is similar to those cited above, and provides a helping starting point.

> EQF defines learning outcomes as statements of what a learner knows, understands and is able to do on completion of a learning process (European Commission, 2006).

The EQF definition of learning outcomes was arrived at after extensive research and discussion. It is a definition agreed between the governments and social partners participating in Education and training 2010. Nevertheless, given the wide variety of systems and contexts covered by the Cedefop study, this definition was further simplified to allow the term maximum applicability. Therefore, the following definition was adopted for the study:

> Learning outcomes are statements of what a learner knows, understands and is able to do after completion of learning.

However, the simplicity and comprehensiveness begins to unravel as soon as the complexity of associated terms – in particular competence – and country usage comes into play.

It is clear the terms learning outcomes and competence are frequently interchanged. The following sections will illustrate how the learning outcomes concept has gradually emerged, how it is linked to different theories on learning and how it is captured in different efforts to describe learning outcomes. This will also illustrate some of the links to and overlaps with the concept of competence.

2.1. Gradual emergence of a learning outcomes perspective

At some risk of overgeneralisation, outcome-based approaches started to have a real impact from the mid-1980s, when they were introduced as part of reforms intended to improve the employability of young people and the unemployed, and to improve the labour market relevance of vocational qualifications. Initial focus was, thus, on VET and the learner was targeted as an individual functioning in the labour market and the workplace. One of the tools introduced was functional analysis of occupations, with learning outcomes (often called competences) as one of the key elements of the methodology. This approach was highly developed in the literature of the English-speaking world, but was also clearly present in the approaches to functional analysis used, for example, in Germany and France.

In recent years, as education policy-makers have started to reflect on the appropriate type of education for living and working in the 21st century, different and more varied ways of conceptualising learning outcomes have appeared. One current example is the *socle commun* in France, where the focus is primarily on the citizen, and each of the competences is a combination of essential knowledge, skills, abilities and attitudes. The *socle commun* is to be acquired gradually from nursery education through to the end of compulsory schooling, with the intention that each competence should be acquired across more than one discipline and each discipline should contribute to acquisition of several competences.

A second approach is observed in Sweden where the overarching curriculum document for compulsory school (seven to 16 year-olds), preschool and leisure centres (*Skolverket*, ([2]) 2006), defines two main types of goals. These are: goals to strive towards and goals to be attained. The former determine the general direction of all work to be undertaken at school; they specify the qualitative development desired at school, while the latter express the minimum levels pupils should attain when leaving school. Some goals are quite similar to the competences in the French *socle commun*, yet others in the Swedish frame focus differently.

Similar developments are underway in the UK. In Northern Ireland, the curriculum aims to 'empower young people to achieve their potential and to make informed and responsible decisions throughout their lives' ([3]). In the English

([2]) The Swedish National Agency for Education.
([3]) For more information on the Northern Ireland curriculum, see: http://www.nicurriculum.org.uk/

curriculum there are again basic key competences elements (such as, 'have the essential learning skills of literacy, numeracy and information and communication technology') but the curriculum also aims to enable young people to become 'confident individuals who … have a sense of self-worth and personal identity, relate well to others and form good relationships, are self-aware and deal well with their emotions'.

These are just a few examples of how general education, particularly compulsory education, is integrating the notion of learning outcomes in appropriate ways. However, it seems upper secondary general/academic qualifications (*baccalauréat general, Abitur*, etc.) that open entry to university appear for the most part to be least affected by reforms linked to learning outcomes, at least at present. Given the work underway in higher education, this may change in the next few years.

In higher education, the Bologna process is at an early stage of reforms that embrace learning outcomes. According to the most recent declaration of national education and training ministers, the purposes of higher education institutions should include:

> 'preparing students for life as active citizens in a democratic society; preparing students for their future careers and enabling their personal development; creating and maintaining a broad, advanced knowledge base; and stimulating research and innovation' (European Ministers of Education, 2007).

It is clear from the above that application of the learning outcomes concept will vary, depending on whether the focus is VET, general or higher education. To examine how countries are currently using learning outcomes in the evolution of their education policy, it is best to bear this variety of both focus and context in mind. Even so, there are common intentions over and above national differences. International comparisons have an increasingly influential role in this respect. The international PISA surveys ([4]) now have substantial influence in several countries, insofar as PISA tests are intended to assess how pupils are able to use what they have learned. The impact of this has been that some countries that had previously been well placed in the results of input-based comparisons, found themselves lower down the scale in learning outcomes assessments. In many cases this has led to reflection, review and reform. Results of the PISA surveys have had an impact on recent reforms in Austria, Germany, Luxembourg and Norway.

([4]) OECD PISA reports: http://www.pisa.oecd.org/pages/0,3417,en_32252351_32236130_1_1_1_1_1,00.html (cited 6.3.2008).

2.2. Learning outcomes – Opening up towards active learning?

Giving priority to learning outcomes is frequently described as indicative of – and leading to – a new approach to learning and teaching. Thus, in a paper on applying a changing policy paradigm to VET reforms in developing countries, Cedefop, Grootings and Nielson (2008, forthcoming) argue that, ever since development of formal systems of education and training that provide standardised programmes, the challenge has been to engage all learners in successful learning. Theory and research offer different understandings of why, where, what and how people learn – and what motivates them.

Summarising some of the most influential ideas about successful learning, Cedefop, Grootings and Nielson contrast two differing approaches. On the one hand traditional (behaviourist and cognitive) approaches ([5]) assume that:

- learning is basically a steady accumulation of discrete entities of knowledge and skills that can be presented to learners;
- there is one best way of learning;
- learning is essentially an individual activity;
- learning that is non-transparent or tacit is inferior;
- learning centres on the stable and enduring – facts and proven evidence;
- learning is replicable.

On the other hand, active learning (constructivist) approaches see learning as a selective process in which people give their own meaning to information, continuously interacting with their various environments. Thus:

- people build up their own meanings, based on what they already know and how they see the world around them;
- different people give different interpretations to the same thing, may retain different aspects and may act differently based on the same information;
- there are many ways through which people can learn without someone else passing on pieces of expert knowledge;
- learning is a social activity and much learning is tacit (Lave and Wenger, 1991; Wenger, 1999; Schön, 1983);
- learning is dynamic and context–bound and, therefore, good learning depends on meaningful learning environments (Kolb, 1984).

([5]) See Driscoll (2000) for a critical evaluation.

Contrasting these approaches to learning, Cedefop, Grootings and Nielson believe that active learning is justifiably referred to as a new paradigm, and one that is becoming more and more appropriate to our times. Further:

> 'The active learning paradigm stresses the need for new criteria for – and new kinds of – learning outcomes' (Cedefop, Grootings and Nielson, 2008, (forthcoming)).

The point is that the cognitive approach tends to emphasise individual acquisition of certain kinds of learning, whilst approaches based on ideas of active learning tend to emphasise the dynamic role of social relationships and the situations in which learning takes place. In the research and theory of Lave and Wenger (Lave and Wenger, 1991; Wenger, 1999), this is summed up by the importance given to communities of practice. The communities of practice concept is not a tabulation of outcomes, but is currently enjoying a strong influence on how learning takes place and, therefore, on outcomes.

