

## 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



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#### Abstract

This chapter explores the nature and functions of learning outcomes in the context of the Bologna educational reforms. Section 1 explains what they are and where they originate. Section 2 explores their practical application and multiple functions, and provides a schematic summary. Section 3 places them in the context of current pedagogical reform and highlights their relationship to curriculum development - teaching learning and assessment. Section 4 establishes their centrality to the Bologna Process and the successful completion of the European Higher Education Area. Finally, the concluding section 5 points to some important issues associated with their application in the immediate future.

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## 1. The nature and provenance of learning outcomes

### 1.1 Explicit statements about the outcomes of learning

Learning outcomes are statements of what a learner is expected to know, understand and/or be able to demonstrate at the end of a period of learning. They are explicit statements about the outcomes of learning – the results of learning. They are usually defined in terms of a mixture of knowledge, skills, abilities, attitudes and understanding that an individual will attain as a result of his or her successful engagement in a particular set of higher education experiences. In reality, they represent much more than this. They exemplify a particular methodological approach for the expression and description of the curriculum (modules, units and qualifications) and levels, cycles, subject benchmarks statements and the ‘new style’ Bologna qualifications frameworks.

### 1.2 Origins

Learning outcomes do not have a particularly edifying history. Their origins can be loosely traced to the 19<sup>th</sup> and 20<sup>th</sup> centuries and the work of Ivan Pavlov (1849-1936) and then the work of the American ‘behavioural school’ of psychological thought developed by JB Watson (1878-1958) and BF Skinner (1904-1990). Pavlov undertook famous experiments associated with the ‘conditioning’ of salivating dogs and automatic learning. Following this the psychologists Watson and Skinner pioneered the behaviourist approach that explained human behaviour in terms of responses to external stimuli. Notwithstanding Skinner’s abhorrent ideas on mass conditioning, programmed instruction and the excesses of his extreme views, this work led to productive research that improved American teaching, learning and training methods in business, industry and the armed forces.

#### The expansion of learning outcomes

Behaviourism emphasised the clear identification and measurement of learning and the need to produce observable and measurable outcomes. Subsequently, the ‘learning outcomes approach’ was refined by educational practitioners in Australia, New Zealand, South Africa and the United Kingdom and (more recently) by Denmark, Sweden, Ireland and other parts of Europe. From somewhat dangerous beginnings, the emphasis on learning outcomes has evolved to encompass all subject areas, and has moved from school and vocational education and training (VET) fields through to higher education. Their chief advantage is the clarity and precision they bring to any curriculum development process.

### 1.3 A fundamental building block in the Bologna educational reform process

In the 21st century, learning outcomes are arguably best viewed as a fundamental building block of the Bologna educational reforms. This is because they are a practical device and represent a methodological approach that has been adopted to improve the competitiveness, transparency, recognition and mobility of European education. Learning outcomes repeatedly figure in the Bologna-related documents and various ministerial communiqués. The problem is that their acknowledged importance stands in stark contrast to the poor level of understanding associated with them and their relatively rare practical implementation, at least in any explicit manner, across Europe. Detailed experience of learning outcomes is in fact limited to just a few countries at both the institutional and national levels.<sup>1</sup> This gap presents a significant challenge to the Bologna process and even calls into doubt the full realisation of the European Higher Education Area by 2010. This makes the need for better understanding a priority.

**Poor levels of understanding and implementation**

Learning outcomes bring more transparency to higher education systems and qualifications. They have a reputation as rather mundane and prosaic tools, yet it is this basic underpinning function that makes them so significant. It is important that there should be no confusions about their role, nature and significance, or the educational foundations of the Bologna process will be undermined. Learning outcomes have applications at three distinct levels: (i) the local level of the individual higher education institution (for course units/modules, programmes of study and qualifications); (ii) the national level (for qualifications frameworks and quality assurance regimes); and (iii) internationally (for wider recognition and transparency purposes). Learning outcomes and ‘outcomes-based approaches’ have a strong impact on curriculum design, teaching, learning and assessment, as well as quality assurance. They constitute an important part of modern approaches to higher education and the reconsideration of such vital questions as to what, who, how, where and when we teach and assess. The very nature and role of education is being questioned, now more than ever before, and learning outcomes are important tools in clarifying the results of learning for the student, citizen, employer and educator.

**Applications at 3 distinct levels**

In terms of curriculum design and development, learning outcomes are at the forefront of educational change. They represent an adjustment in emphasis from ‘teaching’ to ‘learning’ typified by what is known as

**Student-centred learning**

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<sup>1</sup> The evidence of this can be found in the background report written for the Bologna seminar held in Edinburgh, Adam S, (2004) Using Learning Outcomes, Scottish Executive. This can be downloaded from: <http://www.scotland.gov.uk/library5/lifelong/tehea-00.asp>.

the adoption of a student-centred approach in contrast to the traditional teacher-centred viewpoint. Student-centred learning produces a focus on the teaching – learning – assessment relationship and the fundamental links between the design, delivery and measurement of learning.

Learning outcomes are not just an isolated tool at the level of curriculum design but also represent an approach that plays a significant role in a much wider context that includes: the integration of academic and vocational education and training (VET), the accreditation of prior experiential learning (APEL)<sup>2</sup>, the development of lifelong learning qualifications frameworks and the development of credit transfer and accumulation systems. They are the foundation stone of the new architecture of educational reform.

