



**IMHE**

Programme on Institutional Management in Higher Education  
*Programme sur la gestion des établissements d'enseignement  
supérieur*

**Outcomes of higher education:  
Quality relevance and impact**

8-10 September 2008  
Paris, France

**Enseignement supérieur :  
qualité, pertinence et impact**

8-10 septembre 2008  
Paris, France

## **Learning Outcomes a Fair Way to Measure Performance in Higher Education: the TUNING Approach**

**Robert Wagenaar**

A selection of papers for the IMHE 2008 General Conference will be published in the OECD's *Higher Education Management and Policy Journal*.

The opinions expressed and arguments employed herein are those of the author) and do not necessarily reflect the official views of the Organisation or of the governments of its member countries.

© OECD 2008

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to: [rights@oecd.org](mailto:rights@oecd.org) .

ORGANISATION FOR ECONOMIC  
CO-OPERATION AND DEVELOPMENT



ORGANISATION DE COOPÉRATION ET  
DE DÉVELOPPEMENT ÉCONOMIQUES

## LEARNING OUTCOMES A FAIR WAY TO MEASURE PERFORMANCE IN HIGHER EDUCATION: THE TUNING APPROACH

Robert Wagenaar

While measuring and comparing the quality of the research performances of higher education institutions in a global context raises much interest, this seems less the case with regard to their performances in the field of education. This might be due to the fact that the quality of educational programmes is less newsworthy; it might also be that we have not developed the right set of criteria to make reliable comparisons yet. Less than research, education in general and educational programmes in particular are largely influenced by cultural elements at national, regional and institutional level. This complicates the comparison of the level of outcomes of the learning process measured in terms of 'quality' of those educated at an institution. Counting the number of master degrees and PhD's is one thing, judging the quality of the theses prepared quite another.

Although it is widely accepted that higher education institutions differ in terms of quality both in education and research - but also in purpose and profile -, it is also accepted that minimum standards have to be met. With regard to higher education programmes a major step has been set in Europe by agreeing on a common set of *Standards and Guidelines for Quality assurance in the European Higher Education Area*. These guidelines are a direct result of the Bologna Process. This is also true for another initiative, the project Tuning Educational Structures in Europe. The project was launched in 2001 by a large group of universities from the vast majority of European countries. When Bologna was launched it soon became obvious that the process, which had as one of its main objectives to make degree programmes comparable and compatible, could not do without the development of descriptors and points of reference. While for the three cycles of higher education general descriptors were developed by the so-called Joint Quality Initiative (an international informal group of experts), Tuning concentrated its efforts on the level of the Subject Area.

Since 2001 Tuning has not only developed a methodology to (re-)design, develop, implement and evaluate study programmes, it has also served as a platform for developing reference points at subject area level. In 2007 the work of Tuning was validated by some twenty independent international peer review committees for as many subject areas and was highly praised.

According to the Tuning methodology, reference points are expressed in terms of learning outcomes and competences. Learning outcomes are statements of what a learner is expected to know, understand and be able to demonstrate after completion of a learning experience. According to Tuning, learning outcomes are expressed in terms of the *level of competence* to be obtained by the learner. Competences represent a dynamic combination of cognitive and meta-cognitive skills, knowledge and understanding, interpersonal, intellectual and practical skills, and ethical values. Fostering these competences is the object of all educational programmes, which build on the patrimony of *knowledge and understanding* developed over a period of many centuries. Competences are developed in all course units and assessed at different stages of a

programme. Some competences are subject-area related (specific to a field of study); others are generic (common to any degree course). It is normally the case that competence development proceeds in an integrated and cyclical manner throughout a programme. To make levels of learning comparable the Tuning subject area groups have not only developed reference points but also cycle (level) descriptors for their academic field, which are also expressed in terms of competences.

The Tuning process was launched for a number of reasons. Most of all to promote transparency and comparability of higher education programmes, to facilitate prior learning in a LLL context, but also to raise awareness about the role of employability and citizenship when setting up and implementing degree programmes. It was concluded that the best way to combine these elements was by basing programmes on clear professional and academic profiles. These profiles should serve as the basis for identifying the right set of competences to be trained in the framework of the educational programme.