Active learning approaches now seem to be seen widely as important across the European policy debate – whether at national, sectoral or European levels. Whether they fundamentally change the paradigm or modify its focus is debatable. Michel describes the current paradigm of school education as being fundamentally that of agricultural and industrial France at the end of the 19th century, scrupulously following the 'three unities' of classical theatre: the unity of time (the class hour), the unity of place (the classroom) and the unity of action (the teacher in front of the class) (Michel, 2007) ([6]). This metaphor is applicable to most systems in Europe and elsewhere.

For higher education and looking across the spectrum of education and training in Europe, Adam (2004) observed that approaches to learning outcomes have achieved high priority in many official documents and conferences across Europe. While convinced that learning outcomes are quite rightly at the forefront of educational change, Adam advises care – learning outcomes have not often been converted into practical application and are frequently poorly understood.

Adam, like other observers, concludes that most European countries are probably still using learning outcomes to only a limited extent, and not coherently or holistically. Nevertheless, evidence shows this area of activity is attracting much attention, certainly in policy development and perhaps also in terms of teaching and learning processes at local level. Higher education has certainly adopted learning outcomes to express various external reference points, including levels in the EQF, and to define the cycles (Dublin descrip-

([6]) For an exploration of such issues, see also Carneiro et al. 2007.

tors) in the Bologna overarching framework for qualifications of the European higher education area (EHEA).

2.3. The challenge of describing learning outcomes

The language that governments use at policy level to describe their reforms helps us understand the extent to which educational systems are orientated by input, or process, or learning outcomes.

Where countries are using learning outcomes, these are often expressed as competences. The figure below shows some headline comparisons in how competences are categorised by different models and different countries. To place this comparative table in an international framework intrinsically based on learning outcomes encompassing all forms of learning, we have chosen the Unesco four pillars of learning. These are:

- learning to know,
- learning to do,
- learning to live together,
- learning to be.

These pillars were first developed in the report to Unesco by the International Commission on Education for the 21st century chaired by Jacques Delors (Delors, 1998). For the purpose of Cedefop's study (2008, forthcoming), the four pillars had major advantages over the ISCED framework, because they cover all types of lifelong and lifewide learning. In the figure that follows best allocation of the terms used by different schemes into the scheme developed by Unesco is presented.

From the start, it is clear that countries – as well as academics and development projects – define and put ideas of learning outcomes and competences into practice differently. This is true for countries included in the Eurydice network survey, conducted recently (Eurydice, 2008, forthcoming).

Austria and Germany cover learning outcomes as part of *Bildungsstandards* (educational standards). In Austria, these are competences that learners are expected to have acquired on completion of a specific grade. In Germany, learning outcomes are defined more widely, as 'subject-related and 'subject adjoining' basic qualifications, which are relevant for further general and vocational training'. Cyprus and the Czech Republic have similar approaches. In the former, learning outcomes are defined as a series of aims and objectives, which provide a general indication of the standards of achievement, expected by students awarded particular grades at the end of each stage of education. In the latter, key competences are defined for each level or type of education

Figure 1: **Some categories used for describing learning outcomes**

Country/model	Learning to know	Learning to do	Learning to live together	Learning to be
France	*Savoir*	*Savoir faire*		*Savoir être*
France *(socle commun)*	*Connaissances*	*Capacités*	*Attitude*	*Attitude*
Ireland	Knowledge (breadth and kind)	Know-how and skill (range and selectivity)		Competence (context, role, learning to learn and insight)
Malta (Bloom's taxonomy)	Knowledge	Skills		Attitudes
Portugal (secondary education)	*Competências cognitivas*	*Competências funcionais*	*Competências sociais*	*Competências sociais*
Cyprus	Cognitive (proficiency)			Affective, transfer
Tuning project	Independent	Interpersonal		Systemic
EQF	Knowledge	Skills		Competences
EU key competences	Knowledge	Skills		Attitudes

which formulate learning outcomes. In Greece, learning outcomes are categorised differently. They relate to development of specific skills, such as communication, functional mathematics, teamwork, decision-making or managing resources. Sweden does not explicitly use 'learning outcomes'. However, as already indicated above, its system is clearly goal-orientated (and distinguishes between 'goals to be attained' and 'goals to strive towards').

All of the above signifies that we can make a clear distinction between aims and objectives, which describe what a system, school or teacher hope to achieve and learning outcomes, which focus on what a learner knows, understands and can do.

National cultures, education traditions and policy decision-making all contribute to a picture that both has common elements, and various approaches. This also suggests there can be tension between setting many tightly defined targets in the form of learning outcomes, and taking a broader approach to identifying learning goals or objectives not necessarily linked to a standard of achievement.

A higher education view on this is offered by the Tuning ([7]) project on higher education reform. This sees learning outcomes as 'statements of what a

([7]) See: http://ec.europa.eu/education/policies/educ/tuning/tuning_en.html (cited 6.3.2008).

learner is expected to know, understand and/or be able to demonstrate after completion of learning' (Wagenaar, 2004). These are formulated as competences. Competences represent a dynamic combination of attributes, abilities and attitudes. These may be developed to a greater level than required by the learning outcome – a spiky rather than a flat profile. The generic is emphasised alongside the subject specialist; many in higher education are doubtful about the term competence, seeing it as too narrow and focusing largely on skills for the labour market.

Behind this lies a basic question about the appropriate balance when countries are developing use of learning outcomes. The appropriate balance in different parts of national systems between learning inputs, teaching and learning processes and learning outcomes calls for careful judgement. The same applies to the balance between setting many tightly defined targets, and taking a broader, holistic approach.

2.3.1. What ideas lie behind these descriptors?

It is often difficult to ascertain the source from which learning outcomes have been derived, how development work has been undertaken and with which experts, partners and/or stakeholders.

In some cases the information is well documented and disseminated. Methodology in Germany for developing *Kompetenz* in VET has involved strong interaction between researchers (whether in universities or public agencies), policy-makers and practitioner communities, involving pilot projects, etc. The UK's functional methodology for analysing professional profiles and standards – leading to the identification of competences to be acquired through training or experience, then assessed – is also well known and has been widely adapted and used in central and eastern Europe. While differing in detail, the methodology for identifying learning content and assessment requirements in France for vocational and technical qualifications has some clear similarities. Both involve giving a prominent place to employers or social partners in identifying skills needs. Information from Slovenia indicates that the Bloom taxonomy (see below) has been influential in the process of identifying learning outcomes or competences for occupational standards.

At European level, the origin and development of outcome statements is somewhat clearer. In higher education, the Tuning project developed a complex typology based on three types of competence: instrumental, interpersonal and systemic. Similarly, working towards the European qualifications framework, a series of expert papers, consultations and decisions based on consensus of European Union governments led to an eight-scale framework based on statements of knowledge, skills and competences. The Bologna

process adopted the 'Dublin descriptors' (produced by the joint quality initiative – JQI) as the basis of the three higher education cycles. These descriptors are built on knowledge and understanding, applying knowledge and understanding, making judgements, communication skills, and learning skills ([8]). For languages, a scheme based on six levels involving linguistic attainment statements in different areas of skill was modified considerably across several years of development, as associated schemes for self-assessment and external testing were also built in, based on the same principles and design.

Beyond this, we are often left with a hazy answer to the question: where do the standards or statements of learning outcomes originate? Therefore, it is important to take a brief look at some of the influential sets of ideas that may have given coherence to conceptualisations of learning outcomes.