## **2. The application and multiple roles of learning outcomes**

### **2.1 Definitions**

There is currently no precise agreement about, or definition of, the term ‘learning outcome’ across Europe or the rest of the globe. However, this does not necessarily signify a problem as most who use the term have taken it with minor variations from Northern European, Australian, New Zealand, South African and US practice and the meaning has not fundamentally changed. Learning outcomes have been commonly defined as follows:

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<sup>2</sup> In this context the terms accreditation, assessment, validation and recognition are used synonymously.

'A statement of what a learner is expected to know, understand and/or be able to demonstrate at the end of a period of learning.'<sup>3</sup>

'Learning outcomes (are) statements of what a learner is expected to know, understand and/or be able to demonstrate after a completion of a process of learning.'<sup>4</sup>

'Statements of what a learner can be expected to know, understand and/or do as a result of a learning experience.'<sup>5</sup>

'Student learning outcomes are properly defined in terms of knowledge, skills, and abilities that a student has attained at the end (or as a result) of his or her engagement in a particular set of higher education experiences.'<sup>6</sup>

'Learning outcomes are statements that specify what a learner will know or be able to do as a result of a learning activity. Outcomes are usually expressed as knowledge, skills, or attitudes.'<sup>7</sup>

'Learning outcomes (are) specific measurable achievements.'<sup>8</sup>

A learning outcome is a statement of what competences a student is expected to possess as a result of the learning process.'<sup>9</sup>

'Learning outcome statements are content standards for the provincial education system. Learning outcomes are statements of what students are expected to know and to do at an indicated grade, they comprise the prescribed curriculum.'<sup>10</sup>

### Handout B 2.3-1      Definitions of the term 'learning outcome'

It is clear that these definitions of learning outcomes do not differ significantly from each other. A learning outcome is a written statement of what the successful student/learner is expected to be able to do at the end of the module/course unit, or qualification. The key aspect each of the definitions has in common is the desire for more precision and consideration as to what exactly a learner acquires in terms of knowledge and/or skills when they successfully complete a period of learning.

### Similar definitions

<sup>3</sup> The definition used by the SEEC, NICCAT, NUCCAT Credit and Qualifications – Credit Guidelines for Qualifications in England, Wales and Northern Ireland, November 2001.

<sup>4</sup> Source: Final Report of the Socrates Project (Phase 1), Tuning Educational Structures, glossary. This is also the definition used by ECTS in the new 2004 ECTS Users' Guide.

<sup>5</sup> Source: Credit and Qualifications Framework for Wales, working document, June 2003, page 8.

<sup>6</sup> Source: US, Council for Higher Education Accreditation (CHEA)

<sup>7</sup> Source: American Association of Law Libraries: <http://www.aallnet.org> .

<sup>8</sup> Source: University of Hertfordshire: [http://www.herts.ac.uk/tli/locguide\\_main.html](http://www.herts.ac.uk/tli/locguide_main.html) .

<sup>9</sup> Source: Trans-national European Evaluation Project (TEEP).

<sup>10</sup> Source: Government of British Columbia Ministry of education.

## 2.2 The difference between aims and learning outcomes

Learning outcomes are concerned with the achievements of the learner rather than the intentions of the teacher (expressed in the aims of a module or course). They can take many forms and can be broad or narrow in nature. There is often some confusion between learning outcomes and aims and objectives and certainly many regard learning outcomes and objectives as the same thing and use the terms synonymously. Aims are concerned with teaching and the teacher's intentions whilst learning outcomes are concerned with learning.<sup>11</sup> It has been remarked that

*'There is no absolutely correct way of writing learning outcomes...'*<sup>12</sup>

The creation of learning outcomes is not a precise science and they require considerable thought to write – it is easy to get them wrong and create a learning straitjacket. Learning outcomes are commonly further divided into different categories of outcomes. The most common sub-divisions are between: subject specific outcomes that relate to the subject discipline and the knowledge and/or skills particular to it; and generic (sometimes called transferable or transversal skills) outcomes that relate to any and all disciplines e.g. written, oral, problem-solving, information technology, and team working skills, etc. The identification of generic skills is seen as important in enhancing the employability of graduates whatever their discipline.<sup>13</sup>

### Some examples

Learning outcome statements commonly begin with 'On completion of the learning (unit/module or qualification) the successful student will be able to...' This formulation has a number of benefits as it focuses the writer of the learning outcomes on precisely what skills, abilities and knowledge will be acquired. In the case of this section some appropriate learning outcomes would be that

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<sup>11</sup> One way to distinguish aims from learning outcomes is that aims indicate the general content, direction and intentions behind the module from the designer/teacher viewpoint. Learning outcomes and objectives are more difficult to distinguish as objectives can be written in terms of learning outcomes. This issue is discussed in depth in, Moon J, (2002) *The Module and Programmes Development Handbook*, Routledge Falmer, page 62.

<sup>12</sup> Gosling D and Moon J, (2001) *How to Use Learning Outcomes and Assessment Criteria*, SEEC publications, page 5.

<sup>13</sup> The Tuning Educational Structures project is a valuable source of information and research on generic, transversal learning outcomes: <http://tuning.unideusto.org/tuningeu/>.

'On completion of this article the successful reader will be able to:

comprehend the nature and function and multiple applications of learning outcomes;

assess the relative merits and implications of the adoption of learning outcomes;

describe the role of learning outcomes in the Bologna Process.

