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Tuning-AHELO Conceptual Framework of Expected and Desired Learning Outcomes in Economics

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TUNING-AHELO CONCEPTUAL FRAMEWORK OF EXPECTED AND DESIRED LEARNING OUTCOMES IN ECONOMICS

OECD Education Working Paper No. 59

The OECD Secretariat, at the invitation of the AHELO GNE, contracted the Tuning Association to undertake initial development work on expected/intended learning outcomes in the two selected disciplines selected for the AHELO Feasibility Study (economics and engineering)—achieved through a Tuning-AHELO project. Academics from various countries reflected and agreed upon definitions of expected learning outcomes for bachelor's-type programmes in economics and engineering.This working paper presents the outcomes of their work in the economics discipline.

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ABSTRACT

The OECD Secretariat, at the invitation of the AHELO Group of National Experts, contracted the Tuning Association to undertake initial development work on learning outcomes to be used for valid and reliable assessments of students from diverse institutions and countries. The two disciplines selected for the AEHLO Feasibility Study are engineering and economics.

Following the Tuning approach, academics from various regions and countries in the world reached consensus on definitions of expected learning outcomes for bachelor's-type programmes in both disciplines. This Working Paper presents the outcomes of their work for the economics discipline.

This report intends to identify a set of learning outcomes and spur on a collective reflection on learning outcomes for economics at the transnational level.

In addition to the agreed upon learning outcomes, the paper presents an overview of the field of economics, the typical degrees and occupations in economics associated to the first and second cycle degrees. The paper also discusses the role of learning outcomes and presents the approach used to defining them. A summary of some of the prior work on the learning outcomes approaches in the economics field is also provided.

RÉSUMÉ

Le Secrétariat de l'OCDE, à l'invitation du Groupe National d'Experts de AHELO, a mandaté l'association Tuning pour conduire un travail initial sur les résultats d'apprentissage qui seront utilisés dans le cadre d'évaluations valides et fiables d'étudiants provenant de divers établissements et de différents pays. Les deux disciplines sélectionnées pour l'étude de faisabilité AHELO sont l'ingénierie et l'économie.

Suivant l'approche TUNING, des universitaires provenant de divers pays et régions du monde, se sont mis d'accord sur une définition des résultats attendus d'étudiants de 1er cycle universitaire dans les deux disciplines. Ce document de travail présente le produit de leur réflexion s'agissant de l'économie.

Ce rapport a pour objet de susciter la réflexion collective sur les résultats de 1er cycle en économie au niveau transnational. Les membres du groupe de travail AHELO-Tuning ont identifié une variété de résultats d'apprentissage correspondants.

Le document présente également le champ couvert par l'économie, les types de diplômes et de métiers possibles pour le premier et le second cycle. Il reflète par ailleurs les débats sur le rôle des résultats d'apprentissage et réunit les approches ayant servi à les définir. Un résumé des travaux conduits précédemment sur les résultats d'apprentissage en économie est inclus.

FOREWORD BY THE OECD SECRETARIAT

1. Assessing student performance in the discipline strands of the AHELO feasibility study is intended to complement the information gathered by the generic skills strand. An entirely unique approach to generic competencies would be limiting as it would not assess the kind of subject-matter competencies that many higher education departments or faculties consider their primary objective. Measurements could become too far removed from the actual context in faculties and departments and fail to capture the competencies that are exclusive to higher education institutions (HEIs).

2. To overcome this constraint, the discipline strands of the AHELO feasibility study will seek to assess discipline-related competencies. Economics and engineering assessments will determine the viability of measuring discipline-specific skills in these two contrasted disciplines representing both scientific and social sciences domains, with the understanding that a full-fledged AHELO main study would examine more disciplines over a given period of time.

3. The aim is to assess competencies that are fundamental and "above content" focusing on the capacity of students to extrapolate from what they have learned and apply their competencies in unfamiliar contexts. The discipline-specific strands of work will involve activities that foster the development of assessment frameworks for the economics and engineering disciplines. In doing so, substantive input from AHELO participating countries and subject-matter experts will be imperative to ensure that the resulting instrument will be internationally valid and reflect the cultural context of the countries in which the AHELO feasibility study will be implemented.

4. The development of assessment frameworks is, however, a lengthy process and the OECD Secretariat initiated work prior to the completion of the AHELO tendering process in order to save time. In particular, the Secretariat, at the invitation of the AHELO GNE, contracted the Tuning Association to undertake initial development work on expected/intended learning outcomes in the two selected disciplines—achieved through a Tuning-AHELO project. Academics from various countries reflected and agreed upon definitions of expected learning outcomes for bachelor's-type programmes in economics and engineering.

5. This working paper presents the outcomes of their work in the economics discipline. While further work is needed to develop assessment frameworks, this paper provides a first indication that agreement on expected learning outcomes in the economics discipline can be achieved cross-culturally. This report could be considered a preliminary output of the AHELO feasibility study, as it will stimulate further reflection on the development of assessment frameworks and spur discussion on the assessment of learning outcomes in the economics discipline.

INTRODUCTION

1. The OECD has launched a feasibility study, Assessment of Higher Education Learning Outcomes (AHELO), which is a ground-breaking initiative that will assess learning outcomes on an international scale by creating measures that would be valid for all cultures and languages.

2. More students than ever are enrolled in post-secondary degree programmes As society and employability are rapidly changing, this initiative should be considered within the context of ever more student participation in higher education degree programmes. While many traditional jobs are disappearing or changing in content and form, new jobs are emerging. Both require new knowledge and skills therefore the way education is offered and perceived needs to be adjusted. Higher education institutions throughout the world are expected to respond to these demands. The higher education sector is aware of its responsibility to prepare their graduates for citizenry as well as for a dynamic job market. Higher education graduates are expected to be flexible, internationally-oriented and be able to remain current within a Life Long Learning context.

3. The AHELO feasibility study contains four complementary strands of work: i) a generic skills or transferable competencies strand; ii) an economics strand; iii) an engineering strand; and iv) a value-added measurement strand that will recommend possible methodologies to capture learning gain during a student's higher education experience from a research-oriented perspective. The first three strands will contain a contextual dimension to assess the feasibility of capturing information on institutional settings, teaching practices and environment characteristics that may affect learning, as well as indirect proxies of quality. [1]

4. At present, higher education institutions, encompassing research universities, universities of applied sciences (polytechnic schools) as well as colleges, are transforming. The traditional 'staff-centred' and 'knowledge-oriented' approach is slowly giving way to degree programmes which place the student at the centre of the teaching and learning process. In practice this implies that, besides knowledge acquisition, more attention is given to applying subject-specific skills as well as to general academic skills. The aim is for the students to be as competent as possible in a given timeframe for their future role in society by expanding the educational offer and by making optimum use of their interests and capabilities.

5. A methodology has been developed – originally within the framework of the European Bologna Process[2] (2001) – by a large group of universities and their departments in the initiative *Tuning Educational Structures in Europe*[3], to meet the above-mentioned challenges. Since its launch, Tuning has been strongly supported – financially and ethically – by the European Commission.

6. Tuning is a university-driven initiative, which was originally created to offer a concrete approach to the implementation of the European Bologna Process within higher education institutions and subject areas. The name *Tuning* was chosen to reflect the idea that universities do not look for uniformity in their degree programmes or any sort of unified, prescriptive or definitive curricula but rather for points of reference, convergence and common understanding. Tuning avoids using the expression "subject area 'standards'", due to its connotation in many higher educational settings as a 'straitjacket' although it acknowledges that in other countries the expression is understood differently. Protecting the wide diversity of higher education is paramount in Tuning. In no way does it seek to restrict the independence of academic and subject specialists, or undermine local and national academic authority.

