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EDU/PISA/GB/SDG(2010)8



Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development

10-Jun-2010

English - Or. English

**DIRECTORATE FOR EDUCATION
PROGRAMME FOR INTERNATIONAL STUDENT ASSESSMENT GOVERNING BOARD**

**EDU/PISA/GB/SDG(2010)8
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PISA Strategic Development Group

**STATEMENT OF THE STRATEGIC DEVELOPMENT GROUP ON BEHALF OF THE PISA
GOVERNING BOARD REGARDING CISCO-INTEL-MICROSOFT, ATC21S AND PISA**

**London, United Kingdom
13-14 June 2010**

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JT03285259

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English - Or. English

STATEMENT OF THE STRATEGIC DEVELOPMENT GROUP ON BEHALF OF THE PISA GOVERNING BOARD REGARDING CISCO-INTEL-MICROSOFT, ATC21S AND PISA

Current Situation: The PGB has stated its intention to continue the move toward computer based assessments in the future. The Board has also stated its intention of expanding the domains that PISA assesses regularly (reading literacy, mathematics literacy and science literacy) especially into problem solving, including collaborative problem solving. Both of these prospects present the board with methodological (measurement), technical (software and hardware) and logistical (school burden and co-operation) challenges. The Annex contains a progress report from the ATC21S team.

Goal: The primary need of the PGB is the development of a stable computer delivery platform that can be used with future PISA computer based assessment. To that end the PGB would like to be able to access and be facilitated in working with technical experts at Cisco-Intel-Microsoft to address the technological challenges computer based assessments present.

The PGB welcomes the joint development of methodologies and measurement models to accommodate the scoring, scaling and reporting of the skill domains outlined by ATC21S for the large scale multi-national assessment that is PISA, and the development of the skill areas outlined in the ATC21S working paper on 21st Century Skills to define the domains in a way that make them measurable and reportable in a large scale assessment, namely PISA. **However, the PGB views these aspects of collaboration of much lower priority than the application of the technical expertise of Cisco-Intel-Microsoft in developing a flexible, stable computer delivery platform.**

ANNEX- ATC21S PROGRESS REPORT

PISA GB

Wednesday, 14 April 2010
8:23 AM



Summary Report to the PISA Governing Board

April 11, 2010.

ATC21S Project Goals

- To define 21st century skills and develop ways to measure them using technology
- To address the pedagogical implications of these definitions and measures and provide evidence on how the skills can best be developed through education.
- To identify whether the availability of clear definitions of 21st century skills and the capacity to measure students' development of them facilitates their teaching and learning

Process

Throughout 2009, working parties worked on the conceptualization of the ATC21S skills and produced a series of White papers (www.atc21s.org). Following an executive Board meeting in London in January 2010, three skills were identified for development to operational stage as prototype examples of the goals of the project. Definitions of the 21st Century Skills were offered in the White Paper on 21st Century Skills. Those definitions required further development, to be accompanied by formulation of hypotheses concerning the nature and characteristics of the developmental learning continua associated with each of the skills. To achieve this outcome, three Expert Panels were established.

A Meeting was held in Paris in Mid March 2010. Its purpose was to establish the operational definitions of the three (skills) domains (problem-solving, collaborative problem-solving, and ICT literacy), and to initiate the process.

ATC21S Project Goals

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process of establishing developmental learning progressions along which assessment tasks will be created.

Progress summary

- In 2009, the ATC21S project was focused on the development of five White Papers (which were included in the Meeting Materials). These papers should have been a framework for the three Panels' development work in Paris.
- In January, 2010, the Executive Board approved the focus on three domain areas (problem-solving, collaboration, and ICT literacy) for development work in 2010-2011.
- The constitution of Panels for each of the domain areas may vary over the 2010-2011 time period

as the nature of the task changes. In view of this variation, the current Panel Members were invited to contribute to the development and definition of the domain areas. It was anticipated that some Panel members would remain with the Panels through the next stage of item and task development. As the project takes on a more developmental and operational emphasis the composition of the panels may alter.

Panels

- The problem solving panel was headed by Beno Csapo. The collaborative problem-solving panel was co-led for the first phase by Eckhard Klieme and Friedrich Hesse. The ICT literacy panel was headed by John Ainley.

Procedures

- The approach to assessment in ATC21S is broad. It could encompass tests, complex tasks and classroom-based assessments. It is concerned with formative as well as summative assessment. It will seek deep understanding of students' performances and development in evidence from classrooms. This assessment approach will dictate how the domain areas must be conceptualised, and defined. The work of the Expert Panels must take these parameters into consideration as they develop the theoretical description of their respective skill domains.

Output

- At the end of the meeting, Panel leaders reported on the work achieved. All three panel leaders reported on the developmental learning progression. They then undertook to prepare a draft report by April 26th on the list of issues above,

Panel Membership

Problem Solving	Collaborative Problem Solving	ICT Literacy
<i>Lead: Beno Csapo</i>	<i>Co-lead: Eckhard Klieme Co-lead: Friedrich Hesse</i>	<i>Lead: John Ainley</i>
Philip Adey	Martin Ripley	Kathleen Scalise
Jarkko Hautamaki	Marlene Scardamalia	Peter Pirolli
Terezinha Nunes	Kurt Vanlehn	Jean-Paul Reeffer
Patrick Griffin (Psych)	Esther Care (Psych)	Mark Wilson (Psych)

A fourth panel was formed to advise on specifications. This paper will be prepared by the psychometricians assigned to each of the expert panels.

Panel Tasks

Each Panel was responsible for:

- Final definitions and hypotheses
- Reporting on issues and developments in the literature
- Identifying existing task banks that may yield suitable materials for development
- Identifying gaps in existing materials that will need to be developed
- Advising on possible development agencies and personnel

Output

A small number of prototypical assessment tasks that meet the following criteria for each skill domain.

The tasks will....

1. allow students to be monitored over the levels of the developmental progression;
2. be innovative and not replicate PISA items on problem solving or the IEA ICT Literacy items;
3. be technology-based and allow both formative assessment for teachers and scale application in

- survey assessment;
- 4. use the technology to enable the tasks to be scored / coded automatically;
- 5. If approved for trial as a PISA national option in 2012 and IEA option in 2013 the tasks will...
 - i. be complementary to the PISA/IEA assessments and added after the PISA assessments have been completed;
 - ii. not replace other national options of the PISA assessments;
 - iii. be offered in the first instance, to the ATC21S founder countries as a national option additional to PISA

Patrick Griffin
Executive Director ATC21S project.