2.3.2. Bloom's taxonomy

In recent times, Bloom's taxonomy has been the most widely known way of categorising knowledge and skills. It has certainly had a direct impact on framing some approaches to learning outcomes, and we can expect that even where the formulation was not known directly to stakeholders developing learning outcomes schemes, it may still have had an indirect influence. Originally (Bloom et al., 1964) the taxonomy specified cognitive and affective domains. Indeed, the taxonomy originates from the cognitive tradition described earlier, but its influence has been far and wide. A third dimension that is now always included in the Bloom taxonomy was added later; this is the psychomotor domain (Cedefop, Winterton 2006). The cognitive relates to mental skills, or knowledge. The affective relates to feelings, attitudes and emotional aspects of learning. Psychomotor skills refer to manual, dexterous and physical skills. The taxonomy above these three headings is expressed in terms of learning outcomes; the order is intended to be in sequential order of difficulty.

Figure 2: **Bloom's taxonomy of outcomes**

COGNITIVE SKILLS	EMOTIVE SKILLS	PSYCHOMOTOR SKILLS
Evaluation	Internalising values	Origination
Synthesis	Organising and prioritising	Adaptation
Analysis	Valuing	Complex overt response
Application	Active participation	Mechanism
Comprehension	Awareness and attention	Guided response
Recall		Set response
		Perception

([8]) See Bologna working group on qualifications frameworks, 2005.

Bloom's and similar taxonomies have certainly been influential in many large workplace organisations (ibid.) and, at least implicitly, in formulations of learning outcomes developed in some countries. Often, such categorisations lead to many subcategories, sometimes seen hierarchically, sometimes, not. In practice, a strength of the taxonomy is that it focuses attention on the need to consider learner progression.

2.3.3. Functional analysis

Mostly, functional analysis is used to derive learning outcomes or competences for vocational education and training. This method has been in wide use in the UK for some time and, as indicated earlier, has often been used in some donor funded reform projects on labour market and VET developments. Often, the method of functional analysis for developing outcomes-based VET qualifications in the UK follows a set process.

Figure 3: **Main steps for developing outcome-based VET qualifications in the UK**

National occupational standards (NOS) are the building blocks for VET qualifications in the UK. Sector skills councils (SSC) and other standard setting bodies (SSB) develop the standards by involving their respective industries and employers. In many cases, NOS are used for development of vocational qualifications. NOS are comprised of individual statements that awarding bodies use for developing units and qualifications.

The awarding body uses the suite of NOS, again in consultation with the relevant SSC or SSB and other relevant partner organisations, to develop a structure for a new qualification. Usually, the qualification structure includes both mandatory and optional units. Each unit includes a set of learning outcomes that learners must achieve to complete the unit successfully, and for assessment. Learning outcomes will state what a learner will know and be able to do, following a learning activity.

Source: Cortes, 2007.

2.3.4. The EQF formulation

It is well known that the EQF is expressed as a table of eight levels, each one defined by a series of statements relating to knowledge, skills and competences. The emphasis of learning outcomes is rightly identified with the need to define such outcomes within an inclusive approach to lifelong learning, rather than to be tied to particular kinds and phases of institutions, curricula and qualifications.

Prior to developing the EQF, interestingly, earlier formulations of qualifications and learning outcomes frameworks all seemed to settle on different numbers of levels in the framework. Even in the UK and Ireland, the framework for Ireland has 10 levels, Scotland 12 and England (with Wales and Northern Ireland) eight levels. The Council of Europe's common European

Figure 4: **The European qualifications framework**

Each of the eight levels is defined by a set of descriptors indicating the learning outcomes relevant to qualifications at that level in any system of qualifications

Level	Knowledge *Described as theoretical and/or factual*	Skills *Described as cognitive (use of logical, intuitive and creative thinking) and practical (involving manual dexterity and use of methods, materials, tools and instruments)*	Competence *Described in terms of responsibility and autonomy*
1	Basic general knowledge	Basic skills required to carry out simple tasks	Work or study under direct supervision in a structured context
2	Basic factual knowledge of a field of work or study	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	Work or study under supervision with some autonomy
3	Knowledge of facts, principles, processes and general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	Take responsibility for completion of tasks in work or study Adapt own behaviour to circumstances in solving problems
4	Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change Supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities
5	Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	Exercise management and supervision in contexts of work or study activities where there is unpredictable change Review and develop performance of self and others

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Each of the eight levels is defined by a set of descriptors indicating the learning outcomes relevant to qualifications at that level in any system of qualifications

Level	Knowledge *Described as theoretical and/or factual*	Skills *Described as cognitive (use of logical, intuitive and creative thinking) and practical (involving manual dexterity and use of methods, materials, tools and instruments)*	Competence *Described in terms of responsibility and autonomy*
6	Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles	Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study	Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts Take responsibility for managing professional development of individuals and groups
7	Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking Critical awareness of knowledge issues in a field and at the interface between different fields	Specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields	Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches Take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams
8	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields	The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice	Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research

Source: European Commission (2007).

framework of reference for languages, on the other hand, uses six levels. In conceptualising learning outcomes this suggests that they are eminently contextual and that the number of levels and their exact formulation will reflect both the history of qualifications in a particular country or region as well as the major debates and stakeholders involved. However, as a current paper on the European qualification framework shows (Coles, 2007), European countries currently considering how to develop their own national qualifications framework seem to favour eight levels. This includes Belgium, the Czech Republic, Lithuania, Slovakia and Spain. Several documents refer to the anticipated influence of the EQF. Is it worth noting that for higher education it is expected that countries will produce further levels in the three Bologna cycles and, by implication, in the EQF. Contrary to popular perceptions, the Bologna cycles are envisaged as metaguidelines. As such they are intended to provide an external reference point for national qualification framework alignment, thus helping countries to develop their own levels.

2.3.5. The Tuning project

The Bologna process is attempting, as the Tuning project illustrates, to place emphasis on learning outcomes. The Tuning project has developed its own classification of generic learning outcomes, expressed in instrumental competences, interpersonal competences and systemic competences. This can be tabulated.

Figure 5: **The Tuning project generic learning outcomes**

Instrumental competences	Interpersonal competences	Systemic competences
Capacity for analysis and synthesis	**Critical and self-critical abilities**	**Capacity to apply knowledge in practice**
Capacity for organisation and planning	Teamwork	Research skills
Basic general knowledge	Interpersonal skills	Capacity to learn
Grounding in professional knowledge	Ability to work in an interdisciplinary team	Capacity to adapt to new situations
Oral and written communication	Ability to communicate with experts in other fields	Creativity
Knowledge of a second language	Appreciation of diversity and multiculturalism	Leadership
Computing skills	Ability to work in international context	Understanding other cultures
Information management skills	Ethical commitment	Ability to work autonomously
Problem solving		Project design and management
Decision making		Initiative and entrepreneurial spirit
		Concern for quality
		Will to succeed

Source: Adam, 2004.

Given the number of countries whose higher education systems have agreed to participate in the Bologna process, this classification can be expected to have an influence at policy level and – presumably in differentiated ways – at the level of learning and teaching in higher education. The extent to which this is already the case remains doubtful, and until now the main impact of the Tuning learning outcomes has probably been to publicise the importance of generic competences, which are not subject-based but generic and transferable. One source of tension is that graduates, employers and academics frequently apply different rankings to skills, in terms of their importance.