7. The Tuning approach consists of a methodology to (re-) design, develop, implement and evaluate study programmes for each of the Bologna cycles, which are the bachelor's, master's and doctorate degrees. Having been tested and found successful on several continents, the approach can be considered legitimate internationally. In 2007, groups of high level peers validated the Tuning approach as a methodology as well as an application in numerous disciplines. It is currently applied in more than 30 subject areas, in many institutions throughout Europe and Latin America as well as some countries in (Eur)Asia (*e.g*. Kyrgyz Republic, Georgia).[4] Information sessions have raised awareness of the Tuning approach in other regions of the world, such as Australia, India and Japan. At present, the Tuning methodology is being tested in three US states.[5]

8. Furthermore, Tuning has served and is serving as a platform for developing reference points within subject areas. These reference points are relevant for making study programmes comparable, compatible and transparent. They are expressed in terms of learning outcomes and competencies. Learning outcomes are *statements of what a learner is expected to know, understand and /or be able to demonstrate after completion of a process of learning.* According to Tuning, learning outcomes are expressed in terms of the *level of competence* to be obtained by the learner. Competencies represent a dynamic combination of cognitive and meta-cognitive skills, knowledge and understanding, interpersonal, intellectual and practical skills, and ethical values. This definition is in line with the international ISO 9000 norm which defines competencies as "demonstrated ability to apply knowledge and skills". All educational programmes aim to foster these competencies, which build on the *knowledge and understanding* developed over a period of many centuries. Competencies are developed in all course units, usually in an integrated and cyclical manner, and assessed at different stages of a programme. Some competencies are subject area-specific (to a field of study); others are generic (common to any degree course). Tuning organised several consultation processes including employers, graduates and academic staff/faculty and students in different parts of the world to identify the most important competencies that should be developed in a degree programme. The outcome of these consultation processes is reflected in sets of reference points – generic and subject specific competencies – identified by each subject area.

9. According to Tuning, the use of the learning outcomes and competencies approach implies changes in the teaching, learning and assessment methods used in a programme. Tuning has identified approaches and best practices to form specific generic and subject-specific competencies. It has also raised awareness about the feasibility of learning outcomes by relating the learning outcomes approach to student work load. In this respect, Tuning has played a major role in transforming the European Credit Transfer System, in the *European Credit Transfer and Accumulation System (ECTS),* based on learning outcomes and competencies (Wagenaar, 2003, 2006; ETCS, 2009).

10. Finally, *Tuning* has developed an approach to improve quality in the process of designing, re-designing, developing and implementing study programmes, which involves all elements of the learning chain. It has also created a number of tools and has identified examples of good practice, which can help institutions enhance the quality of their study programmes. The OECD-AHELO project has asked the Tuning Association to define a conceptual framework of expected/desired learning outcomes in engineering and economics following the *Tuning* approach. This document sets out the framework for **economics** and provides an intermediate output of the AHELO feasibility study. It will also supply useful input for test developers to design and develop (an) instrument(s) to measure/to assess the performance of students who will soon complete their first (cycle) or bachelor's degree. The coverage of this framework, however, is not seen as a prescriptive requirement at the feasibility study stage. This assessment should provide high-quality data to be used to improve the quality of higher education programmes throughout the world. This report presents and explains the framework, which follows the structure:

i. Project context

ii. Economics and its teaching

iii. Overview of typical degrees offered in economics

iv. Overview of typical occupations of economists, with a first-cycle (bachelor's) degree and a second cycle (master's) degree

v. Role of learning outcomes, (cycle) level descriptors and qualifications frameworks

vi. Overview of prior work on the learning outcomes approach in economics

vii. Approach used in defining learning outcomes statements

viii. Overview of agreed learning outcomes statements

ix. New approaches required in teaching, learning and assessment for outcome-based learning

x. Concluding remarks

xi. References

xii. Membership of the expert group Economics

11. A group of experts defined this conceptual framework. It was previously agreed that the group should cover a range of continents and thirteen countries, as well as various schools of thought. These experts should have a good overview of the field as well as of the issues involved. These experts should have a good overview of the field as well as the issue at stake. A distinction was made between full members and corresponding members whereas full members actually met in Brussels on the 4th and 5th of May 2009 to discuss the report. Both full members and corresponding members have received all documents and were invited to reflect and advise on all materials.

12. The following organisations were contacted: The Royal Economic Society, The Economic Society of Australia, China Association of Comparative Economic Studies, The Korean Economic Association, The Joint Committee of Finnish Economic Associations, Association Française de Sciences Économiques (French Association of Economic Sciences), Indian Economic Association, Conferencia Española de Decanos de Economía y Empresariales (CONFEDE – Spanish Dean Conference of Business and Economics), Swedish Institute for Social Research (SOFI), the Turkish Economic Association, The International Association for Feminist Economists (IAFFE), Verein für Socialpolitik (Scientific society of the German-speaking economists). Members of the AHELO Group of National Experts (GNE[6]) were instrumental in helping the Tuning Association identify appropriate experts from Australia, Belgium, Italy, Japan, Mexico and the Netherlands. The Group also benefited from the inclusion of the editor of the *Journal of Economic Education*, who is also the editor of the SSRN Economic Research Network Educator and the Chairman of the Quality Assurance Agency (QAA) Committee for Economics.

13. The report has been the work of three of the expert group members: the appointed *rapporteur,* William E. Becker; the group's chairperson, John Beath; and the *Tuning* project co-ordinator for economics, Julia González. Other members of the Group made valuable contributions and suggestions, and shared their knowledge of other parts of the world and their perceptions regarding economics. They contributed especially in the identification, selection and structuring of agreed learning outcomes.

[1] AHELO Web site: www.oecd.org/edu/ahelo

[2] Bologna Process Web site: www.ond.vlaanderen.be/hogeronderwijs/bologna/

[3] Tuning Europe Web site: http://tuning.unideusto.org/tuningeu/

[4] Nearly 100 academic communities applied the Tuning methodology in 58 countries.

See also the following Web sites:
Tuning América Latina Web site: http://tuning.unideusto.org/tuningal/
Tuning Kyrgyz Republic Web site: www.bolognakg.net/default2.html
Tuning Georgia Web site: www.mes.gov.ge
Tuning Russia Web site: www.iori.hse.ru/tuning/

[5] Tuning América Latina Web site http://tuning.unideusto.org/tuningal/; Tuning USA Web site: www.luminafoundation.org/newsroom/news_releases/2009-04-08.html
and www.luminafoundation.org/our_work/tuning/

[6] The AHELO feasibility study is jointly steered by governments, HEIs and agencies through the Programme for Institutional Management in Higher Education (IMHE) Governing Board – which brings together these different groups with a common interest in improving institutional management and effectiveness. However the technical nature of the project has led the IMHE Governing Board and the Education Policy Committee to delegate decisions on the methods, timing and principles of the AHELO feasibility study to an AHELO Group of National Experts.

1. PROJECT CONTEXT

14. The higher education environment is changing. Universities now need to play more of a role in our knowledge-based society. Information and communication technologies are having greater impact and innovation is becoming increasingly essential. Diversity should be fostered and managed while improving and maintaining quality. New skills have to be developed and adapted to fit new, emerging occupational contexts.

15. These rapid changes are raising new challenges. All types of education institutions are dealing with management, organisation and financing reforms. HEIs' educational strategy reforms are dramatic and affecting how they position themselves and their mission. In particular, there is a major shift, accompanied by significant impacts, "from teaching to learning organisations". The perspective is moving from a "knowledge-oriented approach," with the teacher as the key element, to a "learner-oriented approach," in which degree programmes are student-centric and improve the development of student capacities.

16. These programmes should foster knowledge and understanding of the various and complex areas of an ever-changing society and workforce. They also need to develop the capacity to manage this knowledge and apply it in practical contexts. This knowledge must include the capacity to judge inconsistencies, the ability to create solutions, communicate results and focus on a number of subject-specific as well as transversal competencies. Learners have to be able to meet future academic and professional challenges. Quality programmes should be created to deliver what they promise, be relevant to social needs and, above all, develop the capacity of learners to make optimal use of their time, interests and capacities.

17. Although some countries still focus on the knowledge base, using learning outcomes to assess the quality of provision is becoming increasingly important or of serious interest to those involved in higher education. This is especially true for educators tracking the Bologna Process not only in Europe but also in Australia, Latin America, New Zealand, South Africa and the United States. HEIs are striving to reform their educational strategies to reflect a student outcome-based approach. This reform process could be the most dramatic ever experienced within higher education due to its intensity, extent and depth.