Such statements are typically characterised by the use of active verbs. Six categories of learning were identified by Bloom as: knowledge, comprehension, application, analysis, synthesis and evaluation.<sup>14</sup> Useful examples of verbs used are as follows: for knowledge - duplicate, state, relate; for comprehension - classify, describe, recognise, review; for application - apply, demonstrate, solve; for analysis - calculate, analyse, appraise, criticise; for synthesis - assemble, construct, plan, formulate; for evaluation - appraise, argue, predict evaluate, etc.<sup>15</sup> Certainly Bloom, when writing learning outcomes, is a useful starting place for inspiration but should not be regarded as the only source.

### 2.3 The relationship between learning outcomes and competences

The relationship between learning outcomes and competences is a complex area – the subject of some debate and considerable confusion. 'Competence' and 'competences' are used in association with learning outcomes in different countries in a number of ways – hence the problem. 'Competence' can broadly refer to aptitude, proficiency, capability, skills and understanding, etc. A competent person is someone with sufficient skills, knowledge and capabilities. Some take a narrow view and equate competence just with skills acquired by training. It should be recognised that there is no precise common understanding or use of the term.

In the Tuning project<sup>16</sup>, competences and skills are understood as including 'knowing and understanding' (theoretical knowledge of an academic field, the capacity to know and understand), 'knowing how

#### Competences and skills

<sup>14</sup> Bloom B (1956) *Taxonomy of Educational Objectives – The Cognitive Domain*. Longman, New York.

<sup>15</sup> There are many texts that explore how to write learning outcomes including Moon J, (2002) *The Module and Programme Development Handbook*, chapter 5, Kogan Page.

<sup>16</sup> <http://tuning.unideusto.org/tuningeu/>

to act' (practical and operational application of knowledge to certain situations), 'knowing how to be' (values as an integral element of the way of perceiving and living with others and in a social context). Competences represent a combination of attributes (with respect to knowledge and its application, skills, responsibilities and attitudes) and are used to describe the level or extent to which a person is capable of performing them. In this context, a competence or a set of competences means that a person can demonstrate a certain capacity or skill and perform a task in a way that allows evaluation of the level of achievement. Competences can be demonstrated and therefore assessed.

### Need for a common understanding

Learning outcomes are commonly expressed in terms of competences or skills and competence. The loose use of all these terms in an almost interchangeable way does lead to confusion and the development of a common terminological understanding should be encouraged. The European Commission consultation event held in Budapest, February 2006, on their proposed European Qualifications Framework (EQF) for Lifelong learning concluded that there needs to be a common understanding of learning outcomes and work is continuing to achieve this.<sup>17</sup>

## 2.4 The multiple roles and applications of learning outcome

Learning outcomes make a contribution to different levels and dimensions of education. They are not just devices to express the curriculum – they also represent a way to communicate external reference points at the regional, national and international levels. The three distinct levels of application can be summarised in the following way:

### 2.4.1 Institutional/local level

### Curriculum and assessment implications

At the institutional level they have curriculum implications for teaching, learning and assessment. Here learning outcomes can be used to express learning at the level of the unit or module. In so doing they clarify for the learner what is expected of him or her as well as the skills/competences, understanding and abilities that they will acquire on successful completion of their study. For the teacher, learning outcomes clarify what exactly the module will deliver and unite this with the appropriate mode of delivery and assessment. The dynamic process of marrying outcome and learning with assessment is not simple but does lead to improved courses. The qualification itself can also be described in broader learning outcomes that link to external reference

<sup>17</sup> [http://ec.europa.eu/eucation/policies/educ/eqf/index\\_en.html](http://ec.europa.eu/eucation/policies/educ/eqf/index_en.html)

points leading to better design. This results in qualifications that are fit for their now clearly stated purposes.

#### **2.4.2 National level**

At the national level learning outcomes play a wider role that permeates the ways the national qualifications framework is described and the tools used to describe it. Quality assurance is improved, as explicit guides to standards can emerge based on level descriptors, qualification descriptors and subject benchmark statements. These descriptors and statements themselves take the form of learning outcomes – statements that show what a student will achieve at a particular level of study, in a type of qualification, or in a specific discipline.

**Links to national qualifications frameworks and quality assurance**

#### **2.4.3 International level**

At the international level learning outcomes play a subtly different role than at the local and national levels. They will be by definition much broader and less precise than any national descriptors. For example, the European Higher Education Area has adopted the very broad generic ‘Dublin descriptors’ as the cycle descriptors for its Bologna overarching qualifications framework. These cycle descriptors provide a context to help national authorities develop their own more detailed level descriptors. Providing common approaches are used by different states within their own national systems, learning outcomes open up the possibility of real transparency, mobility and fair recognition on a scale impossible in the past. At the international level they aid transparency, recognition and comparability by providing overarching reference points.