2.3.6. The OECD DeSeCo project – Key 'competencies'

The OECD has developed a classification of key competences. The definition and selection of competencies (DeSeCo) project (OECD, 2005) describes the classification as the result of collaboration with experts, researchers and institutions, and based on a sound theoretical understanding. Specifically, each key 'competency' – this term is preferred to competence – must contribute to valued outcomes for individuals and societies, help people meet a range of demands in today's world and be important for all, not just for specialists. The three broad categories are: using tools (such as language and technology) interactively; interacting in heterogeneous groups; and, acting autonomously.

Documentation from Finland indicates that the DeSeCo descriptors have been influential in developing the core curriculum, which is common to basic education, upper secondary general and vocational education and to teacher training. It is sometimes difficult to understand clearly whether the Finnish case relates mainly to learning outcomes, or is in a midpoint position between learning outcomes, teaching and learning processes (a reduced core curriculum) and learning inputs (taught subjects and hours of instruction). Perhaps, also, the OECD competence scheme oscillates between a learning outcomes approach, and a teaching and learning process approach. In Hungary, the underlying concept of learning outcomes being developed is increasingly based on the results of the OECD's DeSeCo project and EU recommendations on key 'competencies'.

2.3.7. EU key competences

As part of the Education and training 2010 programme, the EU has also developed a set of key competences, working with expert groups representing Member States and through consultation (European Commission, 2005). The EU has preferred the term competence. The descriptors used for the eight key competences are based on the categories knowledge, skills and attitudes. To

date, no attempt is made to define them by level, except in the separately worked up areas of languages (Lenz and Schneider, 2004) and ICT.

Figure 6: **The eight EU/European key competences**

Communication in mother tongue	Learning to learn
Communication in foreign languages	Interpersonal, intercultural and social competences and civic competence
Mathematical competence and basic competences in science and technology	Entrepreneurship
Digital competence	Cultural expression

Source: Adapted from European Commission, 2005.

The detailed descriptors, which are available in the document cited, refer to 'abilities to …'. The EU key competences fall into three groups. First, primarily cognitive competences (such as mathematical competence) are measurable at national and international levels. Second, there are competences that require a higher degree of cross-curricular organisation if they are to be achieved (digital competence, learning to learn, social and civic competences). Finally, a group of underpinning transversal competences is identified, such as critical thinking, creativity, initiative, problem-solving, risk assessment, decision-taking and constructive management of feelings. In addition, the Council of Europe's common European framework of reference for languages is clearly anchored to learning outcomes rather than mode of acquisition, across the domains of listening, speaking, reading and writing. The European Commission has commissioned a cross-country study of key competences in general education, and this will be one of several constructive ways in which this study can be followed up.

2.3.8. Implications

The schematic presentations of learning outcomes schemes summarised above help to raise questions about how learning outcomes are developed in particular settings. The following questions stand out. This can clarify:

- whether a particular set of learning outcomes is based on a particular theoretical position or set of research findings;
- whether a set of learning outcomes is the result of a process of negotiation on the part of stakeholders. If so, the leading stakeholders and their motivation can be identified;
- whether the set of learning outcomes are a 'ready made' set, which has been developed in relation to an external reference point, such as the EQF or the Bologna process;

- what the balance is between generic and technical/subject specific/sectoral learning outcomes and whether there is, for example, an overfocus on one of the cognitive aspects.

This suggests a three-part typology, based on the derivation of systems of learning outcomes.

Figure 7: **Derivation of learning outcome categorisations**

Type 1	Type 2	Type 3
Learning outcomes based on a theoretical or research formulation	Learning outcomes based on negotiation between stakeholders	Learning outcomes borrowed/ adapted from elsewhere

3. Learning outcomes; drivers for change

The 2007 Cedefop study provides a detailed picture of how the learning outcomes-based perspective and approach have been taken on across the subsystems of general education, higher education and vocational education and training. The study also provides an insight into use of learning outcomes in designing and reforming assessment, how it links to lifelong learning policies and the critical importance of involving key stakeholders in the development and implementation of learning outcomes approaches.

3.1. Learning outcomes in subsectors of education and training

The following sections provide an overview of main trends and challenges in the main areas of education and training. While this overview illustrates a clear shift towards learning outcomes, we can still see important differences between the different subsectors.

- Vocational education and training: the drive to redefine qualifications and curricula using learning outcomes has been most clearly seen in VET. Programmes of study and the mix of school-based and work-based learning are now focused more and more on the learning outcomes called for in working life. The clear point of reference is the kinds of skills required for successful involvement in working life. A simultaneous shift is taking place to identify the soft or transferable skills that the modern labour market calls for, alongside specialist knowledge and skills. Everywhere, the challenge is to equip the learner with the transferable skills needed for unpredictable working careers, while at the same time meeting the labour market's technical skills needs. Most European countries have developed or are developing approaches to VET qualifications that identify learning outcomes based on standards, which are subject to procedures for validating them, and to governance and quality assurance by recognised national, federal or regional agencies.
- Higher education: learning outcomes also have an increasingly prominent role in higher education. So far, however, at European level the Bologna process has concentrated mainly on commonly agreed developments of

new structures. Thus university degrees are being recast as licences, masters and doctorates (LMD). The evidence is that the learning outcomes approach, on which there is broad agreement at European policy level and often at policy level in Member States, is being adopted more slowly at the level of higher education institutions. The agreed formulations of generic and specialist competences, as they are called, or locally adapted variants, are only gradually being introduced to reformed higher education courses and modules. Even if, as the evidence suggests, learning outcomes have a rather limited impact on higher education at present, this is likely to prove to be a major shift in the reform of higher education teaching and learning in the longer term. We can describe development of learning outcomes in higher education as a slow burning fuse: the agreed formulations for learning outcomes in higher education are as yet having limited impact, but the situation is likely to change in the middle and longer term, with considerable impact on higher education teaching and learning.

- General education: increasingly, learning outcomes are being introduced as a guiding mechanism to inform general education reforms. The emphasis is on defining learning outcomes to shape the learner's experience, rather than give primacy to the content of the subjects that make up the curriculum. Learning outcomes are being used in a range of countries to point the way to modernising EU schooling systems, thus acting as a renewing and reforming influence at different levels – governance, systemic reform, curriculum, pedagogy and assessment. In compulsory schooling, the study has identified two different ways in which learning outcomes are given prominence in the school curriculum in different countries. In one approach, a core of learning outcomes is defined with reference to the school curriculum. The learner is expected to achieve these outcomes through the experience of learning: some outcomes are linked to specific subjects within a core curriculum, while others are learned across the whole curriculum, including wider and informal experience. A second approach identifies holistically the learning outcomes that the learner should typically achieve by the end of a phase, or the whole of school education. These are associated with the agreed aims and objectives of the education system. Only then are appropriate subjects and groupings of subjects identified or brought into play. In this case, new possibilities open up to include some new ways of thinking about the learning process in the overall planning of learning programmes. We can expect these approaches to open up new challenges for pedagogy and for the organisation of schools.

  In both of these approaches the role of learning outcomes is to provide a new organising focus for teaching and learning, and this can mark a radical

shift from the traditional, subject-dominated approach to the school curriculum. This can be referred to as a learner-centred approach. As we understand more about learning processes through research being conducted in fields outside traditional domains of educational research, we can expect the results of new research to open up new challenges for pedagogy and for the organisation of schools. New approaches to learning outcomes in the school curriculum are also often linked to decentralisation in arrangements for the curriculum; various forms of decentralisation have been a marked trend in most European countries' education systems over two decades.

