ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Assessment of Higher Education Learning Outcomes: a ground-breaking initiative to assess quality in higher education on an international scale

Diane Lalancette
Directorate for Education
Organisation for Economic Cooperation and Development

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What we know about HE quality…

The massification of participation in higher education has meant much more heterogeneous abilities and expectations of students than in the past

Proxies of higher education quality exist, but none are perfect

- Rankings focused on input factors and research
- Subjectivity of reputation factor
- Cultural sensitivity of satisfaction factor
- Labour market outcomes sensitive to conjoncture and local economic conditions

So what?

Learning outcomes as a promising direction

- Defining them (Tuning process in Bologna area)
- Incorporating them in quality assurance processes
- Measuring them (AHELO)

The OECD AHELO feasibility study

What is AHELO?

A ground-breaking initiative to assess HE learning outcomes on an international scale, by creating measures that would be valid:

- For all cultures and languages
- And also for the diversity of HE institutions

Why undertake the study?

After decades of quantitative growth in HE, consensus on the need to ensure quality for all (Athens, 2006)… but information gap on learning outcomes

➡ Carry out a feasibility study to provide a proof of concept (Tokyo, 2008)

Why is AHELO important?

- Employs a wide range of measures
- Provides faculties, students and government agencies with a more balanced assessment of HE quality
- No sacrifice of HEIs' missions or autonomy in their subsequent efforts to improve performance

The feasibility study at a glance

Goal? To evaluate whether reliable cross-national assessments of HE learning outcomes are scientifically possible and whether their implementation is feasible.

What? Not a pilot, but rather a research approach to provide a proof of concept and proof of practicality.

Why? The outcomes will be used to assist countries to decide on the next steps.

When? Phase 1 - Development of tools: August 2010 to April 2011
Phase 2 - Implementation: August 2011 to December 2012

Who? Data will be collected from a targeted population of students who are near, but before, the end of their first 3-4 year degree.

How? OECD's role is to establish broad frameworks that guide international expert committees charged with instrument development in the assessment areas.

Multi-dimensional def° of quality

Addressing the needs of various users and uses

- “Bottom line” of performance
- “Value-added” to assess the quality of services
- Contextual data to reveal best practices and problems, and to identify teaching and learning practices leading to greater outcomes

Both in discipline-related competencies …

- Easily interpretable in the context of departments and faculties ...
- But require highly differentiated instruments

And in generic skills

- Less dependent on occupational and cultural contexts, applicable across HEIs …
- But reflect cumulative learning outcomes and less relevant to the subject-matter competencies that are familiar to HEIs, departments or faculties

Remarks on data collection

- **Institutions/departments** are the units of analysis, hence **measures** and **reporting** at HEI/dept level
- **No comparative data** at the national level
- Feedback to HEIs: **performance profiles** and **contextual data**, with their own results and those of other HEIs (**anonymously**)

AHELO: 4 strands of work

Discipline strand in Economics

Initial work on defining expected learning outcomes through 'Tuning' approach.

+ contextual data

Discipline strand in Engineering

Initial work on defining expected learning outcomes through 'Tuning' approach.

+ contextual data

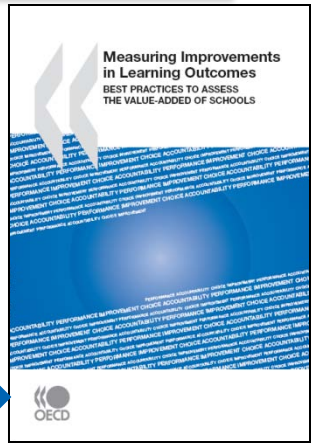
Generic skills strand

International pilot test of the US Collegiate Learning Assessment (CLA), to assess the extent to which problem-solving or critical thinking can be validly measured across different cultural, linguistic and institutional contexts.

+ contextual data

Research-based "Value-added" or "Learning gain" measurement strand

Several perspectives to explore the issue of value-added (conceptually, psychometrics), building on recent OECD work at school level.



