Comparing higher education outcomes: the OECD AHELO feasibility study

UNESCO-OECD-WORLD BANK GLOBAL FORUM ON RANKINGS AND ACCOUNTABILITY

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AHELO rationale
Key trends in higher education

Massification

- Sustained and substantial growth in participation and graduation over 50 years with further increases to be expected

A valuable investment

- Higher education qualifications have a high and increasing value in terms of lifetime earnings and labour market opportunities

Globalisation

- Growth in numbers of international students
- Increasing competition between providers at national and institutional level

Internationalisation of high-skilled labour market

- The professions and increasingly global and migration of high-skilled labour is to increase
But what do we know about HE quality?

**Impact of the growth of participation in higher education**
- Much more heterogeneous abilities of students than in the past
- More diverse expectations too

**Despite huge progress in quality assurance, institutional quality remains largely unknown**
- Proxies of higher education quality exist, but none are perfect
- Reputation race: highly subjective
- Rankings: biased towards input factors and research excellence
- Labour market outcomes sensitive to conjuncture and local economic conditions

So what? An information vacuum which is filled by available information

Learning outcomes need to be taken into account
- Defining them (Tuning process in Bologna area and beyond)
- Incorporating them in quality assurance (moving from processes to outcomes)
- Measuring them (AHELO)
Overview of the feasibility study
The aims of the feasibility study

Test the science of the assessment

- whether it is possible to devise an assessment as well as associated contextual data which enables reliable statements to be made about the performance/effectiveness of learning in institutions of very different types, and in countries with different cultures and languages

Test the practicality of implementation

- whether it is possible to motivate institutions and students to take part in such an assessment and find solutions to implement such an assessment
To evaluate whether reliable cross-national assessments of HE learning outcomes are **scientifically possible** and whether their implementation is feasible.

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

Better information on learning outcomes will be valuable and the study will assist countries to decide on the next steps.

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

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

Establishment of frameworks that guide international expert committees charged with instrument development in the assessment areas.
AHELO: 4 strands of work

Discipline strand in Economics

Exploring the feasibility of measuring LO in 2 contrasted disciplines to prove concept

Discipline strand in Engineering

Generic skills strand

Critical to strive in 21st Century knowledge societies

Research-based “Value-added” or “Learning gain” measurement strand

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

3 assessment instruments

1. Generic Skills

Discipline-specific skills:

2. Engineering

3. Economics

3 contextual surveys

Contextual indicators to put performance in perspective and better understand teaching and learning processes in HE

1. Student survey
2. Faculty survey
3. Institution survey
Work to be undertaken in 2 phases

Jan 2010 - Apr 2011
- 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

Mar 2011 - Dec 2012
- Phase 2 - Scientific feasibility & proof of practicality
  - Implementation
    - Contextual dimension surveys
    - Project management, survey operations and analyses of results
A range of geographic, linguistic and cultural backgrounds involved

Observer: Saudi Arabia
Challenges
Assessing 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 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?
Initial insights
The Generic Skills Strand

The CLA Performance Task (PT) concept

• 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, …

  and to assess the confidence of various sources (e.g. scientific evidence vs. rumour, misinterpreted data etc.)
The Generic Skills Strand – Initial feasibility insights

- 2 selected PTs considered suitable to the range of countries
- Initial adaptation proved superficial only (names, city/government structures, date ordering)
- Smooth translation process but new adaptation issues discovered
- PTs functioned as anticipated in cognitive workshops and can be considered valid. Subsequent edits of PTs to foster understanding
- Cognitive workshops pointed to issues for longer-term work:
  - PT concept less familiar in some countries: need to provide students with exemplary mini-PT + model answer ahead of test
  - address possible variation in the perceived confidence level of documents provided depending on national contexts

More to come…
The Discipline Strands - Status

ETS in charge of instrument development for ECO

ACER, NIER and Florence School of Engineering in charge of instrument development for ENG

Current status

- TUNING-AHELO frameworks of expected learning outcomes used as a basis
- Draft assessment frameworks and instruments ready
  - Mix of open-ended and multiple choice questions covering a range of economics/engineering skills
- Translation and Adaptation process starting
  - Dual translation + reconciliation
- Training of national teams for focus groups with students
The Discipline Strands – Initial feasibility insights

Insight from development of assessment frameworks and instruments

- Process involving faculties in the related disciplines
- No major hurdles in finding agreement on expected learning outcomes (TUNING-AHELO) in the selected disciplines
- It has been possible to reach agreement on provisional assessment frameworks and test items across a range of diverse countries

More insight to come from the focus groups
The Contextual dimension – 3 surveys

CHEPS and CPR in charge of framework and instrument development

Dual goal of contextual data

- Better interpret resulting learning outcomes measures
  - Comparing like with like

- Explore the “black box” of teaching and learning in HE
  - Psychometric analyses combining performance data and context variables
  - Find out what works, for whom, in which context?
The Contextual dimension – 3 surveys

3 Context instruments to be administered alongside the assessments to

- **Students (10 minutes)**
  - Demographic profile of students (age, gender, disadvantaged groups, or socio-economic status…)
  - Practices in teaching and learning (perceptions of academic challenge, clear sense of direction, quality of effort, student-faculty relationship…)

- **Faculties (10 minutes)**
  - Curricular design and pedagogy philosophies (curriculum reforms integrating application and problem solving skills, expectations for teaching practices…)
  - Alternative instructional settings (workplace placements or internships, simulations or problem-based learning…)

- **Institutions (10 minutes)**
  - Institution characteristics (size, curriculum structure, facilities, financial resources, teaching staff, student body…)
  - Institution type (research emphasis, incentives for teaching, teaching/assessment culture, emphasis on generic outcomes…)

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The longer-term potential
Next steps

**Phase 1 - Initial proof of concept**
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  - Generic Skills Framework
  - Economics Framework
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- Instrument development & small-scale validation
  - Generic Skills Instrument
  - Economics Instrument
  - Engineering Instrument

**Phase 2 - Scientific feasibility & proof of practicality**
- Implementation
  - Contextual dimension surveys
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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
Thank you!

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