As part of a profile different angles can be distinguished: its identity, functions, contexts and education(al process). By identity is meant what the degree holder is / should be as a result of finishing the programme successfully; by functions is meant the (type of) occupations and tasks which can be carried out by the graduate; by contexts is meant the environment in which the graduate is able to function; and by education is meant the main expected learning outcomes. In more detail the following overview shows key elements that a description of a profile should contain:

- Orientation: theoretical or applied
- Subject related knowledge/ know-how (mono-, multi-, inter-disciplinary)
- Generic competences
- Subject specific skills
- Level of qualification (role of descriptor(s))
- Employability (regulated / non-regulated)
- Social and professional responsibility
- Particular focus / specialisation
- Approach(es) to teaching, learning and assessment.

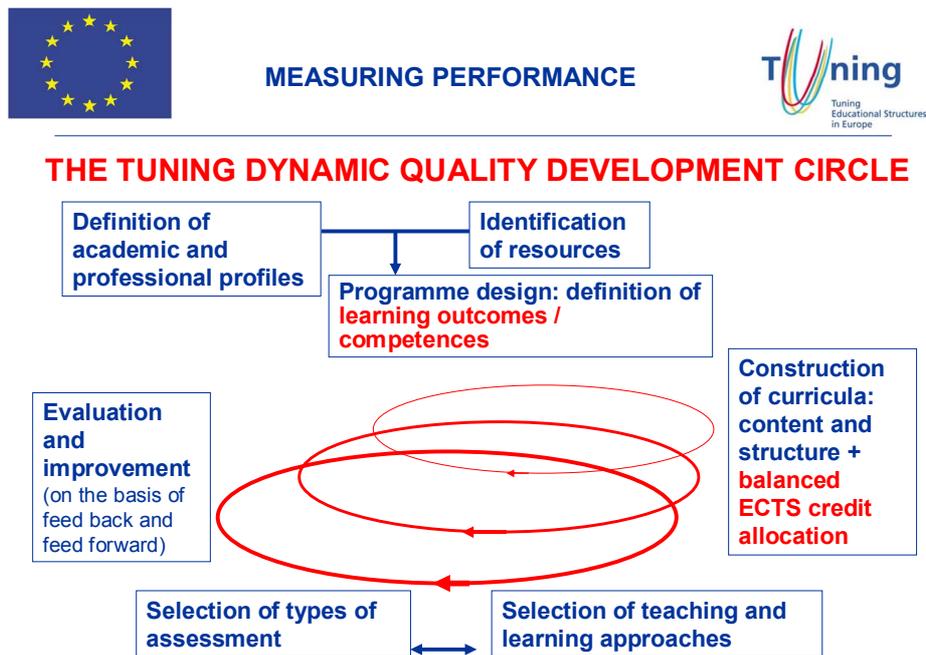
When preparing and presenting a profile, it has to be taken into account, that its content must be understandable by different groups of stakeholders: the individual (potential) learner, professional organizations, society in general and the academic world.

By focusing on the output of the programme, a change of paradigm is expected with regard to the way programmes are taught and learned. These should no longer be staff centred, but should concentrate on the preparation of the student for his or her future role in society.

To identify the most important competences that should be formed or developed in a degree programme, Tuning organized a Europe-wide consultation process in 2002 including employers, graduates and academic staff / faculty. Such a consultation process was in later years repeated in other regions and countries and extended to students as an important group of stakeholders (19 Latin America countries, Russia, Georgia). The outcomes of these consultation processes are reflected in sets of reference points – generic and subject specific competences – identified by

each subject area. In 2008 this consultation process has been repeated for Europe, to check whether the identified reference points are still up-to-date. For some subject area groups the outcomes implied that some minor changes were thought useful.

The consultation of stakeholders – of course - is only one element in developing high level programmes. Tuning makes the distinction between the quality of the process in designing study programmes and the quality of the outcomes of the learning experience (level of competence achieved, expressed in terms of expected learning outcomes). For setting up and enhancing degree programmes the Tuning dynamic quality development circle has been designed.



As stated before, Tuning has made the distinction between generic competences and subject specific competences. As part of the consultation process some 30 generic competences were identified. Each subject area selected another 25 to 30 subject specific competences. On the basis of the consultation process the key generic and subject specific competences were identified for each of the subject areas involved. With regard to the generic ones, a number of competences stand out for every subject area: ability to abstract thinking, analysis and synthesis, ability to apply knowledge in practical situations, knowledge of the subject area and understanding of the profession, ability to identify, pose and resolve problems. Academics, students, employers and academic staff agree that these are key competences of relevance for all higher education programmes. Other competences, like the capacity to learn and stay up-to-date, teamwork and ability to communicate both orally and through the written word in native language, are judged slightly differently, but still thought important by all stakeholders.

