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➔ Lessons from instrument development

We are a little less than half way through the feasibility study, and **there are genuine indications that AHELO is feasible**. Firm scientific and practical foundations have been established for the implementation phase of the feasibility study, and more broadly for a full-scale AHELO. Key technical and operational parameters, opportunities and constraints have also been clarified.

AHELO intends to measure above content knowledge. The feasibility study focuses on three different strands of work, with three distinct sets of instruments: generic skills and two disciplines (economics and engineering). **Instruments have now been developed for all three strands.**

The international adaptation of the CLA used for the generic skills strand has been validated by students in different participating countries through a series of cognitive labs.

The draft assessment frameworks and instruments for engineering and economics have been validated by groups of international experts. These instruments are now being tested by focus groups of students in the countries involved in these disciplinary strands.

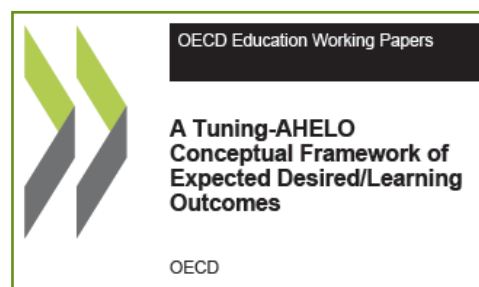
Obtaining agreement on assessment frameworks and instruments (that is, what we

aim to test in an AHELO and the actual test items) is an achievement in itself. Given the great diversity of curricula in higher education, one of the chief challenges of the feasibility study was to gauge whether a test could be developed at disciplinary level.

The inclusion of the economics strand helped explore whether agreement was also possible in a social science. Progress to date suggests that this is indeed the case.

The preliminary work by the AHELO-TUNING expert groups which fed into the disciplinary instrument development has been released as OECD EDU Working Papers.

- Download the AHELO Tuning reports for free: [economics](#); [engineering](#)



The instruments

In each strand, the assessment instrument contains a different mix of performance tasks (that is, contextualised open questions) and multiple choice questions. If the feasibility study results lead to the launch of an AHELO main study, we will then know more about the ideal balance of the types of question items.

Generic skills

90 minute assessment asking students to respond to one of 2 **Performance Tasks** adapted for AHELO based on the [CLA model](#).

The performance task requires students to use an integrated set of skills - including critical thinking, analytic reasoning, problem solving and written communication - to answer several open-ended questions about a hypothetical but realistic situation. To respond to this performance task, students also need to collect evidence from different sources (e.g. letters, memos, summaries of research reports, maps, diagrams, tables, ...), to assess the confidence of various sources (e.g. scientific evidence vs. rumour, misinterpreted data...), to make a reasoned judgment and to write up their arguments to support their position.

Assessing

Critical thinking

Analytic reasoning

Problem solving

Communication

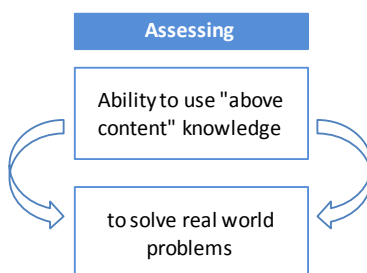
Economics

90 minute assessment containing **one complex performance task** (30 minutes) and approximately **45 multiple choice questions** (60 minutes).

Both task types avoid prompting students to simply recall factual knowledge and instead focus on 'above content' skills. The emphasis is on students' ability to use the 'language of economics' to solve real-world problems. Indeed, an examination of university curriculum around the world shows a general agreement on the kinds of courses that help one acquire the 'language of economics'. The real world of Economics requires strong technical skills, an understanding of environmental, social and political contexts, as well as highly developed communication skills.

The test therefore involves students to demonstrate that they know and understand basic economics concepts, can apply these concepts, can use appropriate statistical and non-statistical tools to evaluate issues, can analyse data, draw conclusions, and can communicate results and policy recommendations to a range of audiences.

Over the last year the Educational Testing Services ([ETS](#)) in Princeton, New Jersey has led the development of the Economics Framework and Economics Assessment.



Engineering

2 performance tasks, each requiring 30 minutes to complete, and **20 multiple choice questions**, together requiring another 30 minutes to complete.

The Engineering Framework and Assessment are being developed by a consortium of international organisations led by the Australian Council for Educational Research ([ACER](#)) and including Japan's National Institute for Educational Policy Research ([NIER](#)) and a European network of engineers ([Eugene](#)) managed by the University of Florence in Italy.