18. The current economic paradigm is being called into question as a result of the global economic crisis. However, the science of economics is ever-evolving and transforming. The current crisis has led to more careful thinking about economic systems and their structures as well as about the discipline's fundamentals including the roots and the understanding of the concepts, models and methods employed by economists. The issues stemming from the 2008/2009 economic and financial crises, for example, might provide the impetus to widen the scope of economic models to include aspects of trust, greed and the herd instinct, and may lead economists to be more open to the contributions of other disciplines (such as psychology in experimental economics and behavioural economics, sociology in a recognition of the importance of social capital, and political science and law for means to implement regulations).

19. The specific elements covered in this report include:

- Different aspects of economics, regions and schools of thought. Discussions among some experts from different approaches and selected regions of the world led to the identification of

programme-level learning outcomes for the first-cycle bachelor's degree (following secondary school).

- Expression of student learning outcomes in competencies. In the language of the Tuning Project, learning outcomes indicate the specific level at which a competence is attained.

- An accepted understanding of higher education cycle levels to shape the perception of degrees.

- Use of the *Tuning* approach, which is based on establishing consensus and has been developed, constructed and widely accepted by over 94 academic communities[7] in 57 countries[8] throughout the world.

- The challenges that emerge when attempting to describe higher-level student learning outcomes or competencies in an evolving field.

20. The overall aim of the project is to reach agreement, ideally at the global level, regarding the descriptors for the key competencies (expected or intended learning outcomes) for the first-cycle bachelor's degree. In developing these descriptors and learning outcomes, different degree profiles and relevant occupations have been taken into account.

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7 Nearly 100 academic communities applied the Tuning methodology in 58 countries.

8 Argentina, Austria, Belgium, Bolivia, Bosnia and Herzegovina, Brazil, Bulgaria, Chile, Colombia, Costa Rica, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Dominican Republic, Ecuador, El Salvador, Estonia, Finland, France, Georgia, Germany, Greece, Guatemala, Honduras, Hungary, Iceland, Ireland, Italy, Kyrgyz Republic, Latvia, Lithuania, Luxembourg, Malta, Mexico, Moldova, the Netherlands, Nicaragua, Norway, Panama, Paraguay, Peru, Poland, Portugal, Romania, Russia, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United States, United Kingdom, Ukraine, Uruguay, Venezuela.

2. ECONOMICS AND ITS TEACHING

21. Economic reasoning or the economic way to approach problems, issues and events typically begins with the identification of objectives to be achieved and the constraints to be faced while attempting to achieve said objectives. Models of (or methods for connecting) objectives and constraints are then formulated, by which the models identify relevant institutional details statically (ignoring time) or dynamically, and with or without incorporating uncertainties. Models might be based on or involve theoretical considerations, social norms, historical economic theory, or empirical inference, with reflections on shortcomings based on mathematical limitations, data availability or other impediments. Analysis could seek to explain allocation, distribution and use of resources and their consequences for economic and social well-being at the individual (micro) or aggregate (macro) level.

22. From secondary schooling in the natural sciences, students and teachers are conditioned to consider the cores of long-standing non-controversial principles and form the standards for content knowledge in biology, chemistry, and physics. Similarly, standards have been written for secondary-school teaching of economics (see, for example, The National Assessment of Educational Progress's Economics Framework project website). Becker (2007) points out, however, that contrary to secondary school ideas regarding standards, the natural sciences are hotly debated even in the popular press. The *Wall Street Journal* articles by Begley (2005a; 2005b), for instance, detail such controversy.[9] Begley's list of untaught scientific arguments is extensive, but can be summarised by a quotation from physicist Lawrence Kraus of Case Western Reserve University, "Every scientific theory is constantly under scrutiny and has unknowns at the edges." This message must be kept in mind when considering higher education student outcomes in economics.

23. Becker and Andrews (2004) provide examples illustrating that higher education involves much more than simply teaching traditional doctrine. It is academic inquiry that elevates higher education above mere training. They argue that instruction in universities can be improved as it can be part of an integrated and aggressive inquiry campaign. Active researchers can engage students in challenging ideas, questions and investigative methods at the forefront of their disciplines, whereas docents (a teacher who acts as a "tour guide," with minimal subject knowledge) can be expected only to teach that which they have been taught or learned from textbooks. The teaching and learning of economics in universities must reflect the science of economics as a dynamic and ever-improving investigative method.[10]

24. David Ricardo's (1772-1823) notion of trade based on comparative advantage requires that production technologies and resources of unlike trading partners remain stagnant. Both capital and technology in today's world can be quickly transferred from one country to another.

25. As economics is directly linked to constantly changing global dynamics, teachers must be able to effectively to provide students with a broad overview of long-standing concepts along with new and innovative notions.

[9] MIT's Frank Wilczek (who shared the 2004 Nobel Prize in physics) is quoted by Begley saying that some alleged laws of physics are disputed, giving as an example the concept that mass is conserved, a staple from introductory courses. Wilczek is quoted saying "But that couldn't be more wrong. Massive particles such as protons are built of quarks and gluons, which have zero mass (unless they are moving). Mass is far

from conserved." From high school physics we learn that for every action there is an equal and opposite reaction; yet, Wilczek is quoted by Begley saying that is not universally true: "It fails for magnetic forces between charged particles." Begley tells of high school biology teachers presenting without question that auxin promotes plant growth, when the reality is far more complex as seen in the raging controversy over how, if at all, it does so. She reports that only recently did Indiana University's Mark Estelle and colleagues find that auxin attracts and binds plant proteins that silence growth-promoting genes. It is the enzymes that then devour the silencers that allow growth genes to turn on. Astronomers argue over the dark matter that pervades the universe. Thus, an up-to-date textbook should state that dark matter exists but its composition remains an enigma.

[10] Historically, and as seen in the popular press, economists have been classified into schools of thought: classical economics, Marxian, Chicago school (Freshwater), Saltwater schools (MIT, Harvard, Berkeley), French Heterodox, Austrian School, Keynesian economics, post-Keynesian economics, behaviour economics, etc. Today mainstream or orthodox economists (as opposed to their heterodox critics) do not fit into any one particular school of thought on the many topics in *The Journal of Economic Literature* Classification Codes. It is the nature of their models, empirical support and what is emphasized that distinguishes them from those who simply adhere to an ideology.

3. OVERVIEW OF TYPICAL DEGREES IN ECONOMICS

26. Economics degrees in the first cycle after secondary school fall into three groups: i) **general** degrees in economics; ii) **specialised** degrees in economics; and iii) **combined** degrees with other disciplines. The specific titles will vary from country to country but are frequently referred to as bachelor's degrees (following the Bologna Process, in Europe it is usually now a three-year degree). Some students leave higher education upon receiving their bachelor's degree, although ever more students continue on to a master's degree.[11]

27. **General degrees** consist of **three** basic components: i) theoretical principles; ii) methods; and iii) applications. In a typical degree programme, students learn a coherent set of economic ideas that covers both micro and macro principles and the workings of the economy nationally and internationally. In addition, they acquire the appropriate quantitative techniques so that they may reason analytically and collect and analyse economic data. With this toolkit of theory and methods, students then study sets of topic areas in which economic analysis can be, and are, applied. There are many of these topic areas, but the most common examples are health economics, industrial organisation, and labour economics. Studying the application of a coherent set of economic principles to a variety of topics, should teach students how to use this knowledge to design, guide and interpret commercial, economic and social policy. Students are then able to discuss and analyse individual, corporate and institutional behaviour and, in turn, government policy.

28. **Specialised degrees** in economics contain the general degree's first two elements (theoretical principles and methods), but with particular concentration on a specific topic area as a third component. Examples include degrees in econometrics, finance and financial economics, public finance, international or development economics, etc. Indeed, in degrees such as econometrics and finance, there is usually an additional specialised mathematical and statistical methods component, such as stochastic calculus or time-series analysis. In others, such as public finance, the additional detailed study might involve relevant institutional and/or legal frameworks. In some cases, the degree title might be associated with a thematic issue and have a multi-disciplinary aspect.