This does not mean that growing emphasis on learning outcomes signals that provision for the definition or content of the curriculum has become unimportant. Rather, identification of clear and apt learning outcomes acts as an organising principle for good practice in schools. Learning outcomes take a prominent place alongside the aims, objectives and ethos of the system or institution. They have a direct and formative impact on the curriculum and pedagogy, contributing significantly to what and how young people learn, and should have an impact on how learning is assessed.

- Post-compulsory general education: across Europe, the post-compulsory phase of general education is the part of the education system least influenced by reforming ideas about learning outcomes. This is largely because, while upper secondary general education has an educative function, this can be overshadowed by the selective function. General upper secondary schooling in most European countries is intended primarily to lead on to higher education, and access to university is a restricted transition intended for only part of each age cohort or generation. A consequence is that general upper secondary education remains closely tied in many – though not all – cases to detailed curriculum or syllabus requirement, often assessed by terminal written examination. In this case, learning outcomes are limited by the learning requirements of the groups of subjects followed, often closely monitored by the subject specialists in universities. If learning outcomes begin to have a formative impact on university curricula and pedagogies, this may in due course have a consequential effect on the curriculum, pedagogy and assessment in upper secondary general education.

3.2. Learning outcomes and assessment

If the evidence and argument above are accepted, it is to be expected that learning outcomes will have an impact on styles of assessment. However, the evidence gathered for this report suggests that learning outcomes currently

have a limited impact on the ways in which learning is assessed. This calls for more attention on the part of research, policy-makers and practitioners.

In this respect, recent reforms in some countries provide interesting case studies showing the way towards introducing learning outcomes as an effective way to guide assessment practice, replacing more traditional notions such as course completion and tests to assess mastery of content, both of which depend for their legitimacy on learning inputs. The report has brought to light several such innovations. In Norway, the new national system of assessment is built on agreed conceptualisations of learning outcomes, and is intended to be formative for learners rather than simply summative for quality assurance purposes. In Finland, assessment in VET at all levels is being shifted away from course or unit completion and formal, traditional testing to what is called locally 'demonstration' assessment. This applies to school-based and polytechnic VET qualifications, and also to recognition of skills acquired informally and non-formally by adults in the workplace. In Ireland, learning outcomes are a constant factor in the newly developed and flexible system for recognising informal and non-formal learning, while the innovative Romanian system of recognition centres for adult learning is based firmly on competences, as learning outcomes. These approaches to assessment rely strongly on assessment vehicles such as use of student portfolios, presentation of projects and assignments that the learner has produced after negotiation or agreement with teachers or trainers, and formative assessment of learning experience in the community or workplace.

Even if learning outcomes are generally less influential in assessment than in some other aspects of education and training reform, identifying active learning as a new – or increasingly dominant – paradigm certainly raises the question of what kinds of assessment are appropriate. The solution may be found in linking assessment to the active learning cycle. This strongly implies the need for formative assessment, and to build up a culture of self-assessment as an explicit part of assessment for learning. Traditional, end of qualification examinations may perform a selective function, but they really cannot perform this formative function.

Yet, it must be recognised that assessment legitimately has diverse purposes. In practice, policy-makers, practitioners and researchers all seek a combination of usefulness, reliability and trust from assessment. Although there may not be consensus on where the balance should lie, the identified shift to learning outcomes requires some major changes in well established testing and assessment practices ([9]).

([9]) This paragraph draws on Steiner's presentation and Paul Black's contribution to the Cedefop's learning outcomes conference, October 2007.

Vocational education and training has been the sector of education where learning outcomes have first been brought most clearly into play. The challenge now is to find appropriate descriptors and metaphors that can make use of learning outcomes fully appropriate to developments, such as national qualifications frameworks, in other parts of education and training systems. We take up this question in the next section of the conclusions.

3.3. Learning outcomes and lifelong learning

Beyond reform of particular qualifications, curricula and assessment processes, the report has shown how learning outcomes are prominent in attempts to develop a modern, overarching approach to all aspects of education and training. Lifelong learning policies are intended to help meet the challenges that modern societies face, including those facing individuals, communities, labour markets and economies.

In Europe, most Member States report (Council of the European Union, 2008) that developing a coherent lifelong learning policy is a priority, even though few Member States can be considered to be advanced in implementing a lifelong learning strategy. Overall implementation remains patchy, at best. Further, and as might be expected from the different traditions and approaches to developing social and economic policies in evidence across the European Union, the basic motivation that lies behind development of a lifelong learning strategy varies between countries. Some countries emphasise the social dimension, and the entitlement of all citizens to free access to lifelong learning opportunities on as equal a basis as possible. Others, while not ignoring social inclusion and cohesion, place the primary emphasis on employability and raising skills levels in the workforce. A third group envisages the social and economic priorities as intertwined in developing an approach to lifelong learning, not as separate or alternative strands. In each case, there is a strong tendency to identify generic learning outcomes, to give shape to policies at national level.

This is most clearly the case where a national qualifications framework exists or is under development and where efforts are in place to recognise the outcomes of all learning experiences, irrespective of whether the setting is formal or informal, explicit or implicit.

Cedefop's study (2008 forthcoming) has provided numerous examples from current usage of how learning outcomes can be conceptualised and grouped. It is suggested that a particular formulation may be developed through adoption or use of theories and research into learning outcomes, through negotia-

tion between stakeholders or, simply, through borrowing a formulation in use elsewhere. In practice, identification of learning outcomes to create levels in a national qualifications framework should probably contain a well-judged mix of these sources. In many cases, the origin of particular formulations of local outcomes and the method for arriving at them are far from clear. This is an aspect that should be more explicit, in developmental work and in international comparative work.

As an item on their own, qualifications frameworks may have little value; their dynamic purpose is to help resolve challenges in the system that need a strategic approach. In some cases this will be a VET system that is not responsive to the needs of the labour market or work organisations. In other cases, the pressure for wider reform will be to open up access to learning or to further qualification to groups blocked from progression, or who face major barriers. Again, the issue may be to bring more coherence to the whole system, where general education, higher education and VET previously existed in sealed compartments, with limited points of contact and transfer. A qualifications framework constitutes at best active networking and a focal point for stakeholders engaged in the complex task of sustainably reforming major aspects of an education system. Therefore, an NQF development has to be seen as an active tool that engages the main stakeholders in a process of ongoing negotiation and, probably, compromise at different levels in the system. This is the idea behind the Scottish credit and qualifications framework (SCQF), which is 'owned' by a consortium of stakeholders, and does not sit inside the government department.

Numerous countries now have their own national qualifications frameworks, many more are under development, and the European qualifications framework has been agreed by Member States and provides a point of reference for partner countries of the EU. The difference between mapping qualifications and a qualifications framework is that the former simply describes existing qualifications (often by age, stage and duration), while the latter provides common threads to align the different qualifications or types of qualifications. Generic statements of learning outcomes are the approach that can somehow link the different qualifications strands, hence the effort to identify such outcomes.

The current influence of the EQF development may lead to a common norm of descriptors and levels that look like those contained in the EQF. On the one hand, it is sensible for countries developing their NQF to treat other formulations as part of the research and theoretical background, or the evidence base for developing their own policies. However, national contexts and challenges are specific, and there is clear advantage in each Member State working out

carefully its own needs, and how to assist national strategies through development and use of a tailored national qualifications framework. International comparability and legibility of qualifications is one purpose of a national qualifications framework, but not the only purpose. This implies policy learning, not policy borrowing; the open method of coordination and peer learning are already providing a constructive vehicle for this at European level.