Work to be undertaken in 2 phases

Phase 1 - ***Initial proof of concept***

Frameworks

- Generic Skills Framework
- Economics Framework
- Engineering Framework

Instrument development & small-scale validation

- Generic Skills Instrument
- Economics Instrument
- Engineering Instrument

Phase 2 - ***Scientific feasibility & proof of practicality***

Implementation

- Contextual dimension surveys
- Project management, survey operations and analyses of results

AHELO tests of instruments

3 assessment instruments

1. Generic Skills

Discipline-specific skills:

2. Engineering
3. Economics

2 contextual surveys

Contextual indicators and indirect proxies of quality:

1. Student survey
2. Faculty survey

The Generic skills strand

The CLA Performance Task

- Requires students to use an integrated set of skills:
  - critical thinking
  - analytic reasoning
  - problem solving
  - written communication

  to answer several open-ended questions about a hypothetical but realistic situation

- Requires students to marshal evidence from different sources such as letters, memos, summaries of research reports, maps, diagrams, tables, …

Participating countries – Generic Skills

The economics strand

Tuning-AHELO framework of learning outcomes

Subject knowledge and understating

- To explain how economics agents make decisions and make choices and to use this to solve problems related to economic decisions;
- …

Subject knowledge and its application

- To apply economic reasoning and methods effectively to the study of specific topic areas(e.g. markets, public finance, environment…);
- ...

Effective use of relevant data and quantitative methods

- To show significant knowledge of the sources of economic and social data including an understanding of where and how to find them, and to know about the methods used to create or collect such data;
- …

Effective communication

- To communicate and explain effectively economic arguments both to those with disciplinary knowledge and to non-experts…;
- …

Acquisition of independent learning skills

- To pose and to carry out the investigation of a specific problem in economics…;
- …

Participating countries - Economics

The engineering strand

Tuning-AHELO framework of learning outcomes

Basic and engineering sciences

- To demonstrate knowledge and understanding of the scientific and mathematical principles underlying their branch of engineering;
- …

Engineering analysis

- To apply knowledge and understanding to identify, formulate and solve engineering problems using established methods;
- ...

Engineering design

- To apply their knowledge and understanding to develop designs to meet defined and specified requirements;
- …

Engineering practice

- The ability to demonstrate knowledge of project management and business practices, such as risk and change management, and be aware of their limitations;
- …

Generic skills

- The ability to demonstrate awareness of the wider multi disciplinary context of engineering;
- …

Participating Countries - Engineering

The contextual dimension: 2 surveys

A brief student survey (15 minutes maximum)

Looking at:

- Demographic profile of students such as age, gender, disadvantaged groups, or socio-economic status…
- Practices in teaching and learning such as students' perceptions of academic challenge, clear sense of direction, quality of effort, student-faculty relationship,…
- …

A brief faculty survey (15 minutes maximum)

Looking at:

- Curricular design and pedagogy philosophies such as curriculum reforms integrating application and problem solving skills, expectations for teaching practices, …
- Alternative instructional settings such as workplace placements or internships, simulations or problem-based learning…
- …

Contextual data to better interpret resulting outcomes

Participating countries - All strands

Practical considerations

- **Test of practicality of implementation**: international standards for test administration and student participation rates within HEIs
- Assessments will be **computer-delivered** or **web-based** (phase 2)
- Performance described through **proficiency levels** and **"can-do"** statements
- Feedback to HEIs: **performance profiles** and **contextual data**, with their own results and those of other HEIs (**anonymously**)

Assessing the scientific feasibility

Questions such as :

- Is it possible to develop instruments to capture learning outcomes that are perceived as valid in diverse national and institutional contexts?
- Do the test items perform as expected and do the test results meet pre-defined psychometric standards of validity and reliability?
- Is it possible to score higher-order types of items consistently across countries?
- Is it possible to capture information on teaching and learning contexts that contribute to explaining differences in student performance?

Assessing the practical feasibility

Questions such as :

- How effective are strategies implemented at national/institutional level to secure institutional and student cooperation?
- Can students be motivated to take part in such an assessment and take it seriously?
- To what extent does the implementation of the feasibility study assessments bring benefits to participating HEIs?
- To what extent does the implementation of the feasibility study contribute to demonstrating its value for the improvement of teaching and building support for an AHELO?

A study with great potential…

… Diagnosis is the basis of any improvement

Better information on student learning outcomes is the first step to **improve teaching** and learning for all:

- ➡ Provide evidence for national and institutional policy and practice
- ➡ Equip institutions with the method and tools to improve teaching

… Shaping the future of higher education to address key challenges

Equity

Build fairer higher education systems, promoting success for all

Responsiveness

Better connect higher education and society

Effectiveness

Help students make informed choices to ensure success for all

Impact

Foster international transparency and mobility

AHELO is managed by the OECD IMHE Programme

Institutional Management in Higher Education

A network of 246 members from 48 countries

HEIs, government and agencies

Policy analyses and services to members

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Thank you

Diane.Lalancette@oecd.org

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