**Transparency, recognition and comparability**

Defining degree structures and identifying their characteristics      Learning outcomes, skills and competences

**Table B 2.3-1-1      Towards a typology of learning outcomes and their multiple applications**

<b>Mode and area of application</b>	<b>Features and attributes</b>
<p><b>Module</b> (learning outcomes employed at the level of the unit or module as statements that identify what a successful learner will be able to know, understand and / or be able to do)</p>	<p>Concerned with the achievements of the learner. Differ from 'aims' that indicate the intentions of the teacher. Directly link to a teaching strategy for the effective delivery of the learning outcomes. Directly link to an assessment strategy and appropriate assessment criteria.</p> <ul style="list-style-type: none"> <li>• Are developed in a context of a wide range of internal and external reference points and influences</li> </ul>
<p><b>Assessment and grading criteria</b> (at the level of the module, learning outcomes can be used to express the criteria that establish the standard of achievement and the relative performance of individuals )</p>	<ul style="list-style-type: none"> <li>• Assessment criteria are the description of what the learner is expected to do to demonstrate that the learning outcome has been achieved. These are normally written at threshold level and distinguish the pass and fail threshold.</li> <li>• Grading criteria refer to the precise quality of the achievement of the outcome. They distinguish the relative performance of each student. Grading criteria are also written as learning outcomes.</li> </ul>
<p><b>Unique individual qualification Descriptors</b> (learning outcomes used for describing and expressing individual subject-specific qualifications validated / accredited by a Higher Education Institution)</p>	<ul style="list-style-type: none"> <li>• Written individually or collectively by academics and are unique to a specific qualification and institution.</li> <li>• Include subject specific statements of skills, abilities and understanding.</li> <li>• Can include general transferable / transversal skills that are sought by employers.</li> <li>• Will be created within the context of the appropriate national and / or international 'external reference points' and qualifications frameworks.</li> </ul>
<p><b>National qualification descriptors</b> (learning outcomes as generic descriptions of types of qualifications)</p>	<ul style="list-style-type: none"> <li>• Exemplify the generic (non-subject specific) outcomes of a nationally recognised qualification.</li> <li>• Produced by appropriate national authorities.</li> <li>• Will include statements of the wider abilities of a typical holder of the qualification (transferable / transversal skills).</li> <li>• Linked to national level descriptors. A generic qualifications descriptor can encompass several national level descriptors to show progression or just typify one level.</li> <li>• Generally describe the learning achieved by a student at the finish of a qualification (as do the international 'Dublin Descriptors').</li> <li>• Act as an external reference point, for those at the institutional level, developing individual qualifications.</li> </ul>

Learning outcomes, skills and competences

Defining degree structures and identifying their characteristics

Mode and area of application	Features and attributes
<p><b>Cycle descriptors</b> (Also known as the ‘Dublin descriptors’, describe the three cycles of the Bologna overarching qualifications framework in terms of learning outcomes)</p>	<ul style="list-style-type: none"> <li>• Adopted by the 45 Bologna Process countries and used to express the three cycles of the ‘framework for qualifications of the European Higher Education Area (EHEA)’.</li> <li>• Are composed of generic statements of the typical expectations of achievement and abilities associated with awards that represent the end of each of a Bologna cycle.</li> <li>• Function as meta-level international descriptors (guidance tools) that act as an external reference point for those developing ‘new style’ national qualifications frameworks and national levels descriptors.</li> </ul>
<p><b>National subject benchmark statements</b> (learning outcomes employed as statements designed to make explicit the general subject-specific academic characteristics and standards of programmes in the UK)</p>	<ul style="list-style-type: none"> <li>• Subject benchmark statements set out expectations about standards of degrees in a range of subject areas. They describe what gives a discipline its coherence and identity, and define what can be expected of a graduate in terms of the techniques and skills needed to develop understanding in the subject.</li> <li>• These have been extensively developed in the UK by the Quality Assurance Agency (QAA).</li> <li>• They function as subject-specific external reference points for curriculum designers.</li> <li>• Internationally, the Tuning project explores the significance of subject-specific and general competences. It has encouraged detailed reflection on subject specific learning outcomes associated with the first and second Bologna cycles.</li> </ul>
<p><b>National level descriptors</b> (Learning outcomes employed as generic statements that describe the characteristics and context of learning)</p>	<ul style="list-style-type: none"> <li>• Designed to provide a shared understanding of each level and to facilitate the comparisons to be made between qualifications and learning at each level. A qualification will often straddle several levels.</li> <li>• The number and complexity of national level descriptors is a matter of national decision. They are often expressed in terms of knowledge and understanding, cognitive skills, practical applied skills, learner autonomy etc.</li> <li>• They can be expressed in terms of what the best student might achieve (aspiration) or minimum standards (threshold) or something in between.</li> <li>• Act as an external reference point for those developing individual qualifications as well as modules and units.</li> </ul>

### 3. Learning outcomes and their advantages for educational reform – pedagogy, assessment and quality assurance

#### 3.1 The contribution of learning outcomes to student-centred learning

##### The shift from inputs to outcomes

Learning outcomes focus attention on explicit and detailed statements of what students learn – the skills, understanding and abilities we seek to develop and then test. It is important to stress that learning outcomes form an integral part of an educational reform agenda that can be summarised in the phrase ‘student-centred learning’. This approach in its extreme manifestation has been represented as a paradigm shift from traditional ways to measure and express learning characterised as ‘input’ approaches (that emphasises teaching hours and resource counting) to ‘output’-focused techniques (using learning outcomes and competences). The emphasis moves from the content (what staff teach) to the outcome (what a student will be able to do). However, the move towards student-centred learning is not new and many educators have instinctively adhered to such an approach. However, to over-emphasise a stark choice between input and output-focused approaches to teaching and learning misrepresents the situation; a middle way is often possible and constructive.