29. **Combined degrees** integrate economics with another subject, which may be related to the sciences or the arts/humanities, depending on the faculty in which the student is studying. Such degrees include a significant amount of the first two elements of the general degree, with a limited range of topic areas covered in the third component. It should also be noted that first-cycle degrees in business administration and in management also have an economics component. While this is always a minor element, in some cases it may account for up to 30% of the degree programme.

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[11] Although the Bologna Process first-cycle bachelor's degree is normally to be a three-year degree followed by a two-year master's degree there are many exceptions to be found in Europe. For example, the Erasmus School of Economics awards both a one and a two-year master's degree.

4. OVERVIEW OF TYPICAL OCCUPATIONS OF ECONOMISTS WITH A FIRST-CYCLE (BACHELOR'S) DEGREE AND A SECOND-CYCLE (MASTER´S) DEGREE

30. A student who completes a first-cycle (bachelor's) degree in economics would be unlikely to find employment as an economist immediately upon graduation. He or she would be more likely to take up a general administrative post either in the business/commercial sector or in the government sector. For example, the larger industrial and retail firms and banks run their own graduate-training schemes through which the graduate acquires a range of managerial skills on the job. The percentage of graduates who move straight into employment varies from country to country but appears to be decreasing over time.

31. Graduates with a first-cycle degree might also move on to further structured training, either within the higher-education sector or through some licensing body that can award a professional qualification (examples of a professional qualification would be accountancy and law). Further structured training could include the acquisition of a teaching qualification or the pursuit of a second-cycle (master's degree) economics qualification. Subsequent to the Bologna Process, this is now usually a two-year degree in Europe.[12] Successful completion of the master's degree should enable the recipient to work as an economist in industry and commerce, banking and finance, in the national or supra-national governments, and in international agencies. However, there is no systematically-collected **international** data on the careers of graduates with economics degrees.

[12] In The Netherlands universities such as the Erasmus School of Economics offer both a one-year and a two-year master's degree, with the former intended for those who want to get a job upon completion and the latter intended for those who plan to go on for a PhD.

5. ROLE OF LEARNING OUTCOMES, (CYCLE) LEVEL DESCRIPTORS AND QUALIFICATIONS FRAMEWORKS

32. Globalisation in higher education has led to the call for descriptors and agreed frameworks. The higher education environment relies on a combination of elements such as: the rise of the 'network' society, the restructuring of the economic world system, the political reshaping of world order, the growing actual but also virtual mobility of people, capital and knowledge, the erosion of the nation-state and very complex cultural developments, with an increasing cultural exchange and elements of cultural differentiation and segregation (Van Damme, 2001). These elements have also had a profound impact on HEIs which are faced with numerous challenges: creation of new and more demanding strategies, ever more people throughout the world trying to access higher education, tension in the national regulatory and policy frameworks, the emergence of borderless education and, as a consequence, the growing need for an international regulatory framework and the capacity to understand, transfer and recognise qualifications.

33. Thus, the development of transnational education has become essential with the emergence of the global society. This goes along with greater citizen mobility throughout the world and the need to continue learning in formal and non-formal contexts. The development of transnational education also needs to be recognised in various geographical settings. It has been greatly supported by the political will of regions, such as those in Europe, which have decided to create a common higher education area. Working together, they launched the Bologna Process as a dynamic tool to bring about a common framework for teaching and learning within higher education.

34. Learning outcomes are linked to defining descriptors and frameworks. This concept is a relatively new approach in educational policies. It has gained momentum since the 1990s and today is considered to be a prime change agent in higher education. Driving forces and inspirational sources have been, among others, in particular the Quality Assurance Agency (QAA) in the United Kingdom and the Tuning process in Europe and elsewhere.

35. Within the framework of the Bologna Process, learning outcomes have become ever more important and higher on the political agenda. Reference was not made to learning outcomes in the original 1999 Bologna Declaration and the Prague Communiqué of 2001[13], yet they have figured prominently in all ensuing ministerial Communiqués.

36. In September 2003, the Berlin Bologna follow up conference considered degree programmes as playing a central role. The conceptual framework, on which the Berlin Communiqué is based, shows coherence with the Tuning approach. This is evident in the language used, where Ministers indicated that degrees should be described in terms of workload, level, learning outcomes, competencies and profile.

37. Subsequent to the Berlin conference, the Bologna follow-up group developed an overarching *Framework for Qualifications of the European Higher Education Area* (QF of the EHEA) which, in concept and language, is again fully aligned with the Tuning approach. This framework was adopted at the Bergen Bologna follow-up conference held in May 2005. The QF of the EHEA has capitalised on the outcomes both of the Joint Quality Initiative (JQI) and of Tuning. The JQI, an informal group of higher education experts, produced a set of criteria to distinguish between the different cycles in a broad and general manner. These criteria are commonly known as the "*Dublin descriptors*". From the beginning, the JQI and Tuning have been considered complementary. The JQI focuses on the comparability of cycles in

general terms, whereas Tuning seeks to describe cycle degree programmes with regard to subject area. An important aim of all three initiatives (QF of the EHEA, JQI and Tuning) is to make European higher education more transparent. In this respect, the concept of Qualifications Frameworks is a major step as it provides guidance for the construction of national qualifications frameworks based on learning outcomes and competencies as well as on credits. In addition, there is a parallel between the QF of the EHEA and Tuning with regard to the importance of initiating and maintaining a dialogue between higher education and society and the value of consultation -- in the case of the QF of the EHEA with respect to higher education in general; in that of Tuning with respect to degree profiles.

38. In 2006, the European Commission launched a European Qualifications Framework for Life Long Learning (EQF for LLL) seeking to encompass all types of learning in one overall framework. This framework is the outcome of the Copenhagen Process, which focuses on the Vocational Educational and Training sector. The EQF meta-framework intends to act as a translation device between member states' national qualifications systems. It provides employers and educational establishments across Europe the opportunity to compare and better understand the qualifications presented by individuals. The core of the EQF system is its eight reference levels, covering the range from basic to highest level qualifications. Within this framework every new qualification issued in the EU should have a reference to the appropriate EQF reference level, "so the benefits to mobility and lifelong learning that the EQF brings will be visible and available to every EU citizen". National Qualifications Frameworks (NQFs) are presently being mapped to the QF for the EHEA and/or the EQF for LLL.

39. In providing descriptors and key competencies (expected or intended learning outcomes) for the first cycle, the use of meta-frameworks and their points of reference are critical because they:

- are the result of debate and agreement by a large group of academics and stakeholders from various regions,
- have been considered relevant indicators and signify important landmarks in the educational processes,
- offer a common direction and context for the development of a common understanding and co-ordination,
- prompt reflection and mutual learning around critical issues related to the outcomes at specific moments in the educational process, as well as the recognition of the need for equity, and
- provide a comprehensive context for the indicators giving them meaning and value.

40. Although the concepts differ on which the QF of the European Higher Education Area and the EQF for LLL are based, both are fully coherent with the Tuning approach. Like the other two, the LLL variant is based on the development level of knowledge, skills and (wider) competencies. From the Tuning perspective, both initiatives have their value and roles to play in the further development of a consistent European Education Area.

41. It is important to note that this Tuning-AHELO experts' group has concentrated exclusively on the first cycle or bachelor's level - that is, Competence level 6 of the European Qualifications Framework for LLL.