Competences can be developed and achieved at different levels. Each level requires a descriptor, which is phrased in (expected or intended) learning outcomes. Different levels can be distinguished: degree programme or cycle levels and levels within a degree programme (basic, intermediate, advanced and specialized). It goes without saying that a student can develop a level

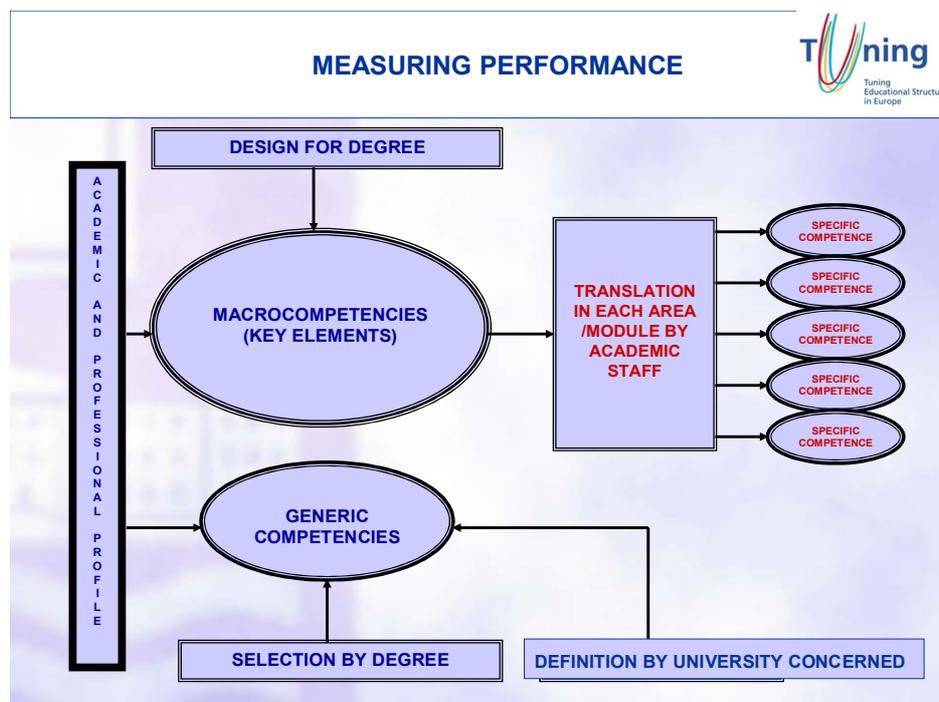
of competence which goes beyond the expected learning outcome. This performance or achievement will normally be expressed in a higher mark than the pass or average one.

Descriptors linked to cycles or degree levels relate to at least the following five general elements:

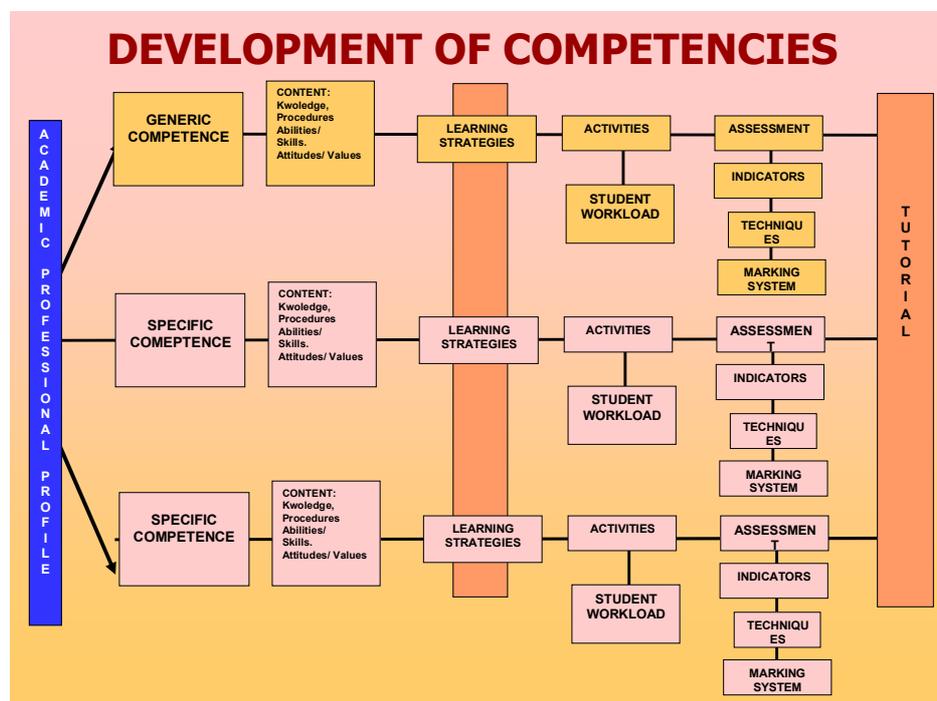
- Level of knowledge and understanding with the capacity to apply them in a professional manner.
- Level of the competences to be demonstrated through the elaboration and defense of arguments and problem solving capacity.
- Level in the capacity to gather and interpret relevant information in order to be able to develop judgments with accuracy.
- Level of capacity to communicate information, ideas, problems and solutions to different target groups.
- Level of development in the capacity to be able to continue learning in their profession and throughout life in an autonomous manner.