##### Focus on the learner

The adoption of a learning outcomes approach focuses activity on the learner and away from the teacher. It promotes the idea of the teacher as a facilitator or manager of the learning process and recognises that much learning takes place outside the classroom without a teacher present.<sup>18</sup> It further involves the idea that students should be actively involved in the planning and management of their own learning and take more responsibility for this as the student progressively develops as an independent learner.<sup>19</sup> It is important to recognise that student-centred learning necessitates the use of learning outcomes as the only logical approach. This produces an automatic focus on how learners learn and the design of effective learning environments. There is a cascade effect that links the use of learning outcomes, the selection of appropriate teaching strategies and the development of suitable as-

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<sup>18</sup> For example, in the workplace, at home and in social situations where non-formal and informal learning is the norm.

<sup>19</sup> The development of modular credit-based frameworks invariably involves a high degree of choice (multiple study routes) and a progression and sequence in the modules studied. This sort of framework provides sufficient flexibility to facilitate the progressive assumption of more responsibility, by the student, for the choice and management of their studies – they develop as independent learners as the course progresses.

assessment techniques. This is done within the context of external reference points (qualification descriptors, level descriptors, benchmark statements). Modules are not developed in a vacuum, but within a dynamic environment that directly links the internal, institutional world, with the external national qualifications framework and quality assurance system.

### 3.2 Problems with traditional input-focused ways of expressing the curriculum

The majority of European educational systems currently do not use learning outcomes in any systematic and comprehensive way to express the purposes, content, nature and level of their qualifications (the curricula). Most countries rely on traditional approaches for the explanation and expression of their qualifications and the units/modules that constitute them. Curricula are described in terms of what students will cover. The content is listed and the main theories, events, processes and relationships are mapped-out. This type of approach can be characterised as part of an ‘input-focused’ series of measures to express the general level and relationship between qualifications.<sup>20</sup> This approach emphasises the length of a programme, its access requirements, the material covered, and the number of staff and level of resources available.

**Most countries still operate an input-focused system**

These variables are often used as the focus for quality assurance activities in input-driven systems. In addition, learning is categorised in terms of years of study to achieve a particular qualification. In this case it is generally understood that a first year of ‘first cycle’ study is less complex and demanding than a fourth year of study. So a reference to how many years a qualification might take, plus a specific year of study, provides some very general information about the level of study. This approach is often accompanied by an emphasis on student workload measured in terms of only direct contact time with staff. However, total student workload expressed in hours is now, due to the Bologna process, assuming more weight in Europe. This tendency will become strengthened as the move from a curriculum model based on the volume of learning identified in terms of years of study shifts to one based on the notional time to achieve specific learning

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<sup>20</sup> Similarly, many ‘old style’ national qualifications frameworks reflect this traditional approach in their methodology and the tools used to explain their systems. The movement toward new-style qualification frameworks based on levels, level indicators, learning outcomes and subject reference points is intimately linked to the adoption of an output-based approach.

outcomes.<sup>21</sup> However, the latter will not eradicate the former completely, as the length of a traditional programme is a sort of ‘gold standard’ we are all familiar with. However, the adoption of learning outcomes approaches will mean that less emphasis will be put on all crude time measures and greater focus will be applied to flexible delivery modes that are increasingly becoming more popular. Part time learning, distance learning (including e-learning), work-based learning, burst-mode (accelerated and decelerated) learning and intensive programmes increasingly do not conform to the time-pattern of traditional education.

### 3.3 Criticism of learning outcomes

#### 2 main concerns

Those who have reservations about the adoption of learning outcomes approaches have expressed two main concerns: (i) basic conceptual/philosophical objections and (ii) practical/technical objections.

#### Philosophical objections

In terms of philosophy, the objections follow the view that higher education learning cannot be constricted and/or reduced to a series of learning outcomes that inhibit and prescribe the learning process. Academic study is by definition open-ended and the detailed specification of outcomes is antithetical to the traditional university function. Proponents of this view often emphasise the distinction between higher education and vocational education and training, the latter being more suited to a learning outcomes approach due to the skills and competence-based nature of such courses. Academic study, it is suggested, is different in nature and cannot be limited to a skill/competence-based approach that creates a target-led culture focused on ticking boxes. Learning outcomes are viewed as an attack on the liberal conception of education, which diminishes the teacher to facilitator and stifles the diversity of education by reducing it to a crass instrumentalist approach.

#### Practical/technical objections

The practical/technical objections to learning outcomes are associated with their formulation and implementation. The implementation of learning outcomes is a formidable task that involves a huge staff-development process as well as cost implications in terms of time and money. It is a massive undertaking to transform all curricula to be expressed in terms of outcomes and this often takes years to accomplish. In addition, there can be a high degree of initial staff resentment and disagreement concerning the detailed process of identifying, writing and implementing learning outcomes – and the consequential changes to teaching, learning and assessment.

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<sup>21</sup> Notional learning time is defined as the number of hours a learner will spend, on average, to achieve the specified learning outcomes at a particular level.

Furthermore, various technical problems arise concerning the nature and detail of the approach to outcomes adopted. It is argued that learning outcomes written as threshold statements can limit learning and stifle creativity as well as dumb-down teaching. Learning outcomes can be over-described and under-described (too specific or too general). Their development requires the existence of some sort of framework of qualifications descriptors, levels and level descriptors. Finally, it is sometimes the case that the move to learning outcomes, which is often linked to the introduction of credits and modular frameworks, leads to module/unit overload as too much is crammed into a restricted time period for learning.