The tasks have been carefully constructed to have sound technical and practical characteristics. The performance tasks present an authentic engineering scenario or design in a specific context and provide students with a set of questions related to that context. They aim to engage students with interesting, innovative, real-world situations that arise in the profession of civil engineering. They have been developed to allow students to demonstrate innovative thinking.

Multiple choice questions focus on basic engineering science. They have been included to provide a fast and efficient way to collect data on students' engineering knowledge, understanding and skills.

Like in economics, the test is designed to measure students' ability to use the 'language of engineering' and display the non-technical competencies that professional engineers must possess.

Find out more on our website:
<http://bit.ly/jRQtEP>

→ Encouraging initial feedback from students

Prior to the field implementation of the tests in the universities and other institutions participating in the feasibility study, the instruments undergo a “**small-scale validation**” by a small group of students.

Small scale validation		
Genericskills	Economics	Engineering
one cognitive lab per country	focus groups in participating institutions	

In a **cognitive lab**, a student works through an assessment and, while doing so, verbalises his or her thinking. These labs were designed to ensure that the performance task translations from English into each country’s language: i) did not alter the constructs measured, ii) were interpreted by the students in the ways originally intended; and iii) were not more difficult for the country’s students to read and understand than they would have been if the tasks had been written originally in the country’s language.

Countries as different as Finland, Korea, Kuwait, Mexico and Norway conducted cognitive labs with between six and thirteen college students. Some countries offered monetary incentives (15 to 50 euros) to students to participate, while other countries did not need incentives to recruit students. The country teams found the cognitive labs to be useful tools in gauging the accuracy of performance task translations.

This qualitative testing also identified cultural issues that need to be addressed in an AHELO main study (perceived reliability of information sources, students’ familiarity with performance tasks)

The countries participating in the economics and engineering strands will be holding **focus groups** in the next few weeks. The students in the focus groups will complete assessment tasks and then discuss their experience of doing the tasks. Initial feedback suggests that the authentic scenario tasks that have been developed stimulate students’ interest in the tasks and are engaging.

It is interesting to note that student interest in AHELO has been sparked in another way. At least two PhD theses have been launched as a result of the generic skills strand study in the USA (University of Colorado) and in Finland. The US-based thesis will document lessons learned from this study in more detail. The Finland-based thesis will extend the use of the performance assessment approach to disciplines.

Feedback from Australia’s focus groups

Because materials have not required translation in Australia, many of the focus groups are now complete. Australia is participating in AHELO’s engineering strand, and feedback from participating students has been highly positive.

Assessment materials comprise both constructed response tasks, which require students to respond to a range of stimuli in order to present solutions to authentic problems, and multiple choice questions. Feedback from some Australian students are set out below.

Constructed response task:

“It’s a realistic problem which made me think and understand that the knowledge I learned from university is being applied in the real world”

“Interesting question which challenges people to think. A real situation for real application was interesting”

“It is a real project - I may meet the same problem in my future career. It was challenging for me”

Multiple choice items:

“It was a very comprehensive summary of most things related to civil and structural engineering. Personally good to revise”

“Interesting and challenging questions. Have to think critically and apply the skills learnt in past four years. Very relevant to my program”

“The task covered a broad range of knowledge”

➔ From diagnosis to treatment: why the context data is essential

A range of different tools can be used for diagnosis of higher education quality. Rankings are a popular proxy, although they tend to be based on available data and hence ignore teaching and learning. AHELO seeks to measure learning outcomes across cultures and languages as well as diverse institutional settings and missions. To that extent, AHELO has scope for improving the information basis and diagnosis on teaching and learning quality. But AHELO will go even further, beyond diagnosis into treatment. The reason lies in the contextual data collected along with measures of learning outcomes.

Many variables influence student performance including student background, initial knowledge and skill, programme design, student effort, teaching resources, practices and teaching quality. All **students, faculty and institutions** participating in AHELO will complete a brief **10-minute contextual questionnaire** to gather context information on these types of input and process variables. AHELO's explicit focus on learner outcomes examines the net learning effect of all the variables operating together. This allows the attained level of achievement to be assessed and recorded (such as grades on student transcripts), and evaluates of how well the teaching and learning system is working.



