

# The Transition to Computer-Based Assessment

## Lessons learned from the PISA 2006 Computer Based Assessment of Science (CBAS) and implications for large scale testing

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Organised by:

The Educational Testing Institute, Reykjavik, Iceland  
and  
European Commission - Joint Research Centre (IPSC),  
Centre for Research on Lifelong Learning (CRELL)

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The workshop will be held in Reykjavik, Iceland on September 29<sup>th</sup> and 30<sup>th</sup> 2008, at the Grand Hotel Reykjavik.

The main themes of the workshop are:

1. Comparison between paper and pencil tests and computer based assessment
2. Electronic tests and gender differences
3. Adaptive vs. linear computer-based assessment.

A number of invited high-level experts in both computer based assessment and traditional assessment will come together in order to discuss relevant research along the workshop themes and experiences which are mainly from the PISA 2006 Computer-Based Assessment of Science (CBAS). Participation is open to the public and any interested person can register for the workshop.



# Programme

Monday, September 29<sup>th</sup>

09:00 Welcome by the Icelandic Ministry of Education

09:15 *Nathan Thompson & David Weiss* (Assessment Systems Corporation, USA):  
**Computerized and Adaptive Testing in Educational Assessment**

10.15 Coffee

10:30 **National experiences with computer-based assessment**

- *Brent Bridgeman* (ETS, USA): Experiences from large scale computer based testing in the USA
- *Jakob Wandall* (Ministry of Education, Denmark): The new Danish National Test

12:00 Lunch

13:00 **The European agenda on international large-scale surveys**

- *Oyvind Bjerkestrand* (European Commission): The European Coherent Framework of Indicators and Benchmarks and implications for computer-based assessment
- *Jostein Ryssevik* (SurveyLang): Large-scale computer-based testing of foreign language skills across Europe – requirements and implementation
- *Ernesto Villalba* (JRC, IPSC): Computer-based assessment and the measurement of creativity in education

14:30 **Shifting to computer-based assessment**

- *Vesna Busko* (University of Zagreb, Croatia): Shifting from Paper-and-Pencil to Computer-based testing: advantages/disadvantages, consequences for testing outcomes
- *Sam Haldane and Ron Martin* (ACER, Australia): Delivery platforms for national and international computer-based surveys: history, issues and current status
- *Thibaud Latour* (Centre de Recherche Public Henri Tudor, Luxemburg): Shifting from Paper-and-Pencil testing : An economic model of Return on Investment (ROI)

16:00 Coffee

16:15 **Experiences with the transition to computer-based assessment**

- *Benő Csapó, Gyongyver Molnar & Krisztina R. Toth* (University of Szeged, Hungary): Comparing paper-and-pencil and online assessment of reasoning skills - a pilot study for introducing TAO in large-scale assessments in Hungary
- *Eli Moe* (Aksis, Unifob, Norway): Introducing large scale computer-based testing of English - experiences and future challenges
- *Heiko Sibberns* (IEA-DPC, Germany): Experiences with moving to computer-based testing: test preparation and field operations in two computer based assessment tests

17:45 Review of main results

18:30 Reception for all participants at the invitation of the Icelandic Ministry of Education

Tuesday, September 30<sup>th</sup>

09:00 **CBAS assessment and lessons learned with national representatives from Iceland, Denmark and Korea**

- *Mee-Kyeong Lee*, Korea Institute of Curriculum & Evaluation, Korea
- *Julius Björnsson*, Educational Testing Institute, Iceland
- *Helene Sørensen*, (Aarhus University, Denmark): How do Danish student solve the CBAS items? Looking at right and wrong answers from a gender perspective

10:00 *Benő Csapó* (University of Szeged, Hungary): What is planned in PISA: The ERA component of PISA 2009 and plans for PISA 2012

10:15 Round table discussion: conclusions for future PISA surveys and international computer-based surveys

10.45 Coffee

11:00 **CBAS and comparison of traditional and electronic testing: What are the differences?**

- *Gerben van Lent* (ETS-Europe, Netherlands): Risks and benefits of computer-based testing versus paper-and-pencil
- *Martin Ripley* (Independent consultant, UK): Innovation versus migration
- *Oliver Wilhelm* (IQB, Germany): Traditional and Computerized Ability Measurement: Stressing Equivalence versus Exploiting Opportunities

12:30 Lunch

13:30 **CBAS and comparison of traditional and electronic testing: Gender issues**

- *Romain Martin* (University of Luxemburg, Luxemburg): Gender differences in reading literacy - a consequence of girls' preference for the information presentation formats used in paper and pencil tests?
- *Almar M. Halldorsson* (Educational Testing Institute, Iceland): Are Icelandic boys really better on computerized tests than conventional ones?
- *Martin Ripley* (Consultant, UK): Gender effects in computer-based testing

15.00 Coffee

15.15 **The future of electronic testing: trends, difficulties, obstacles to overcome, technical solutions and research needs**

- *Ron Martin* (ACER, Australia): Utilising the full potential of computer delivered surveys in assessing the aims of science teaching
- *Theo Eggen* (CITO, Netherlands): Computer-adaptive testing of basic skills in arithmetic/mathematics for teacher training
- *Patrik Kyllonen* (ETS, USA): Computer-based assessment of background variables
- *Denise Whitelock* (Open University, UK): Large scale testing : past benefits and new opportunities for PISA

17:00 Conclusions

17:30 Final comments by the Educational Testing Institute, the JRC and the OECD

Wednesday, October 1st

## **The new Icelandic National Testing programme**

This is an extra meeting about the newly proposed Icelandic CBA testing programme, which will be held at the Educational Testing Institute. Both theoretical and practical issues will be covered. All attendees of the main workshop are welcome to join this meeting. The main purpose of the meeting is to go over the main points of the current Icelandic testing programme, outline the requirements for changing over to electronic tests, preferably adaptive testing and stimulate a practical discussion of all these issues.

09.00 Introduction – Agenda and purpose of the meeting

09.15 A short introduction to the Icelandic National Tests, - history and recent developments

10.00 Coffee

10.30 The proposal for changing over to electronic testing

11.30 Discussion

12.00 Lunch

13.00 Requirements of the new testing programme: What needs to be done?

14.00 Hardware and software requirements – introduction to the TAO system. What needs to be adapted changed and adapted?

15.00 General discussion – problems and solutions

16.00 Final comments and farewell

The meeting will be held at the Educational Testing Institute, Borgartun 7a, ground floor.

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Further details about the workshop, documentation and proceedings will be provided at:

<http://crell.jrc.ec.europa.eu/>

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