It must be stressed that the negative aspects described above are a brief summary representation of the general claims that are made about learning outcomes. In practice, such objections can be overcome, providing that learning outcomes are developed with care and sensitivity. Much depends on how they are constructed and whether (and how) they include knowledge, skills, abilities/attitudes and understanding. Badly constructed, narrow and limiting learning outcomes are not appropriate for higher education where creativity and imaginative leaps are highly valued.

### **3.4 Writing learning outcomes and the teaching-learning-assessment relationship**

The process of writing good learning outcomes is something that takes time and reflection. They are developed in a context where many variables have to be taken into consideration including: qualifications frameworks, external reference points, past experience, subject benchmark statements, employer requirements, student feedback, qualifications descriptors, etc. It is essential that such an exercise is not seen as a sterile creation of learning outcomes to fit existing unmodified modules and courses. The benefits in the creation of learning outcomes result from the dynamic and cathartic process of creation where a new approach to learning is honestly undertaken. This will involve a simultaneous reflection on possible learning outcomes, their mode of delivery and their assessment. All learning outcomes must be capable of assessment or they are not fit for their task and should be scrapped. At the level of course and module design there is an obvious and intimate connection between learning outcomes-teaching-assessment that must be fully acknowledged. There are many useful texts and web sources that provide detailed advice on the process of writing learning outcomes.

**Starting to formulate learning outcomes**

### 3.5 The advantages of learning outcomes

The advantages of adopting learning outcomes exist at several levels in terms of benefits for the: (i) course/module designer; (ii) quality assurance and standards; (iii) learners; and (iv) national and international educational transparency.

#### 3.5.1 Benefits for the course and module designer

**Consistency across modules and programmes**

In terms of course and module design, the use of explicit learning outcome statements can help ensure consistency of delivery across modules or programmes. They can aid curriculum design by clarifying areas of overlap between existing modules, programme and qualifications. Learning outcomes help course designers to determine precisely the key purposes of a course, how components of the syllabus fit and how learning progression is incorporated. Highlighting the crucial relationship between teaching, learning and assessment (including assessment criteria and grading) improves course design and the student experience. Learning outcomes promote in-depth reflection on assessment, and the introduction of more effective and varied assessment.

#### 3.5.2 Benefits for quality assurance and standards

**Increased transparency and comparability**

Quality assurance benefits from the adoption of learning outcomes via the resulting increase in transparency and better comparability of standards between and within qualifications. Outcomes-based qualifications possess greater credibility and utility than traditional qualifications. They play a key role (nationally and potentially internationally) by acting as points of reference for establishing and assessing standards.

#### 3.5.3 Benefits for learners and employers

**Better information**

Learners benefit from a comprehensive set of statements of exactly what they will be able to achieve after successful study. Learning outcomes provide learners with clear information that can help them with their choice of module/unit/programme/qualification to study and can lead to more effective learning. They also benefit employers, higher education institutions and civil society in general by clearly articulating the achievement and attributes associated with particular qualifications. Employers are often familiar with learning outcomes and value the spotlight they bring to skills and competences that are important in the workplace.

### 3.5.4 Benefits for national and international educational transparency

Internationally, learning outcomes contribute to the mobility of students by facilitating the recognition of their qualifications and improving the transparency of qualifications and thus simplifying credit transfer. They also provide a common format for different forms of delivery (e.g. distance, work-based, non-formal and experiential learning<sup>22</sup> and have significant capacity to link vocational education and training with higher education. This is important when there are now an increasing number of national and international initiatives to promote lifelong learning. Learning outcomes assist the creation of multiple progression routes through and between different the educational systems and sectors.

**Recognition and lifelong learning**

## 4. The contribution of learning outcomes to the Bologna action lines and the creation of the European Higher Education Area

### 4.1 Learning outcomes and the Bologna Action Lines

The Bologna Process represents a strong desire amongst the 45 participating countries for radical educational reform. The successful creation of the European Higher Education Area is clearly dependent on the introduction of common practical and effective reforms that collectively improve the efficiency and effectiveness of higher education in Europe. However, the role of learning outcomes in these matters is not immediately apparent, so it is useful to establish what this position might be in relation to the various Bologna Action Lines:

#### 4.1.1 Line 1: Adoption of easily readable and comparable degrees

This involves higher education institutions taking full advantage of 'existing tools' in order to facilitate the academic and professional recognition of their course units and degrees. These existing tools are normally identified as the Convention on the Recognition of Qualifications concerning Higher Education in the European Region, 1997 (commonly known as the Lisbon Convention), the Diploma Supplement and the ENIC-NARIC information network. The use of learning

**Qualifications and learning outcomes**

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<sup>22</sup> The accreditation of prior experiential learning (APEL) is predicated upon a learning outcomes approach.

outcomes (unit/module or as course descriptors) has an obvious role to play in making qualifications more transparent for students, credential evaluators and employers. If qualifications are described in terms of learning outcomes the process of evaluation and recognition is simplified and a more informed and fairer judgement can be made. Furthermore, this helps the systematic recording of information about qualifications in Diploma Supplements.<sup>23</sup>