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A consortium led by the Australian Council for Educational Research ([ACER](#)) and incorporating the Centre for Higher Education Policy Studies ([CHEPS](#)) and the Center for Postsecondary Research ([CPR](#)) has started to develop these questionnaires.

How this will help

With the combination of context data and learning outcomes performance measures, it will be possible to analyse what is distinctive of high-performing institutions (whether in terms of absolute performance, in helping disadvantaged students to complete their studies successfully, or in supporting other specific groups of students such as working or international students) and to identify best practice for each type of goal mission. In doing so, AHELO will contribute to moving from diagnosis to treatment and improvement. Eventually **it will help identify what works, for which students and in which contexts**. There is huge potential for reducing drop out rates and enhancing more equitable outcomes.

This is an essential aspect of AHELO if one recalls that on average, **3 out of 10 students entering higher education will drop out without a degree** in the OECD. With an average of 53 000 \$ spent per higher education student, the costs of failure are great. The social costs for those dropping out are equally high. Students from disadvantaged backgrounds and first generation students suffer more than anyone else, thereby fostering inequity. There is a growing need to ensure that higher education delivers the right set of skills which allow all students to thrive and graduate.

- Download the contextual dimension [draft framework*](#)
**preliminary version*

Find out more on our website:
<http://bit.ly/jRQtEP>

→ AHELO and Egypt in the Post-Tahrir Era

By Prof. Dr. Ibrahim Shehatta
Director of Egyptian National Center for Measurement & Evaluation Project
Egyptian National Project Manager - AHELO



Egypt, the country of 7000 years of civilization, has long been the chief supplier of civilization, knowledge and higher education graduates in various disciplines to the international and MENA Region labor market. Egyptian Higher Education institutions were also ranked among the well reputed MENA institutions in European & American Continents during the 19th and early 20th Centuries. However, several sociopolitical factors had interacted to alter this in the late 20th century. As a result, Egyptian graduates started to experience some difficulties to become competitive both locally as well as in the MENA and international labor markets.

These difficulties were manifested by the latest independent review by the World Bank and the Organisation for Economic Co-operation and Development (OECD). This review pointed out that Egypt was ranked as the 65th out of 128 countries in the Global Competitiveness Index in 2007. Moreover, the inadequately educated workforce represented the third most serious problem identified in Egypt in higher education following the financial inaccessibility and bureaucratic inefficiency. Accordingly, university graduates were found to experience the highest unemployment rates in the Egyptian labor market during the period between 1998 and 2006. Despite these observations, Egypt showed relatively good performance being the 4th among the 48 countries at the same stage of development regarding Global Competitiveness Index.

The report recommended some improvement actions including exploring and clarifying the expected capabilities of graduates as well as improving the balance of graduate output to fit labor market needs. Such recommended actions were anticipated to improve Egypt's competitiveness in the global knowledge-based economy, provide good chances of education for a larger and more diversified student population, reduce social inequalities in educational opportunity, improve the decreased quality of educational inputs and processes and bridge the gap and imbalances in graduate output relative to labour market requirements.

The dissatisfaction expressed in the abovementioned report conflicts with the great history of civilization of Egypt and its central global and regional role. Therefore, the Egyptian government has conducted extensive studies to analyze the situation, define the solutions and adopt reform projects. In this context, participation in the AHELO pilot study offers Egyptian Higher Education Institutions the opportunity to assess their graduates' outcomes on an international basis. Being focused on the teaching and learning processes, in addition to the affecting contextual factors, the study will help the institutions to enhance the quality of the services they provide as well as to achieve a global educational preparation.

The Egyptian Management Team of AHELO project has perceived the following potential benefits of joining the feasibility study:

- Assessing the HEIs performance of students with a shift towards outcomes, rather than inputs.
- Providing better information for students, employers and parents that can help them choosing the appropriate HEI as well as evaluating the quality of educational effectiveness.
- Developing the assessment capabilities of the participating institutions
- Strengthening self-assessment processes and external assessment of educational programs to improve the quality of graduates.

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- Exploring assessment methodological alternatives on the international level.
- Providing a checkpoint for the efforts of Egypt's Higher Education Authorities as providers of quality in Higher Education.
- Increasing Egypt's reserve of experiences, methodologies and instruments of assessment of higher education.

Conclusively, it is hoped that Egypt's participation in the AHELO project will provide the database to improve the quality of teaching and learning and to enhance policy and program development towards bridging the gap between National and International Education and the mismatch between the supply and the demand of the national and regional labor market.