42. In the London Communiqué of 2007, education ministers of 46 European countries confirmed the line taken at the Berlin and Bergen Bologna follow-up conferences:

> *"We underline the importance of curricula reform leading to qualifications better suited both to the needs of the labour market and to further study. Efforts should concentrate in future on removing barriers to access and progression between cycles and on proper implementation of ECTS, based on* Learning Outcomes *and student workload."... "Qualifications frameworks are important instruments in achieving comparability and transparency within the EHEA and facilitating the movement of learners within, as well as between higher education systems. They should also help HEIs to develop modules and study programmes based on* Learning Outcomes *and credits and improve the recognition of qualifications as well as all forms of prior learning." Finally: "We urge institutions to further develop partnerships and cooperation with employers in the ongoing process of curriculum innovation based on* Learning Outcomes*.... "With a view to the development of more student-centric, outcome-based learning, the next (stocktaking) exercise should also address in an integrated way national qualifications frameworks,* Learning Outcomes *and credits, lifelong learning and the recognition of prior learning."* [14]

43. Today, the Bologna Process has encouraged the transition of higher education focus on knowledge possession to understanding performances, from a teaching- to a student-centred approach via learning outcomes. As Stephen Adam puts it:

> "*It is arguable that the main end product of the Bologna reforms is better qualifications based on Learning Outcomes and certainly not just new educational structures. For this sort of bottom-up reform it is recognised that there is a need for fundamental changes at the institutional level where academics are responsible for creating and maintaining qualifications*" (Adams, 2008).

44. In spite of this common political agenda, the learning outcomes for European bachelor's (and master's) programmes, agreed by the 46 members of the European Higher Education Area and referred to as "Dublin Descriptors" (see above), have been very difficult to operationalise. This is because they are generic in nature and do not address various learning outcomes at the disciplinary level. Given the considerable diversity of the education systems in EHEA member states, this departure might be understandable. In recent years, however, there has been growing demand by academics and employers alike to develop sectoral qualifications profiles and learning outcomes. In addition, at the political level, the ministers of education for the first time stressed the importance of learning outcomes at the disciplinary level in their recent Leuven/Louvain-la-Neuve Communité Communiqué :

> "*We reassert the importance of the teaching mission of higher education institutions and the necessity for ongoing curricular reform geared toward the development of learning outcomes... Academics in close cooperation with student and employer representatives will continue to develop learning outcomes and international reference points for a growing number of subject areas... This should be a priority in the further implementation of the European Standards and Guidelines for quality assurance*". [15]

45. Qualifications Frameworks are not limited to Europe. Already in the 1990s, Australia developed its "comprehensive national system of cross-sectoral educational qualifications capable of supporting the increasingly diverse needs of students in education and training". This Australian Qualifications Framework (AQF) was implemented on 1 January 1995 and based on nine levels of qualifications and associated titles in tertiary education. The AQF was, and is, the principal assurance mechanism for Australia's education and training qualifications. However, the 1995 AQF is not based on learning outcomes. In May 2008, an AQF Council was established, which, as one of its first tasks, strengthened the existing AQF by basing it on learning outcomes. On 18 May 2009 the AQF Council published a consultation paper.[16]

46. New Zealand and South Africa are the other non-European countries with Qualifications Systems based on the concept of learning outcomes - i.e. knowledge, skills and competencies. The National Qualifications Framework (NQF) of New Zealand is designed to provide nationally recognised standards and qualifications as well as recognition and credit for a wide range of knowledge and skills. The framework, which contains ten levels, makes a distinction between "achievement standards" and "unit standards". The Ministry of Education develops all achievement standards. Each standard registered on the NQF describes what a learner needs to know or what they must be able to achieve.[17]

47. The *Tuning definition* of learning outcomes was provided in the introduction of this report. It is repeated here:

> "*Learning outcomes are statements of what a learner is expected to know, understand and /or be able to demonstrate after completion of a process of learning.*" (González, 2008; ETCS, 2009).

48. The UNESCO definition identifies both outcomes and student learning outcomes, the concept of the latter being linked to the assessment question: "LO, together with assessment criteria, specify the minimum requirements for the award of credit."

49. This definition of learning outcomes (Harvey, 2004-9), has obtained wide acceptance although there are many other definitions.

50. One has to differentiate between:

- intended learning outcomes, ILO—written statements in a course/programme syllabus, and
- achieved learning outcomes, ALO—those results that students actually have achieved.

51. A quality education can be assumed when a student has acquired knowledge, skills and wider competencies as described through the learning outcomes. Learning outcomes are further divided into different categories. The most common sub-division is between subject specific and generic (sometimes referred to as transferable or transversal) outcomes. If designed properly, learning outcomes should promote communication between teachers and students, provide information on courses and programmes as well as study guidance and study planning. They can help assess learning and teaching methods as well as establish feedback mechanisms. Nevertheless there is an underlying caveat that learning outcomes should not be used as a tool to standardise curricular content at the national/European/OECD level but rather as one of the most important tools for academic and professional mobility; a view which has been unanimously shared by the members of the AHELO Group of National Experts.

52. The learning outcomes concept has been, and is being, used in many different settings. It has been instrumental in developing qualifications frameworks in the LLL discussion, in developing the European Credit Transfer and Accumulation System, reforming curricular, in quality assurance and most importantly, as the primary vehicle for recognising qualifications and the corresponding academic and professional mobility.

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13 Web site: www.bologna-bergen2005.no/Docs/00-Main_doc/010519PRAGUE_COMMUNIQUE.PDF

14 London Communiqué: Web site: www.dcsf.gov.uk/londonbologna

15 Communiqué of the Conference of European Ministers Responsible for Higher Education, Leuven and Louvain-la-Neuve, 28-29 April 2009: "The Bologna Process 2020 – the European Higher Education Area in the new decade", pp. 3-4.

See also the conclusions of the official Bologna Seminar (2008) "Development of a Common Understanding of Learning Outcomes and ECTS", Porto, June http://portobologna.up.pt/documents/BS_P_Report_20080915_FINAL.pdf

16 Web site: www.aqf.edu.au/aboutaqf.htm

See also a publication of National Qualifications Authority of Ireland (2006), *Review of Qualifications Frameworks – International Practice* in which an overview is given of existing Qualifications Framework, including the ones from South Africa, Australia and New Zealand. www.nqai.ie/docs/framework/researchreports/review%20of%20qualifications%20frameworks.doc

17 Web site: www.nzqa.govt.nz/framework/ ;
text NQF: www.nzqa.govt.nz/news/featuresandspeeches/docs/nqf-background.pdf

6. OVERVIEW OF PRIOR WORK ON THE LEARNING OUTCOMES APPROACH IN ECONOMICS

53. Since the 1930s, and especially following World War II, the teaching and learning of economics in colleges and universities have been of concern around the world. For example, six decades ago a subcommittee of the American Economic Association found that "the content of the elementary course has expanded beyond all possibility of adequate comprehension and assimilation by a student in one year of three class hours a week" (Taylor, 1950, p. 56). Such criticism and conjecture about student learning of economics gave rise to the development of the Test of Understanding of College Economics (TUCE) which, from its initial version in 1968 (JCEE, 1968) to its current fourth edition in 2007, has been a United States-standardised, multiple-choice test of a small number of concepts in micro and macroeconomics.[18]

54. Despite the early warnings of Australian scholar Judith Yates (1978) that concept testing as found in the TUCE ignores the higher learning aspect of an economics education, the TUCE has become the benchmark for empirical research on the introductory course.[19] Of greater concern and with disregard for its considerable and major shortcomings, reference to the current TUCE is creeping into statements on student competencies, as seen, for example, in performance competencies written by the faculty in Louisiana State University's Department of Economics:

- Performance Indicator for General Education Economics Students:

  Scores on the "Test of Understanding of College Economics" (TUCE).

- Assessment Methods for General Education Economics Students:

  Administer macroeconomic and microeconomic versions of TUCE exam to a random sampling of 100 students having completed Economics 2010 and 2020 each spring and fall term. The TUCE exam is prepared by the National Council on Economic Education (www.ncee.net).

55. Even a cursory review of articles over the past 40 years in the *Journal of Economic Education* shows that while the introductory economics course or subject has received a tremendous amount of attention, the undergraduate major leading to a first-cycle bachelor's degree in economics has received relatively little interest. Only recently has W. Lee Hansen (1986; 2001) opened the door to scholarly inquiry into the components and proficiencies to be demonstrated by those receiving the bachelor's degrees in economics. Hansen's (2001, pp. 232-233) six competencies are:

i. Access existing knowledge: Retrieve information on particular topics and issues in economics. Locate published research in economics and related fields. Track down economic data and data sources. Find information about the generation, construction, and meaning of economic data.

ii. Display command of existing knowledge: Explain key economic concepts and describe how these concepts can be used. Write a précis of a published journal article. Summarise in a two-minute monologue or in a 500-word written statement what is known about the current condition of the economy and its outlook. Summarise the principal ideas of an eminent economist.