On development and use of national qualifications frameworks, we can conclude as follows. First, a national qualifications framework comprises at best an active partnership engaged in a project that is intended to make a contribution to resolving realistically some key problems in the systems where it is located. Second, this takes time to develop, and a formal top-down development that uses a formulaic approach is likely at best to have little impact or, at worst, to be counterproductive. Third, developing a useful framework is likely to be time-consuming and probably a gradual process.

3.4. Learning outcomes and stakeholders

Since the focus for innovation in policy and practice hinges substantially on learning outcomes can be utilised across systems now more decentralised that certainly cannot be micro-managed from the centre, it follows that the main stakeholders in education and training all have a role both in forging change and in developing and implementing learning outcomes.

National and local policy-makers now generally operate in a decentralised environment for education and training. This means that good governance increasingly depends on consensus-building agreements involving multiple stakeholders in broad frameworks that set goals and objectives. In some European countries this takes the form of legislation, while other countries prefer an approach based on bottom-up, evolutionary change. Learning outcomes are well adapted to an objective-led approach to educational reform, more so than are more traditional approaches based on learning inputs, such as detailed central statements of curriculum, and assessment that tests knowledge of curriculum content.

Thus, policy-makers have to engage in diverse areas of reform, in which the systems they organise evolve through participative processes, rather than through the policy decision of a single, centralised authority. In this situation, use of learning outcomes is conducive to the emergence of successful policies and to development of learner-centred practices in teaching and training.

As we have shown, policy-makers have to consider the multiple uses of learning outcomes, whether setting objectives for lifelong learning, develop-

ing a qualifications framework or quality assurance system, or in steering the reform of key aspects of qualifications, curriculum or assessment in general or higher education, or VET. The ways in which Germany is approaching identification of learning outcomes as part of developing a national qualifications framework provides an example of this plurality. At the developmental stage, a distinction is being made between generalised statements or a metaframework of learning outcomes, which can be used to link learning outcomes relating to qualifications across all the subsectors of education and training, and the more specific outcomes that characterise the learning context in each of the subsectors ([10]. These have been described as an ideal model of a hierarchy of theoretical outcomes, and a reality model to describe learning outcomes for each of the main sets of national qualifications. The point to bear in mind is that policy-makers are necessarily using learning outcomes in somewhat different ways at different levels of the conceptualisation and reform process.

3.4.1. The crucial role of social partners

Social partners have a prominent role as stakeholders in VET developments. As we have shown, identifying the standards against which development of qualifications, curricula and assessment can be carried out involves, by definition, the social partners. Preferably this refers both to organisations of employers and of employees. In effective systems, the social partners are also involved at the more local level, for example in taking the leading role in apprenticeship, in providing work placements for students and, frequently, involvement in local partnerships that optimise the learning and assessment processes. In some cases employers are reluctant to engage seriously with the further training of their employees. It is often said that employers are more interested in the skills that new recruits bring, rather than the diplomas they have. Similarly, ministries of education and labour may be reluctant or inexperienced in working with stakeholders. If this is the case, the more transparency that diplomas have through the impact of learning outcomes, the better.

The social partners also have a legitimate role in participating as a stakeholder in learning outcomes-led reforms in other parts of the education system. However, employability is obviously not the only value attached to successful education systems. The role of employment-related skills is urgent in the drive for European competitiveness, but this must be balanced against

([10]) This example is quoted with reference to the presentation (at the Cedefop conference on learning outcomes) of Prof Volker Gehmlich, UAS Osnabruck, Germany – see above.

other legitimate specialist and broadly social goals, whether in higher education, general education or in VET.

3.4.2. The role of teachers and trainers

Teaching and training professionals are at the heart of learning-outcomes led reform. This is the case, even though shifting to using learning outcomes signals a move away from the dominance of what schools and teachers can provide, to an emphasis on learner needs and the requirements of working life and the wider community. Emphasis is placed on changing and optimising professional practice. A move away from traditional curricula and assessment to approaches led through learning outcomes is a marked shift for which, at the very least, teachers and trainers need to be properly prepared.

If learning outcomes are broadly defined, the teacher's role moves towards facilitation. Well defined learning outcomes require well thought out and sensitive pedagogies to facilitate them. Broadly defined and holistic learning outcomes are key to the changing approach to teaching and learning. Optimally, this means that teachers are involved at all levels in the planning as well as the implementation of learning-outcomes led reforms. Often, however, this is not the case. We have indicated that detailed attention to teachers and trainers (including school leaders and those offering information, advice and guidance) lies outside the scope of this study, and these issues call for further research. Such work is already under way elsewhere, in recognition that in many countries and at European level this aspect has received insufficient attention. It is to be expected that the impact of learning outcomes is somewhat different for teachers in the different sectors and phases of education and training.

Research communities can ensure that policy-makers and practitioners base reforms and new practice on a sound evidence base, and can frequently be involved in both trials for new practice and evaluation of the impact of initiatives. Work that relates to learning outcomes is still innovative in terms of common and accepted practice, and this opens up possibilities and responsibilities for research communities. There is a need for more comparative work and, in particular, for local and national researchers to inform policy-making and practitioner communities of both the possibilities and shortcomings of initiatives that have developed learning outcomes to a prominent position elsewhere. Education researchers should be encouraged to lead multidisciplinary work to energise ideas and knowledge and communication about learning outcomes. An important part is to widen access to new ideas about learning emanating from research traditions that are wider than those usually encompassed by education research.

3.4.3. The role and interests of learners

Logically, learners should be an identified stakeholder, as is now happening in some settings. This is appropriate both to national debate and reform and to local, institutional settings. Involving learners can take active forms through involvement in planning, or a more limited role, for example through sampling or open response to online questionnaires. We have shown how a shift towards learning outcomes is associated in many settings with a move towards more individualised learning, including use of individual learning plans. In this case, the learner is almost by definition involved in negotiating aspects of the learning programme, and identifying appropriate forms of review and assessment. This implies engaging the learner at the microlearning level, as a partner.

Of course, this summary of stakeholders and their involvement is not exhaustive. Indeed, numerous other stakeholders from across civil society, such as community organisations, will expect to have a legitimate voice.

4. Conclusion

Even though it has not been possible to capture all the examples of interesting development and practice, the 2007 Cedefop study has brought to light many examples of the ways in which learning outcomes are prominent in European education and training systems and reforms.

Clearly, the study has covered an aspect of policy in which there is already a considerable, and growing, volume of activity at different levels in both national and local systems.

Policy-makers, school leaders and practitioners should bear in mind that learning outcomes are not the only show in town. If we take the planned learning experience as the basis of what the study has examined, we can identify a definite shift from the content-led curriculum to a learning outcomes approach. The focus changes, but the other components of the process do not disappear. Learning outcomes are the focus, and provide a key role in organising systemic aims, curriculum, pedagogy, assessment and quality assurance. These other factors remain significant in planning and implementation.