The linkage between the identified profile and the degree level is established by using the concept of macro competences. These allow for covering and ordering the essence of the learning outcomes. In practice macro competences offer a synthetic vision of the key competences for the degree profile which makes it possible: to identify the relation and the contribution of the different areas and modules to the profile; to facilitate and make explicit the formulation of specific competences, to focuss on the essential; to facilitate easy communication and tuning of the key elements of a degree; to serve as input for the teams working on the elaboration of the programme.

This approach can be visualized as follows:



Identifying competences is one thing, to develop these as part of a programme is something else. It has been stated before that competence (level) is normally developed during more than one course unit. In the development of competences different elements are distinguished. First of all, there is the objective that the learner has to familiarized him or herself with the content of the specific or generic competence, that is the knowledge, understanding, skills, abilities, attitudes and sometimes values. Then it is required to identify the most effective learning and teaching strategies for developing the competence. This means the selection of activities which should fit the available / calculated student time, expressed in (ECTS) credits. In relation to the activities the most relevant training techniques and assessment method(s) have to be identified. The assessment must be based on transparent indicators / assessment criteria and a matching marking system.



This approach can be elaborated as follows. A first step is the definition of the competence to be developed / trained. The second step is the identification of the levels of achievement for that particular competence. The third step requires that for each level of achievement indicators are determined. The fourth and last step implies that for each indicator the progression route is formulated in a number of statements (for example 5). This methodology can be illustrated on the basis of one generic competence: *ability to work in a team*. For this competence we distinguish three levels of achievement:

- First level: Actively participates and collaborates in team tasks, and encourage trust, friendliness and focus on the common goal through the attitudes he/she conveys.
- Second level: Contributes to the consolidation and development of the team, encouraging communication, fair distribution of tasks, a pleasant atmosphere, and cohesion.
- Third level: Is capable of running work groups, guaranteeing the integration of all group members, and their focus on an excellent level of work achieved.

For each of these levels we can formulate five indicators. For each of these indicators five statements reflect the process of progression in developing the particular competence.

The methodology requires that the levels of achievement, the indicators and the statements are phrased in such a way that achievement / progress can be measured / be assessed. According to the Tuning philosophy only (macro)competences / learning outcomes should be included in a programme which can actually be assessed.

This paper/presentation shows how the concept of competences / learning outcomes can be used to design, develop, implement and evaluate and enhance the quality of degree programmes. The experiences with this concept have been positive so far. It allows for more flexible learning routes while respecting that key competences and key features of every subject area have to be met to be awarded a diploma. The concept also allows for differentiation regarding the levels of achievement of different competences in different programmes in comparable or different types of programmes. This is of relevance for giving each programme its own flavour (profile). It also makes possible differentiation in terms of quality of degree programmes. In other words this methodology allows for comparison of the quality of different programmes as well as the quality of its output: the graduates.

However, one closing remark should be made. The system can only work properly when the competences and learning outcomes are formulated in such a way that they actually reflect what has been learned. In practice this is a challenging task. It has become clear already that more guidance is required and more examples of good practice have to be promoted, to help the individual institutions, departments and (teams) of teachers to develop profiles and adequate learning outcomes for their programmes.

## REFERENCES

González, J. & R. Wagenaar, eds., *Tuning Educational Structures in Europe. Universities' Contribution to the Bologna Process. An Introduction*. Universidad de Deusto, Bilbao / University of Groningen. 2<sup>nd</sup>. ed. 2008.

Tuning Europe: <http://tuning.unideusto.org/tuningeu>  
[www.rug.nl/let/tuningeu](http://www.rug.nl/let/tuningeu)

Tuning América Latina: <http://tuning.unideusto.org/tuningal/>

Tuning Kyrgyz Republic: <http://www.bolognakg.net/>

Tuning Russia: <http://www.iori.hse.ru/tuning/>