Elaborate a recent controversy in the economics literature. State the dimensions of a current economic policy issue.

iii. Interpret existing knowledge: Explain and evaluate what economic concepts and principles are used in economic analyses published in daily newspapers and weekly news magazines. Describe how these concepts aid in understanding these analyses. Do the same for nontechnical analyses written by economists for general purpose publications (*e.g., Challenge*, *Brookings Review, The Public Interes*t).

iv. Interpret and manipulate economic data: Explain how to understand and interpret numerical data found in published tables such as those in the annual *Economic Report of the President*. Be able to identify patterns and trends in published data such as those found in the *Statistical Abstract of the United State*s. Construct tables from already available data to illustrate an economic issue. Describe the relationship among three different variables (*e.g*., unemployment, prices and GDP). Explain how to perform and interpret a regression analysis that uses economic data.

v. Apply existing knowledge: Prepare an organised, clearly written five-page analysis of a current economic problem. Assess in a four-page paper the costs and benefits of an economic policy issue. Prepare a two-page memorandum that recommends action on an economic policy issue.

vi. Create new knowledge: Formulate questions that illuminate a new economic issue that needs to be researched. Prepare a five-page proposal for a research project. Conduct a research study, presenting the results in a polished 20-page paper. Conduct a group research project that prepares a detailed research proposal and/or a finished research paper.

56. Carlson, Raymond and Ramsey (2002) were the first to publish a description of an attempt to implement Hansen's competencies or proficiencies to be demonstrated by students. They describe the framework their Department of Economics at Illinois State University adopted to incorporate Hansen's proficiencies into the curriculum. Major changes include the identification of tools students should be able to use to complete specific activities, significant changes in prerequisites for upper-division courses, and the development of a capstone experience. Myers, Nelson and Stratton (2006) report on their attempts to implement Hansen's proficiencies at the University of Akron. Their plan encompasses both formative and summative assessment in the curriculum, captures data in student portfolios and provides a capstone experience for all majors. Although Hansen is now an emeritus professor of economics at the University of Wisconsin (Madison), the UW has not formally implemented his proficiency-based major nor has any other major research university or prestigious liberal arts college.

57. In addition to the above, for the Brussels Tuning-AHELO meeting (4-5 May 2009) a search was conducted of programmes focusing on learning outcomes as described by the Departments of Economics on the Illinois State University website. Consideration was given to their student learning outcomes and a number of examples were discussed. For both individual courses or subjects as well as the bachelor's degree at Georgia State University, "Bachelor's Degree in Economics (B.A., B.S., and B.B.A.), Learning Outcomes" seemed to emphasise mastering the concept. Similarly, learning outcomes for the bachelor's degree at Washington State University stressed mastering the concept. Although importance is placed on knowledge and understanding, there is greater emphasis "to be able to understand the relevant benefits and costs to consider when comparing policy choices". However, other aspects also emerge "to learn and be able to apply basic theories, concepts and analytical methods of microeconomics and macroeconomics" or "to be able to communicate, using appropriate writing and oral conventions, basic economic theories, concepts, analytical methods and policy choices" (Georgia State University).

58. The older and well-known major research universities and prestigious liberal arts colleges in the United States do not usually formally state and co-ordinate their students' skills upon completion of courses or subjects and the earning of a bachelor's degree in economics. Leading economists at these institutions have been writing about economic education for well over a half century, making it clear that desired teaching and learning outcomes at the bachelor's level have not and are not being ignored.

59. Europe is moving in the direction of learning outcomes. This process undertaken by European countries is also being watched closely and acted upon by managers and faculty of universities in Australia, Japan, Mexico, nineteen Latin American countries as well as the United States which participated in a successful Latin America Tuning Project. Since 1992, Australian universities have been required to have statements about graduate capabilities. Clear implementation strategies and the achievement of such learning outcomes have been slow in coming, although higher level programme goals are emerging. This is in response to more economics and business faculties participating in international accreditation initiatives, particularly the Association to Advance Collegiate School of Business (AACSB) at the University of Sydney Web site. In the United States, universities are accredited but individual academic departments or areas of study need not meet uniformly agreed upon standards for student performance. Yet the Lumina Foundation has just launched an experimental pilot Tuning Project for biology, chemistry and education for a few universities in some Midwestern states. Within this context, the OECD Tuning-AHELO Project for economics takes on special importance.

60. In the UK, a major feature of the quality assurance process has been the development and implementation of subject benchmark statements by the Quality Assurance Agency for Higher Education (QAA). The academic community can use subject benchmark statements to describe the nature and characteristics of programmes in a specific subject or subject area – and they have been developed for every subject area. These statements also set out the general expectations regarding standards by which to award qualifications at a given level in terms of the attributes and capabilities. While subject benchmark statements that deal with second-cycle (master's degree) have been published, the bulk of them refer to the standard first-cycle degree, bachelor's degree with honours. .

61. Subject benchmark statements can be a used for many reasons. Primarily, they are an important external reference source for HEIs when new programmes are being designed and developed in a subject area. They provide general guidance for articulating the learning outcomes associated with the programme but do not specify detailed curriculum in the subject.

62. Subject benchmark statements may also help HEIs ensure internal quality. They enable the learning outcomes specified for a particular programme to be reviewed and evaluated in comparison with agreed general expectations of standards. Subject benchmark statements are sufficiently non-prescriptive that they leave room for flexibility and innovation in designing new degree programmes and may facilitate academic discussion and debate on new and existing programme content, within an agreed overall framework. Using subject benchmark statements can facilitate programme design, delivery and review within HEIs and help emphasise institutional responsibility for standards and quality.

63. A subject benchmark statement can also be used to seek information on the nature and standards of awards in a given subject or subject area. As a result, prospective students and employers of graduates in the subject area may benefit the most.

64. However, in developing benchmarking statements, the QAA was aware that in some subject areas, degree programmes also need to be accredited by professional, statutory or regulatory bodies. Therefore HEIs were informed that they were responsible for considering, in detail, the relationship between the benchmark standards and those produced by such bodies for individual disciplines.

65. The subject benchmark statement for economics was originally published in 2000 and was subsequently revised in 2007 as part of a periodic review by the QAA of all subject benchmark statements. The review and subsequent revision of the subject benchmark statement was undertaken by a group of subject specialists drawn from and acting on behalf of the subject community and, like its predecessor, underwent a full consultation with the wider academic community and stakeholder groups.

66. The revised subject benchmark statement for economics provides an overview of the subject context, and what a student can expect to learn in an honours degree programme in economics. At the same time, it acknowledges that joint degrees and multidisciplinary degrees with economics develop their own distinctive structures, and only cover a suitable subset of a single honours degree in economics.

67. The subject benchmark statement also frames the subject-specific and generic (transferable) skills that economics graduates are expected to have acquired by the end of their degree programme. Finally, it sets out some learning and assessment methods, as well as provides a statement of threshold and typical attainment levels. The subject benchmark statement for economics was developed by a broad group of academic economists, acknowledged at the end of the document, and brought together by the Royal Economic Society and the Conference of Heads of University Departments of Economics (CHUDE).

68. Special consideration was given to the "QAA subject benchmark statement for economics 2007" in the Brussels Tuning-AHELO meeting (4-5 May 2009). It was thought that QAA defined economics as well as the knowledge and skills that a bachelor's degree recipient should possess.

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[18] Through all four editions the TUCE has been the product of the currently named Council for Economic Education, which was previously named the National Council on Economic Education and originally named the Joint Council on Economic Education. The most recent TUCE-4 has 30 multiple-choice questions in macroeconomics and 30 in microeconomics, where the content if not the questions themselves tend to repeat from previous versions. TUCE authors Walstad, Watts and Rebeck (2007) claim that these questions reflect the core of what is being taught in introductory economics but their sample of "43-44 colleges and universities" do not include any of the highly ranked National Research Council Ph.D.-granting departments or any of the prestigious U.S. liberal arts colleges identified in popular press listings such as those found in *U.S. News & World Report*.