AHELO and Egypt in the post January 2011 era:

In light of the inspiring 25th January revolution, Egyptian people have expressed greater demands for more effective reform and development efforts in all life aspects particularly education. Moreover, people have great expectations for better service quality in the post revolution era. Such expectations can be met by a ground breaking reform project like AHELO. This growing interest is reflected at different levels.

At the level of policy makers, the Egyptian Military Council has announced full commitment to all international agreements as evidence of respect and compliance to international rules & regulations. Moreover, the present Minister of Higher Education, Professor Amro Salama, has given full support to the Project team and is fully convinced with its aims, outcomes and positive impact on the Higher Education Reform process

At the level of students, faculty & community at large, the new era of democracy and transparency is in harmony with concepts like self-assessment and developments that AHELO targets. Furthermore, being motivated towards building a developed country in Egypt, institutions and students are expected to show markedly better contribution to AHELO

Despite being enthusiastic and motivated, the project management team is fully aware of the possible challenges and difficulties posed by the rapid and radical changes that are involving the whole Egyptian community. One major challenge is the economic "slowing", a phenomenon commonly associated with revolutions which is expected to last for some time. A second major challenge is related to the possible changes in higher institutional leadership and management boards. Both challenges might alter the schedule of synchronized implementation of the assessment tools with other participating countries. However, the zeal, spirit and great will created by January revolution as well as the enthusiasm and motivation of many individuals who are working in and with the project team provide a substantial driving force to overcome such challenges. We are sure that our great country Egypt will lead the education reform efforts in the MENA region as the history says.

Finally, the support and flexibility of AHELO Project consortium and OECD is also highly expected and valued at this juncture to help the success of AHELO implementation in a leading MENA country like Egypt.



→ In the News: AHELO and the rankings debate

Current rankings are based on available data, hence focused on inputs and research performance. Although the nature and objectives of AHELO are not to develop a new ranking or league table, AHELO data will allow a much more accurate assessment of higher education quality, focusing on one of the key missions of institutions: TEACHING. AHELO will bring another dimension to rankings by providing an accurate measure of learning outcomes. Hence the frequent mention of AHELO in the rankings debate, as illustrated in recent media coverage.

“Is AHELO just another ranking?”

- The short answer is “no”, for the full answer see our [FAQ web page](#)

Read the blogs

[Measuring learning in a global marketplace](#), by Ben Wildavsky (Education Today)

[AHELO: Telling you what you need to know about higher education outcomes](#) (OECD Insight)

[Rankings are not a disease, they are a symptom](#), by Richard Yelland (Education Today)

Read the articles

[Mapping the plateaux as well as the peaks](#), by Dirk van Damme (Head of OECD-CERI)

[Collaboration may not measure up in competitive 'alpha-male' rankings](#), by John Morgan

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More articles on:
www.oecd.org/edu/ahelo/media

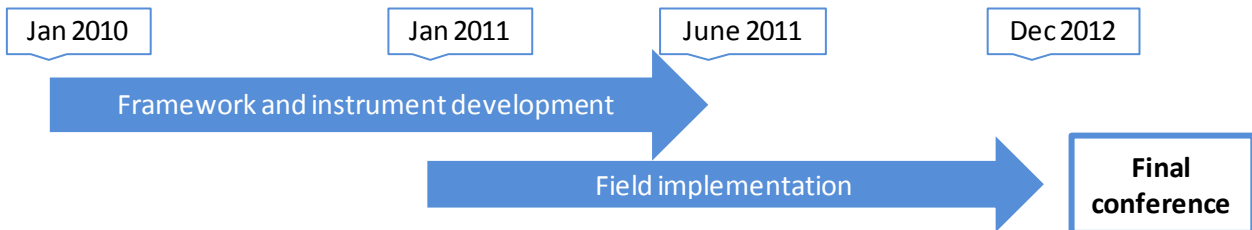
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→ Next steps

The planned next phase of the feasibility study will implement the AHELO assessments and contextual surveys to larger groups of students to explore and gauge the scientific and practical feasibility of an AHELO: sampling students, response rates, scoring of open questions consistently across countries, bias analyses, psychometric performance and properties of test, etc.



→ Find out more:


- [Brochure](#)
- [Detailed Project Update](#)
- [Essential documents](#)

- Website: www.oecd.org/edu/ahelo

- @ Contact us: ahelo@oecd.org



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