There is a clear acknowledgment by those involved in the recognition area that learning outcomes have a vital role in recognition by making learning more transparent and therefore easier to evaluate. Furthermore, the conclusions and recommendations of the *Bologna Seminar on Recognition Issues in the Bologna Process* held in Lisbon in April 2002 stated that:

*‘Learning outcomes are important for recognition, since the basis for recognition procedures is in the process of shifting from quantitative criteria such as the length and type of course studied, to the outcomes reached and competencies obtained during these studies. The principle question asked of the student or the graduate will therefore no longer be “what did you do to obtain your degree?” but rather “what can you do now you have obtained your degree?” This approach is of more relevance to the labour market and is certainly more flexible when taking into account issues of lifelong learning, non-traditional learning, and other forms of non-formal educational experiences.’<sup>24</sup>*

The whole area of academic and professional recognition is likely to be transformed by the adoption of learning outcomes.

#### 4.1.2 Line 2: Adoption of a system essentially based on three main cycles

#### Qualifications frameworks and learning outcomes

The importance of cycles, levels and level descriptors for the correct location of qualifications is a crucial aspect of any qualifications framework. Following the Berlin Communiqué there has been a shift in focus towards the introduction of ‘new style’ national qualifications frameworks and the creation of an over-arching outcomes-focused European Qualifications framework. The adoption of external reference points and the need for precision and clarity strengthens the case for the use of learning outcomes directly related to levels and level/cycle indicators that characterise the new system.

<sup>23</sup> In particular, section 4.2 of the Diploma Supplement requires information about the programme requirements and the contents of qualifications.

<sup>24</sup> Purser, L. Recognition issues in the Bologna Process: conclusions and recommendations, in Bergan S. (ed.), Recognition issues in the Bologna Process, Council of Europe, 2003 <http://www.coe.int>.

#### 4.1.3 Line 3: Establishment of a system of credits

The European Credit Transfer System (ECTS) is in the process of developing from a simple credit transfer tool into a more sophisticated and powerful credit accumulation and transfer system. The generalisation of ECTS has occurred as different states have adopted it as the basis for their domestic credit systems. However, this process has been slowed by the lack of levels in ECTS and the imprecise nature of ECTS credits, which in practice at the institutional level are not defined in terms of learning outcomes. There are current moves to remedy these deficiencies and ECTS is adopting learning outcomes related to levels. Credits expressed in terms of learning outcomes are a powerful way to recognise and quantify learning achievement from different contexts; they also provide an effective structure for relating qualifications. The addition of the learning outcomes dimension has the potential to improve dramatically the effectiveness of ECTS as a true pan-European system.

**ECTS, levels and learning outcomes**



**book tip**

**Bergan, S. (ed) (2003): Recognition Issues in the Bologna Process, Council of Europe**

This book takes stock of the recognition of qualifications in Europe, and highlights policies that will help make the European Higher Education Area a reality. The authors are recognition specialists and higher education policy makers from several countries in Europe and worldwide.

#### 4.1.4 Line 4: Promotion of mobility

Mobility is an obvious area in which more curriculum transparency would make student exchanges and the full recognition of their studies simpler and easier. The removal of obstacles to the free movement of students and teachers can only be helped if courses are expressed in a common way that makes their content - skills and competences gained - explicit. This makes the process of making judgements about them more precise and effective. In this way both horizontal (within a study programme) and vertical (from one programme to another- first to second cycle) mobility is improved.

#### 4.1.5 Line 5: Promotion of co-operation in quality assurance

Quality assurance plays an obvious and increasingly important element in creating the European Higher Education Area. It has a central role in increasing mutual trust and confidence between educational systems. The use of learning outcomes and the approaches associated with them (external reference points) play an important part in encouraging common methodologies and techniques that directly relate to the establishment of universal standards and assurance procedures. Universal approaches to reference points based on output approaches (learning outcomes) make cross-border judgements as to the level, nature and equivalence of qualifications easier and more accurate. The European Association for Quality Assurance in Higher Education

**External reference points**

(ENQA) '*Standards and Guidelines*' published in February 2005, are predicated on the use of explicit external reference points and an implicit recognition of an outcomes based philosophy.<sup>25</sup>

#### 4.1.6 Line 6: Promotion of the European dimension in higher education

##### Towards greater collaboration and compatibility

The European dimension centres upon the development of modules, courses and curricula at all levels with a 'European' content and orientation. In addition, the development of more integrated study programmes and joint degrees is to be encouraged. These initiatives can be aided when the curriculum is expressed in a common manner and methodology, by expressing module/course content in terms of learning outcomes. The fit and relationship between units of study is made more transparent and the construction of dual and joint programmes of study is simplified. Similarly the mobility of study units is facilitated where open and distance learning is concerned.