[19] Alan Krueger (Princeton University) is listed as an advising member of the TUCE-4 "national panel of distinguished economists" but Princeton was not one of the universities in the sample of participating institutions. Krueger and McIntosh (2008) state "A longstanding complaint of Krueger, as well as others (Becker 2004; 2007) is that introductory economics courses have not kept up with the economics profession's expanding emphasis on data and empirical analysis" (p. 180). Unlike the old concept-based TUCE, SRI International's Center for Technology in Learning, under a grant from the U.S. Department of Education's Institute of Education Sciences, is working on an "evidence-centred design" for undergraduate economic education testing that seeks to assess the cognitive processes employed by economists in their reasoning.

In addition to the TUCE, other well known United States standardized tests in economics include the secondary school level multiple-choice Test of Economic Literacy (TEL) and the Advance Placement test. The AP has both a fixed (multiple-choice) and free response (essay) component. To achieve reliability across graders, the free response questions must be compatible with a scoring rubric, making the free response component of the test similar to the fixed response component in assessing cognitive processes. For graduate school applicants, there is the Graduate Record Exam in Economics. Completion of this exam is voluntary and not required by all the major Ph.D. granting universities. Simple testable knowledge of economics is not as important as quantitative skills in assessing candidates for these Ph.D. programs.

7. APPROACH USED IN DEFINING LEARNING OUTCOMES

69. The approach used to define learning outcomes for economics needs to be understood according to the following criteria:

a. it followed the process used in the Tuning methodology;

b. it focused on learning outcomes; and

c. it adopted the scheme of the Qualifications Framework for EHEA.

a) The process used in the Tuning methodology

70. The learning outcomes discussion concerning economics dates back to the founding of the *Journal of Economic Education* in 1969. In addition, in July 1973 the National Council on Economic Education sponsored a conference held at Indiana University that was devoted to student learning objectives. Representative economists from major research universities, including Duke University, University of Wisconsin, the University of Minnesota, Vanderbilt University and others participated. Yet, there has been no overarching agreement by international organisations on what worldwide learning outcomes should be. Unfortunately for this Tuning-AHELO Project in economics, the ideal model of holding two meetings (one brainstorming session and one meeting to discuss the draft report) for the experts' groups could not be maintained due to time restraints. As an alternative, the discussion during the one scheduled meeting would be emphasised and focused on the key points of the framework. The period prior to the meeting was used to study and reflect on the identified relevant materials and to add necessary information. The discussion defined economics, the main profiles for degrees and occupations, and agreed on the expected desired learning outcomes.

b) The learning outcomes

71. Many definitions of learning outcomes are contained in the literature and in the implementation of educational reforms but all are significantly similar:

- "Learning outcomes are explicit statements of what we want our students to know, understand or be able to do as a result of completing our courses" University of New South Wales, Australia (Declan Kennedy, 2007);

- "A learning outcome is a statement of what a learner is expected to know, understand and be able to do at the end of a period of learning and of how that learning is to be demonstrated" (Moon, London, 2002);

- "Learning outcomes describe what students are able to demonstrate in terms of knowledge, skills and attitudes upon completion of a programme" Quality Enhancement Committee, Texas University (Declan Kennedy, 2007); and

- "A learning outcome is a statement of what the learner is expected to know, understand and/or be able to do at the end of the period of learning" (Donnelly and Fitzmaurice, Dublin, 2005).

72. These similar definitions indicate that the concept can be considered understood worldwide. The specific definition used would be that of the Tuning Project glossary which was taken by the ECTS User´s Guide (2005) because it has been formerly agreed upon by the 46 countries in the Bologna Process:

> "Learning outcomes are statements of what a learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning."

c) The Qualification Framework for EHEA

73. The Qualification Framework for EHEA is the framework with the greatest consensus on the definition of first (bachelor's) level, and its differences with the second (master's) level. Therefore, the specificity and difference at each of the two levels, in terms of the following five indicators, should be analysed:

> **Knowledge and understanding:** The specificity of the level seems to be grounded in "informed by knowledge at the forefront of their field of study….supported by advanced textbooks," while at the second level the knowledge and understanding "provides a basis or opportunity for originality in developing ideas…often in a research context." Obviously both levels are interactive and most HEIs will incorporate research elements in undergraduate programmes. However, the specific level should relate to greater capacity to handle advanced knowledge in the specific field.
>
> **Application of knowledge and understanding:** The specificity of the first level seems, in this case, related to the capacity for "devising and sustaining arguments and solving problems in their field of study". The second level is defined more by the capacity to handle multidisciplinary contexts and solve problems in new and unfamiliar environments. The level in this context could be understood as breadth and depth because, upon analysis of realities or problems, many elements play a role.
>
> **Ability to make judgments:** The aim of this indicator, at both levels, relates to the capacity to have "informed judgments that include reflections on relevant social, scientific or ethical issues". This said, the first level concentrates this gathering of information mainly in its own field, while at the second level, there is a complementary requirement, which concerns "integration of knowledge" and the handling of "complexity" and the formulation of judgments with "incomplete or limited information". Again the difference is in the "new and unpredictable" that is beyond the specific field, which should be clearly understood in the first-cycle.
>
> **Ability to communicate:** The level of communication is essential. Communication at both levels should be aimed at "specialist and non-specialist audiences". The specificity of the first level relates to the communication of "information, ideas, problems and solutions" and it would be the efficiency and clarity of this communication that may be at the core of the educational process. The second level deals with "their conclusions and the underpinning knowledge and rationale". The core of the communication goes further as it relates to more original conclusions as well as the roots and background elements explaining them.
>
> **Learning skills:** Here the level of learning skills relates to the degree of independence and autonomy. While for the first level the goal for achievement is "learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy". For the second level, the learning skills need to develop "in a manner that may be largely self-directed and autonomous". Students at both levels need to be able to manage their learning processes and be able to advance. There is no reference in this list of learning skills to the capacity to learn in, with

and through groups. The Tuning consultation with stakeholders showed that there is an important balance in terms of autonomy in learning and the capacity to learn with others and particularly in leading others in the learning process. This aspect is not considered in the EQF for EHEA.

74. In conclusion, frameworks are clearly limited but they enable debate and clarification, particularly in terms of providing reference points in higher education.

8. OVERVIEW OF THE AGREED LEARNING OUTCOMES STATEMENTS

75. Similar but not identical to Hansen's proficiencies the "Dublin descriptor", for a first-cycle bachelor's degree, has five elements: i) have knowledge and understanding of the field of study, ii) ability to apply these in reasoned arguments and problem solving, iii) capacity to gather and interpret data and reflect on its implications, iv) possess communicative skills, and v) develop the capacity to pursue independent learning. Using these as a set of reference points, the following sets of learning outcomes for economics were identified at the Brussels Tuning-AHELO meeting (4-5 May 2009):

Subject knowledge and understanding

- A consistent and coherent command of the language of economics. This should include the ability to clearly define standard terms and explain basic concepts in both micro and macroeconomics;
- A consistent and coherent command of the principles of both micro and macro-economics, as well as the ability to structure economic arguments coherently and convincingly (rhetoric);
- The ability to explain how economic agents (individuals, households, firms, governments, etc.) make decisions and choices and to use this to solve problems related to economic decisions;
- The ability to explain the basic workings of an economic system and the role of policy in such a system; and
- The ability to articulate critical features and shortcomings in a model or method of analysis.

Subject knowledge and its application

- The ability to apply economic reasoning and methods effectively to the study of specific topic areas. (For example, markets, public finance, environment, health, labour markets, international trade, etc.); and
- The ability to use economic reasoning to formulate and evaluate economic advice and policy. This would involve advice to both the private and public sectors.

Effective use of relevant data and quantitative methods

- The ability to show considerable knowledge of the sources of economic and social data including an understanding of where and how to find them, as well as the methods used to create or collect such data.