Seeking a clear and external point of reference, learning outcomes are often tied in with the standards and skills of the labour market. This is tempting because skills for employment are important, and because in many countries identification of learning outcomes has begun in the VET sector. However, effective development means taking account of the specificity of different learning contexts. While it may be possible to reach idealised statements to link subsectors, in practice learning outcomes will continue to be diverse, and depend strongly on their context and the purpose for which they are used.

Placing learning outcomes prominently is strongly linked to the shift to active learning, and blurs the distinction between theoretical and practical learning. This is helpful to both policy-makers and practitioners, as they try to integrate different kinds of learning, such as the theoretical and the vocational, and to motivate the whole range of learners. Often, this is associated with making learning programmes modular or with unit-based assessment. This is associated with attempts at European and national levels to develop systems of credit accumulation and transfer. A test of whether learning outcomes can in practice help to unify different approaches should be undertaken currently in the European context of Education and training 2010. At the Cedefop conference that discussed interim findings of this study, there was debate on the

differing approaches being taken to learning outcomes as a basis of credit systems at European level, in higher education (ECTS – the European credit transfer scheme) and in vocational education and training (ECVET – European credit for vocational education and training).

It follows that successfully adopting an approach to governance that links identification of aims and objectives to new forms of decentralisation and new concepts of learning outcomes at different levels in the education system, also calls for new forms of partnership. Hence, there is a need for strong stakeholder participation in developments at system level of, for example, a national or federal authority. The case stated a little earlier also suggests that developing learning outcomes in relation to national policy development should be a careful and quite open process, not one owned exclusively by the administration. Identification of learning outcomes has to be a collaborative effort, if it is to be meaningful.

Thus, new forms of partnership are also called for at local level. Programmes that link theoretical learning with practical experience may demand a dynamic learning partnership involving local consortia of schools, local authorities and employers or community groups. In this case there can be shared ownership of learning outcomes. Establishing new approaches to the curriculum may involve active participation of teachers and university researchers to develop and evaluate initiatives. Thus, variants of localised action research become possible.

So far as learning outcomes are concerned, a basic argument we have developed is adopting learning outcomes is an important part of the diverse framework for success – at whatever level is in question – in European education and training systems. This involves a culture shift, which cannot be achieved top-down. Therefore, making change happen also means allowing sufficient time and efficient means for change to emerge.

Bibliography

Adam, S. An introduction to learning outcomes: a consideration of the nature, function and position of learning outcomes in the creation of the European Higher Education Area. In Froment, E.; Kohler, J. (eds). *EUA Bologna Handbook*. Berlin: Raabe Verlag, 2006.

Adam, S. *New challenges in recognition: the recognition of prior learning. Official Bologna Process Seminar: why is the recognition of prior experiential learning important and what are the national and institutional implications of this for lifelong learning?* Riga: AIC, 2007. Available from Internet: http://www.aic.lv/bologna2007/docs/S_Adam_background_report.pdf [cited 7.3.2008].

Adam, S. *Using learning outcomes: a consideration of the nature, role, application and implications for European education of employing learning outcomes at the local, national and international levels*. Edinburgh: Scottish Executive, 2004.

Agency for Vocational Education. *CARDS 2002 projekt: Strukovno obrazovanje i osposobljavanje: modernizacija i izgradnja, institucija = White Paper: proposals and recommendations concerning VET policy, strategy and legislation*. Available from Internet: http://www.aso.hr/data/VET_white_paper_english.pdf [cited 7.3.2008].

Allais, Stephanie Matseleng. Why the South African NQF failed: lessons for countries that want to introduce national qualifications frameworks. *European Journal of Education*, 2007, Vol. 42, No 4.

Bloom, B.; Mesia, B.; Krathwohl, D. *Taxonomy of educational objectives* (Vols 1 and 2). New York: David McKay, 1964.

Bologna working group on qualifications frameworks. *A framework for qualifications of the European higher education area*. Copenhagen: Ministry of Science, Technology and Innovation, 2005.

Bouder, A.; Kirsch, J.L. The French vocational education and training system: like an unrecognised prototype? *European Journal of Education*, 2007, Vol. 42, No 4.

Brockmann, Michaela. *Qualifications, learning outcomes and competencies: a review of the literature*. Draft working paper. Available from Internet: http://www.nuffield14-19review.org.uk/files/documents155-1.pdf [cited 6.3.2008].

Carneiro, R. et al. Futures of learning: a compelling agenda. *European Journal of Education, 2007,* Vol. 42, No 2.

Cedefop. The role of learning outcomes in national education and training policies and practices: a comparative study. Luxembourg: Publications Office, 2008 (forthcoming).

Cedefop; Béduwé, C. et al. New and emerging issues in vocational education and training research beyond 2010. In Cedefop; Descy, P.; Tessaring M. (eds). *Modernising vocational education and training. Fourth report on vocational training research in Europe: background report.* Luxembourg: Publications Office, 2006. (Cedefop Reference series).

Cedefop; Descy, P.; Tessaring, M. (eds). Cedefop fourth research report: modernising vocational education and training. Luxembourg: Publications Office, 2008 [forthcoming].

Cedefop; Grootings, P.; Nielsen, S. Policy learning: applying the changing learning paradigm for policy advice on VET reforms in transition countries. In Cedefop; Descy, P.; Tessering, M. (eds). *Modernising vocational education and training: fourth report on VET research in Europe*. Thessaloniki: Cedefop, 2008 [forthcoming].

Cedefop; Winterton, J. et al. *Typology of knowledge, skills and comptences: clarification of the concept and prototype*. Luxembourg; Publications Office, 2006. (Cedefop Reference series).

Coles, M. *Qualifications frameworks in Europe: platforms for collaboration, integration and reform.* Conference paper presented at Making the European learning area a reality, 3-5 June 2007, Munich, 2007.

Cortes, S. *Note on the development of national occupational standards and learning outcomes in UK vocational qualifications*. London: QCA, 2007 [unpublished].

Council of the European Union. *Draft 2008 joint progress report of the Council and the Commission on the implementation of the Education and training 2010 work programme: delivering lifelong learning for knowledge, creativity and innovation: adoption.* Brussels: Council of the European Union, 2008. (EDUC 29 SOC 46). Available from Internet: http://ec.europa.eu/education/policies/2010/natreport08/council_en.pdf [cited 11.3.2008].

Council of the European Union. *Education and training 2010: the success of the Lisbon strategy hinges on urgent reforms: draft joint interim report of the Council and the Commission on the implementation of the detailed work programme on the follow-up of the objectives of education and training systems Europe.* Brussels: Council of the European Union, 2004. Available from Internet: http://register.consilium.eu.int/pdf/en/04/st06/st06236.en04.pdf [cited 11.3.2008].

Crosier, D; Purser, L; Smidt, H. *Universities shaping the European higher education area*. Brussels: European Universities Association, 2007. Available from Internet: http://www.eua.be/fileadmin/user_upload/files/Publications/EUA_Trends_V_for_web.pdf [cited 6.3.2008].

Delors, Jacques. *Education for the twenty-first century: issues and prospects: contributions to the work of the International Commission on Education for the Twenty-First Century: Education on the move.* Paris: Unesco, 1998.

DfES. *Bologna process stocktaking report 2007*. London: DfES, 2007. Available from Internet: http://www.aic.lv/ace/ace_disk/2005_07/Reports/Stocktaking.pdf [cited 6.3.2008].

Dreyfus, H; Dreyfus, S. *Mind over machine: the power of human intuition and expertise in the era of the computer*. Oxford: Basil Blackwell, 1986.