#### 4.1.7 Line 7: Lifelong learning

##### Qualifications frameworks

Lifelong learning is a complex and poorly developed area. It is recognised that there is a need to improve educational opportunities for all citizens throughout their lives. The steps to align national policies as an integrated part of higher education activities involve the promotion of '*flexible learning paths*' and the use of ECTS. Many countries are accepting the need for more flexible and integrated systems of qualifications as a consequence of the objective of creating a lifelong learning society in which citizens learn throughout their lives. The tool to accomplish the necessary linkages between Vocational Education and Training and Higher Education, as well as all learning from cradle to grave, is logically the adoption of credit based qualifications frameworks. The medium of credits based on learning outcomes has the potential to integrate in a single progressive structure: school, secondary, vocational training and higher education. The use of credits linked to levels expressed in terms of outcomes is proving to be a viable way to create such all-encompassing qualifications frameworks in Ireland, Scotland and Wales<sup>26</sup>. These frameworks help people of all ages to access appropriate education and training. The expression of learning in terms of learning outcomes is perhaps the only way to accomplish such integrated systems for lifelong learning, capable of including the recognition of non-formal and informal learning (via

<sup>25</sup> ENQA Standards and Guidelines: [http://www.bologna-bergen2005.no/Docs/00-Main\\_doc/050221\\_ENQA\\_report.pdf](http://www.bologna-bergen2005.no/Docs/00-Main_doc/050221_ENQA_report.pdf).

<sup>26</sup> For more discussion on this issue, see Murray, Jim, Article B.2.5 in this Handbook.

APL and APEL). In this context it is not surprising that the European Commission's European Qualifications Framework for Lifelong learning (EQF) is also based on learning outcomes.

#### **4.1.8 Higher education and students**

The employability agenda is strengthened by the adoption of learning outcomes that highlight the generic skills and competencies valued by employers. Similarly, students have much to gain from more explicit course descriptions. The empowerment of students has to include their active participation in educational life and their development as active learners in more student-centred learning systems. Effective student participation can be enhanced when modules and courses are clearly expressed in terms of learning outcomes which allow the learner to see the skills and abilities they should acquire. This also helps them make more informed choices within and between different programmes of learning.

#### **Empowering students**

#### **4.1.9 Promote attractiveness of the European Higher Education Area**

An obvious goal of the EHEA is to create an effective, efficient, high-quality educational zone that will attract non-European students and help retain home students. The emphasis put by ministers on 'attractiveness and competitiveness' can be indirectly enhanced by the adoption of learning outcomes approaches and the associated development of student-centred, transparent curricula.

#### **4.1.10 Doctoral Studies and the synergies between EHEA and the European Research Area (ERA)**

Research and the doctoral level as the third cycle in the Bologna framework play an important role in the EHEA. Learning outcomes are unlikely to play a big role in these areas. For in relation to doctorates it is difficult to express anticipated outcomes as they are often undiscovered until the research is completed. However, they can be used to clarify the results of an investigation and play a role in good practice and the articulation of comparable standards.

## 5. Learning outcomes – future prospects and challenges

The traditional input-related curriculum has proved to be too focused on the teacher instead of the learner. Consequently there is what has been described as a paradigm shift underway, moving the emphasis from teaching to learning and to embrace student-centred learning. This change has been associated with a need for more precision in curriculum design, and an acknowledgement that more effective and varied learning styles do benefit the learner. This has strengthened the need to express, through the medium of learning outcomes, the knowledge, understanding, competences and other attributes within qualifications and their components. This pedagogical trend has also coincided with the multi-faceted Bologna agenda that emphasises the need for dramatic reform to modernise Europe's antiquated education systems, structures and processes.

### Contribution to all Bologna action lines

Learning outcomes contribute to every aspect of the Bologna agenda (every action line) as they play an underpinning role (a common methodological approach) in the clear expression of the teaching-learning-assessment relationship, as well as the transparent expression of qualifications, qualification frameworks, quality, and their associated tools - cycle descriptors, levels, level indicators, qualification descriptors, subject benchmark statements, etc.

Modules can be regarded and expressed as collections of learning outcomes, as can level descriptors, subject benchmark statements and individual qualification descriptors. Qualification frameworks built upon these foundations are more transparent and only by adopting learning outcomes can they be accommodated into the proposed European overarching qualifications framework. Learning outcomes also provide a common currency between vocational education and training and higher education, thereby helping to promote lifelong learning.

### Unresolved issues

There are a number of unresolved technical issues relating to learning outcomes. Learning can be written as minimum 'threshold' statements at the level of the module (where the assessment criteria differentiate the quality of the pass or fail). However, where qualification descriptors and level descriptors are concerned these are often expressed in terms of what the 'best' student or 'average' students might achieve. There is no agreement on how to approach these matters and different countries may well adopt different approaches. Some common agreements are needed as divergent practices would cause confusions between educational systems.

Learning outcomes are not the universal panacea for all educational problems facing higher education and they certainly create distinct challenges that should not be underestimated. However, it is arguable that it might not be possible to have a meaningful European Higher Education Area without their widespread and consistent use.

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He is the author/*rapporteur* of a number of research projects and studies for international organisations including: the '*Diploma Supplement Development Project*' (1999), '*ECTS Extension Feasibility Project*' (2000), the '*Transnational Education Projects – Western and Central/Eastern Europe*' (2001 and 2003), a background report on '*Qualification Structures in European Higher Education*' for the first Danish 'Bologna Seminar' on qualifications frameworks (2003), '*Learning Outcomes Background Report*' for the Edinburgh 'Bologna' Seminar (2004). He contributed to the Bologna Follow-Up Group working group book on qualifications frameworks '*A Framework for Qualifications of the European Higher Education Area*' (2005) and the text on APEL '*Recognising Experiential Learning –Practices in European Universities*' (2006). He was a member of the EC experts group that advised on the creation of a European Qualifications Framework (EQF) for lifelong learning. He is also a UK Bologna Promoter.

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