Effective communication

- The ability to communicate and explain effectively economic arguments both to those with disciplinary knowledge and to non-experts. Such communication should be both oral and written, and might involve the use of local computer and projection technology as well as the Internet.

Acquisition of independent learning skills

- The ability to think strategically and critically about a range of issues in economics. This might be demonstrated through an understanding of the history of economic thought or of the capacity and limitations of alternative approaches to modelling or other means of analysing or studying economic problems; and

- The ability to raise and explore a specific issue in economics. This involves identifying the subject to study, knowing suitable examination methods and the ability to draw conclusions. Such conclusions could include areas for further investigation.

76. The following four specific skills should be included in any assessment of the learning outcomes acquired by economics first-cycle or bachelor's degree recipients:

– **Abstraction**

By studying economic principles and models, students should learn how to abstract the essential features of complex systems and provide a useable framework to assess and evaluate the effects of policy or other external events. The average student should therefore be proficient in simplifying while still retaining relevance. This approach can then be applied within other contexts. Students thereby become more effective problem-solvers and decision-makers.

– **Analysis, deduction and induction**

Economic reasoning is highly deductive, and logical analysis is applied to assumption-based models. However, inductive reasoning is also important. Developing such analytical skills improves students' problem-solving and decision-making ability.

– **Quantification and design**

Data and their effective organisation, presentation and analysis, are important in economics. The average student will be somewhat familiar with the principal sources of economic information and data related to industry, commerce, society and government. They should also have had experience in organising and presenting such data informatively. Skills such as these are important at all stages in the decision-making process. An employer will expect an economics graduate to be able to structure, analyse and explain information presented in some numerical form. The raw data are frequently presented as tables (or datasets with a tabular structure) and the processed data as a graph, an average, a correlation, etc.. Numeracy, statistical and computing skills are required to handle this type of information. Presentation skills are needed to communicate such quantitative information in usable ways, and particularly to give critical and coherent summary representations of data that cannot be readily absorbed raw. In addition to formal manipulative and presentation skills required to deal with statistical data, economists learn not to be misled by numbers. They question whether the numbers represent what they claim (*e.g.* unemployment, price indices), they understand statistical significance (*e.g.* the margin of error in a poll or survey) and they are aware of at least some of the difficulties in sampling a population. With some understanding of econometrics, they also recognise that conclusions drawn from data might be ambiguous.

– **Framing**

Through the study of economics, a student should learn to decide what is be taken as given or fixed for the purposes of setting up and solving a problem, *i.e,* what the important "parameters" are in constraining the solution to the problem. Learning to think about how and why these parameters might change encourages a student to place the economic problem in its broader social and political context. This "framing" skill is important in determining the decision-maker's ability to implement the solutions to problems. An appropriate assessment instrument needs to explore this skill.

9. NEW APPROACHES REQUIRED TO TEACHING, LEARNING AND ASSESSING OUTCOME-BASED LEARNING

77. The shift in higher education from a teacher-centric to a learner-centric model has an obvious impact on approaches to teaching, learning and assessing, even more so when learning outcomes are the focal point of the learning or assessing. As part of the economics discussion, thought must be given to how teaching, learning and assessing can be best organised to enable students to reach the intended learning outcomes of a study course. Teaching, learning and assessing approaches on a global scale face challenges as every country and institution has its own specificities and national and regional culture. Each has its own written and tacit rules about how to best prepare students for society. It becomes clear that each system, and even each team, has developed its own mix of techniques and learning environments, all of which are well-founded but need to be mutually understood. In some cases the same name is given to different methods (*e.g.* "seminar," "lecture," "tutorial") or, conversely, different names may correspond to similar activities.

78. HEIs use a wide range of teaching techniques that strongly depend on the instructional form of education (face-to-face education or distance learning). Examining the learning activities requiring student participation in a programme or part of a programme of study can help gain insight into the teaching techniques. As with teaching, learning activities with similar names can greatly differ.

79. Assessing how students achieve learning outcomes would complete the learning cycle. Content assessment requires specific systems and tools when the focus of the evaluation is the development of graduate programme-level competencies or learning outcomes. Evaluation requires the individual teachers' personal understanding and also the educational team's joint perspective to ensure that the desired focus of the learning processes, as specified in the degree profiles, is fulfilled. The learning outcome-based approach requires various appropriate assessment methods. It requires a clear analysis so that the evaluation approaches are all-inclusive, reliable and valid therefore consistent with the outcomes the student must attain and demonstrate. Some argue that this will require academic peer reviews of standards as well as the involvement of educational, testing and practitioner specialists. Relevant evaluation based on, and consistent with, student outcomes is resource-intensive and therefore economically costly.

80. Assessment is a key guiding element in the teaching and learning processes, and directly linked to learning outcomes. At one time, oral exams were the most frequently used assessment method in some countries, while others used essays.

81. Almost any type of assessment can have an analytical component for both student and lecturer. By understanding that which has *not* been achieved, what has been achieved with little effort, what is excellent, etc., both the teacher and the learner know where more work is needed or where effort can be placed. An assessment's formative value and the importance of feedback systems are essential when the learner is the main force in the educational process. Having clear well-defined and jointly (teacher and learner) understood targets (learning outcomes) adds to the quality of an educational programme. These learning outcomes also need to be related to social needs and employment demands and in line with the academic requirements of the international community. A clear progression and methodology to attain the goals contributes to quality education. Students' assessment, within the context of learning outcomes, requires identifying the objectives, measuring their achievement, and revealing more importantly, the elements which are lacking and the path to achieve them. Finally, in discussing assessment issues across

different cultures, it is important to examine various concepts that should be taken into account. For example, some systems value the capacity to retain and relate knowledge; others value hard work, or outstanding achievement, high potential, or creativity. This underlying value system is easily forgotten in a straightforward description of the modes of assessment used, but in a "mobile world" is one that should be better understood.

10. CONCLUDING REMARKS

82. The group of experts who met in Brussels on 4-5 May 2009 considers its mission an initial step in establishing guidelines. It facilitated future work on establishing common understandings and helped build momentum to develop joint worldwide criteria on learning outcomes for higher education in economics in the first cycle.

83. They believed that the work undertaken was groundbreaking in terms of collective work for economics at an international level. While there is a substantial body of research on educational methods, it *is* new for academics to work together to define, in a "bottom up" approach, the learning outcomes required for bachelor's degree programmes. With increasing transnational education, it is important to recognise these reference points.

84. This work has integrated the science of economics into the debate being carried out in many parts of the world. The work on learning outcomes is not the only path to quality education but it is significant and increasing as some academic groups believe that educational programmes should have clearly defined aims, be well-understood by academics and society alike as well as by the learners themselves, the main actors in their educational process. It is the quest for quality and transparency which has led the "Tuning movement" among academic communities, together with the awareness that international reference points are needed in a global society. This academic movement runs parallel to the political action of ministers of education in many countries. There has been tremendous support in Europe because of the already existing structures as a result of the Bologna Process. In other countries, such as Australia and New Zealand, the ministries backed the process. In 18 Latin American countries, the ministries joined the political process running parallel to the academic groups and, at different levels, contributed to and embraced the results incorporating them into their laws.

85. Academic work done by consensus also creates a favourable climate amongst the academics, bringing important elements of learning and developing, designing and implementing programme degrees, as well as contributing to building a common language and fostering understanding.

86. However, developing learning outcomes is not an easy or rapid process. The initial step of identification and agreement is followed by specific profiling and focusing for specific programmes as variety is the core of this approach. Other steps such as creating adequate learning and teaching processes, as well as finding appropriate ways to assess learning outcomes require more time. This involves many academics and learners within institutions who need training.

87. Within this context, the economics field is unclear. Many countries have accepted the learning outcomes approach—and therefore economics, as any other academic field, needs to be translated into the specific language. There are examples, such as QAA at country level. Universities are beginning to indicate their identified learning outcomes in economics on their Web pages. In addition, teams in these institutions are in the processes of identifying and finding the right educational processes to make programme quality consistent. Yet implementation is very much at the beginning stages and there is no collective reflection at the transnational level. This report intends to lay the groundwork.

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