

TIMSS Advanced 2008

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49th IEA General Assembly

Berlin, 6-9 October, 2008

TIMSS Advanced

- Assesses school-leaving students with special preparation in
 - Advanced mathematics
 - Physics
- First administered in 1995
 - Trends 1995, 2008
 - Baseline data for new countries

Countries Participating

- Armenia
- Italy
- Iran
- Lebanon
- Netherlands
- Norway
- Philippines
- Russian Federation
- Slovenia
- Sweden

Major Accomplishment

Since last General Assembly:

Completed Data Collection!

TIMSS Advanced Coordinators - Same as in 1995

- Bob Garden – Coordinator, Advanced Mathematics
- Svein Lie – Coordinator, Physics
- Substantial development support from Norway

TIMSS Advanced Assessment Specialists

- Staff at TIMSS & PIRLS ISC
 - Content/measurement experience
 - Production/graphics experience
- IEA Secretariat and DPC
- Statistics Canada
- NRCs – National Research Coordinators
 - Knowledgeable and experienced

Advanced Mathematics Domains

Content	Percentages
Algebra	35%
Calculus	35%
Geometry	30%
Cognitive	
Knowing	35%
Applying	35%
Reasoning	30%

Physics Domains

Content	Percentages
Mechanics	30%
Electricity and Magnetism	30%
Heat and Temperature	20%
Atomic and Nuclear Physics	20%
Cognitive	
Knowing	30%
Applying	40%
Reasoning	30%

Scope of Assessment

- Total assessment time – 7 hours
- Each subject - assessment time
 - 3 hours, 30 minutes
 - 7 30-minute blocks
 - 3 trend blocks, 4 new blocks
- Each student
 - One 90-minute booklet of 3 blocks
- 8 booklets in total – 4 per subject

Questionnaires

- Student Questionnaires
 - Advanced mathematics
 - Physics
- Teacher
 - Advanced mathematics
 - Physics
- School
- Curriculum (adv. math. and physics)

Sampling Designs

- Non-overlapping schools
 - Separate school samples for advanced mathematics and physics
 - Each subject: 120 schools; 2,000 students
 - Total: 240 schools; 4,000 students
- Overlapping schools
 - Essentially same school sample for advanced mathematics and physics
 - Students: half mathematics, half physics
 - 120 schools; 4,000 students

Major Activity – Preparing for Data Collection

- Procedural manuals for instrument preparation and data collection
- Software for within-school sampling (WinW3S) and data entry and validation (WinDEM)
- Training for International Quality Control Monitors
 - IEA Secretariat and TIMSS & PIRLS International Study Center
 - November 2007, Amsterdam

Major Activity – Translation and Layout Verification

- Translation verification
 - Conducted by IEA Secretariat, using professional translation company
 - 13 instruments; 10 countries; 11 languages
- Layout verification
 - Conducted by TIMSS & PIRLS International Study Center
 - Completed March 2008

Major Activity - Scoring Training

- Task force met to revise and finalize scoring guides and training materials
 - Oslo, September 2007
- Scoring guides and training materials posted on website
 - January 2008
- 5th NRC meeting to conduct scoring training
 - Portoroz, Slovenia; January 2008

Major Activity – Data Collection

***** February – May 2008 *****

Major Activity – Data Processing and Checking

- 3 completed, at TIMSS & PIRLS ISC
- 6 in process at the IEA DPC

Major Activity – Preparing for Scaling and Reporting

- Established baseline for 1995
 - Rescaled 1995 data using current TIMSS scaling model
- Programming preparations for 2008 scaling – 15 achievement scales
- Review Report exhibits, with data
 - 6th NRC meeting, January 2009, University of Twente

Major Activity – International Report

- Sampling adjudication – January 2009
- Scaling and scale anchoring – April 2009
- Data exhibits complete – June 2009
- Draft International Report – July 2009
- Review International Report – August 2009
- Print and distribute Report – November 2009
- Release Report – Oslo, December 1, 2009

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