

TIMSS Advanced 2008

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Hong Kong SAR, 8-11 October, 2007

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

Major Accomplishment

Since Last General Assembly:

**Conducted Field Test and
Completed Instrument
Development!**

Countries Participating

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

TIMSS Advanced Coordinators - Same as in 1995

- Bob Garden – Coordinator, Advanced Mathematics
- Svein Lie – Coordinator, Physics
- Substantial Development Support from Norway
 - Liv Sissel Gronmo, NRC

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

Scope of Assessment

For Each Subject

- Total 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
- Four Booklets in Total

Questionnaires

- Student Questionnaires
 - Advanced Mathematics
 - Physics
- Teacher
 - Advanced Mathematics
 - Physics
- School
- Curriculum

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%

Sampling

- Predominant Design
 - Separate School Samples for Advanced Mathematics and Physics
 - Each Subject: 120 Schools; 2,000 Students
- Also Popular
 - Same School Sample for Advanced Mathematics and Physics
 - Assessment Booklets Rotated in Classes
 - 120 Schools; 4,000 Students

Overview of Year's Activities: Finalized Field-test Instruments

- 2nd NRC Meeting for Final Review of Instruments and Procedures
 - Oslo, Norway, November 2006
 - 260 Mathematics and Physics Items
 - School, Teacher, and Student Questionnaires (5)
- Materials for TIMSS Advanced 2008 Field Test Posted on Web
 - 90 Mathematics Items and 90 Physics Items
 - November 2006

Translation and Verification for the Field Test

- Translation and Verification Began
 - November 2006
- Layout and Verification Began
 - December 2006
- Translation Verification and Layout Verification Completed
 - February 2007

Scoring Training for Field Test

- Pilot Test for Scoring Training Materials
 - October-November 2006
- Task Forces Met to Develop Training Materials
 - November-December 2006
- Training Materials Posted on Website
 - January 2007
- 3rd NRC Meeting to Conduct Scoring Training
 - Rome, Italy, February 2007

Conducted Field Test February-March 2007

Advanced Mathematics and Physics

- 180 Items/6 Booklets
- Questionnaires
 - 8 Countries
 - 7,000 Students
 - 450 Teachers
 - 300 Schools

Analyzed and Reviewed Field-test Results

- Mathematics and Physics Field-test Data Processed and Analyzed
 - April-May 2007
- School, Teacher, and Student Questionnaire Data Processed and Analyzed
 - April-May 2007

Analyzed and Reviewed Field-test Results (cont.)

- 4th NRC Meeting to Review and Approve Items and Questionnaires for TIMSS Advanced 2008 Data Collection
 - Lubeck, Germany, June 2007
- Final Instruments Posted on Website
 - July, 2007
 - May be inspected by appointment!

Preparation for Data Collection

- 2nd Task Force Meeting to Prepare Materials for Scoring Training
 - Oslo, Norway, September 2007
- Training Seminar for Quality Control Monitors
 - Amsterdam, November 2007
- Translation and Layout Verification
 - January-March 2008

Data Collection

- 5th NRC Meeting for Scoring Training
 - Portoroz, Slovenia, January 2008

Data Collection February – June 2008

- All Data to DPC
 - September 2008

Addressing Curriculum Coverage

- Curriculum Questionnaire For Each Country
 - TIMSS Topics in Country's Curriculum
- Teacher Questionnaires
 - TIMSS Topics Taught
- Test-Curriculum Matching Analysis
 - Achievement Based on the Items Specially Identified by Each Country as Addressing its Curriculum

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Last Chance to Sign Up!

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