Driscoll, M. *Psychology of learning for instruction*. 2nd ed. Boston: Allyn and Bacon, 2000.

ENQA. *Standards and guidelines for quality assurance in the European higher education area*. Helsinki: European Association for Quality Assurance in Higher Education, 2005. Available from Internet: http://www.enqa.eu/files/ESG_v03.pdf [cited 7.3.2008].

EUNEC. *State of affairs of the European education policy, September 2007*. Brussels: European Network of Education Councils, 2007.

European Commission. *Development of vocational training policy: common European principles for validation of non-formal and informal learning.* Brussels: European Commission, 2004. Available from Internet: http://www.ecotec.com/europeaninventory/publications/EC_common_principles_validation_20040303.pdf [cited 6.3.2008].

European Commission. *Proposal for a recommendation of the European Parliament and of the Council on key competences for lifelong learning*. Brussels: European Commission, 2005. (COM (2005) 548 final).

European Commission. *Proposal for a recommendation of the European Parliament and of the Council on the establishment of the European qualifications framework for lifelong learning.* Brussels: European Commission, 2006. (COM (2006) 459 final).

European Ministers of Education. *London communiqué: towards the European Higher Education Area: responding to challenges in a globalised world.* London: Bologna 5th Ministerial Conference, 2007. Available from Internet: http://www.cicic.ca/docs/bologna/2007London Communique.en.pdf [cited 11.3.2008].

Eurydice. *Learning outcomes*. Slough, UK: Eurydice at NFER, 2008 [forthcoming].

Flavell, J. et al. *Cognitive development*. [3rd ed.]. Englewood Cliffs, NJ: Prentice-Hall, 1993.

Fretwell, D; Lewis, M; Deij, A. *A framework for defining and assessing occupational and training standards in developing countries.* Washington, DC: World Bank, 2001.

Goleman, Daniel. *Emotional intelligence*. New York: Bantam Books, 1995.

Goleman, Daniel. *Emotional intelligence: why it can matter more than IQ*. Bloomsbury, 1996.

Goleman, Daniel. *Social intelligence: the new science of human relationships*. New York: Bantam Books, 2006.

González, J.; Wagenaar, R. *Tuning educational structures in Europe: final report of the socrates project (Phase 1): glossary*. Bilbao: University of Deusto, 2003. Available from Internet: http://www.tuning.unideusto.org/tuningeu/index.php?option=com_docman&Itemid=59&task=doc click&bid=17&limitstart=0&limit=5 [cited 11.3.2008].

Gordon J. Approaches to transparency of vocational qualifications in the EU. *European Journal of Education*, 1999, Vol. 34, No 2.

Haasler, B.; Erpenbeck, J. Assessing vocational competences. In Rauner, F.; Mclean, R. (eds). *Handbook on VET research*. Dordrecht: Springer, 2008 [forthcoming].

Immordino-Yang, M.H., Damasio, A. We feel therefore we learn: the relevance of affective and social neuroscience to education. *Mind, Brain and Education Journal,* Blackwell Publishing, 2007. Available from Internet: http://www.blackwell-synergy.com/doi/pdf/10.1111/j.1751-228X.2007.00004.x [cited 11.3.2008].

Kolb, D. *Experiential learning: experience as the source of learning and development.* Englewood Cliffs, NJ: Prentice Hall, 1984.

Lave, J.; Wenger, E. *Situated learning: legitimate peripheral participation.* Cambridge: Cambridge University Press, 1991.

Leney T. *Trends and issues in level 3 qualifications: a survey of four countries.* London: QCA, 2002.

Leney, T. et al. *Achieving the Lisbon goal: the contribution of VET.* Brussels: European Commission, 2005. Available from Internet: http://ec.europa.eu/education/policies/2010/studies/maastricht_en.pdf [cited 11.3.2008].

Lenz, P.; Schneider, G. *Introduction to the bank of descriptors for self-assessment in European language portfolios*. Friburg: University of Friburg, 2004.

Marginson, S.; Van Der Wende, M. *Globalization and higher education*. Paris: OECD, 2007.

Michel, Alain. Parcours et compétences: les EPLE sont-ils prêts. *Administration et Education*, No 114, 2007.

Ministry of Education, Youth and Sport. *National programme for the development of education in the Czech Republic: white paper*. Prague: IIE, 2001. Available from Internet: http://www.msmt.cz/files/pdf/whitepaper.pdf [cited 11.3.2008].

Oberheidt, Stéphanie; Delhaxhe, Arlette. *Focus on the structure of higher education in Europe: 2006/07 national trends in the Bologna process*. Brussels: Eurydice, 2007.

OECD. *The definition and selection of key competences: executive summary: DeSeCo project.* Paris: OECD, 2005. Available from Internet: http://www.oecd.org/document/17/0,2340,en_2649_34515_2669073_1_1_1_1,00.html [cited 14.3.2008].

Parkes, D.; Nielsen, S. *A cross country analysis of ETF peer reviews on curricular reform in vocational education and training in four South East European transition countries.* Turin: ETF, 2006.

Raffe, David. Making haste slowly: the evolution of a unified qualifications framework in Scotland. *European Journal of Education*, No 42, 2007.

Rychen, D.S.; Salganic, L.H. A holistic model of competence. In Rychen, D.S.; Salganic, L.H. (eds). *Key competencies for a successful life and a well-functioning society*. Göttingen: Hogrefe and Huber, 2003.

Schön, D. *The reflective practitioner: how professionals think in action*. New York: Basic Books, 1983.

Skolverket. *Curriculum for the compulsory school system, the pre-school class and the leisure-time centre.* Stockholm: LPO 94, 2006. Available from Internet: http://www.isn.nacka.se/engelska/isn_allmant/lpo94eng.pdf [cited 11.3.2008].

Verloop, N; Lowyck, J. (eds). *Onderwijskunde: een kennisbasis voor professionals.* Groningen: Wolters, 2003.

Wagenaar, R. *The tuning approach: a case study*. Presentation: Edinburgh, Scottish Executive 2004.

Wenger, E. *Communities of practice: learning, meaning and identity*. Cambridge, Cambridge University Press, 1999.

Wolf, A. *Competence-based assessment.* Buckingham: Open University Press, 1995.

Internet references

BMUKK, Austrian Federal Ministry for Education, the Arts and Culture
http://www.bmukk.gv.at/enfr/min_en/index.xml

Cedefop is the European Centre for the Development of Vocational Training.
http://www.cedefop.europa.eu/

DCSF, 2007 Bologna process stocktaking London 2007 DfES/Socrates. Available online:
www.dfes.gov.uk/**londonbologna**/

Eurydice is an institutional network for gathering, monitoring, processing and circulating reliable and readily comparable information on education systems and policies throughout Europe.
http://www.eurydice.org/portal/page/portal/Eurydice

NCCA, Ireland National Council for Curriculum and Assessment
http://www.ncca.ie

PISA The Programme for international student assessment (PISA) is an internationally standardised assessment that was jointly developed by participating countries and administered to 15 year-olds in schools.
http://www.pisa.oecd.org/pages/0,3417,en_32252351_32235907_1_1_1_1_1,00.html

Tuning Reports (EU Socrates project) are on
http://www.relint.deusto.es/TUNINGProject/index.htm

Cedefop (European Centre for the Development of Vocational Training)

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Conceptual, political and practical developments in Europe

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