



NEWSLETTER

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The 51st General Assembly was held at the Gaborone International Convention Centre

IN THIS ISSUE

- 1 51st IEA General Assembly meeting
- 2 Upcoming 52nd IEA General Assembly meeting / IEA awards
- 3 Redesign of the IEA website
- 4 Activities in the IEA studies 2010–2011
- 5 Upcoming studies / Use and impact of TIMSS and PIRLS data in the Russian Federation
- 6 European Commission report on education and training
- 8 Recent publications / Upcoming meetings

51ST IEA GENERAL ASSEMBLY MEETING

4–7 OCTOBER 2010, GABORONE, BOTSWANA

The 51st meeting of the IEA General Assembly commenced with a “hearty Botswana welcome” from the Botswana Examinations Council (institutional member of IEA and host of the meeting). This annual meeting brought together a number of General Assembly representatives, committee members, study directors, assessment experts, and officers. In the tradition of so many previous assemblies, IEA Chair Dr Seamus Hegarty and Executive Director Dr Hans Wagemaker called 2010 a “remarkable year” in the progress of IEA’s studies and activities.

Meeting highlights

The busy agenda included reports on the IEA studies (for information about study

activities in 2010–2011, see page 4), as well as updates from the IEA DPC, committees, and finance. It also included presentations on the impact of IEA studies in the Czech Republic, Norway, and Spain, and on linking TIMSS to a national assessment in the United States.

Prof Dr Jack Schwillie was awarded Honorary Membership in recognition of his contributions to several IEA studies including the Six Subject Survey, CIVED, and TEDS-M.

Dr Amita Chudgar and Dr Thomas Luschei received the IEA Richard M. Wolf Memorial Award for 2010 for their article, “National Income, Income Inequality, and the Importance of Schools: A Hierarchical Cross-National Comparison,” published in the *American* >



Educational Research Journal (2009, Vol. 46, No. 3).

Discussion groups on pre-primary education and other possible topics for IEA studies provided representatives an opportunity to generate ideas and reflect on some of the benefits and challenges of a study in pre-primary education. In addition to evaluating new directions for an IEA study, a common theme raised in the discussion was how IEA might expand its existing assessments.

Social activities

Participants and their families were invited to gather and participate in several cultural activities, providing time to exchange experiences and reconnect. Beginning with a festive opening reception on Sunday, the social activities continued on Monday evening with a trip to Botswana Craft to see local handi-

work and memorable performances of traditional dance and music. On Tuesday evening, participants were invited to a formal banquet at Cresta Lodge. Family members of the General Assembly representatives had the opportunity to visit spots of interest in and around Gaborone throughout the week, including a traditional Tswana village re-creation, the Manyana rock paintings, and the Three Dikgosi Monument (also known as the Monument of the Three Chiefs). As is typical of the General Assembly meetings, an excursion was planned for Thursday, taking participants to the Mokolodi Nature Reserve for a glimpse of the beauty and nature of this part of the world. Sightings included giraffes, ostriches, impala, hippos, warthogs, and more! This, too, was followed by music, dance, and a bush braais (barbecue).

IEA would like to extend its gratitude to Dr Serara Moahi, representative for Botswana, and colleagues of the Botswana Examinations Council for their generous assistance in the organization and administration of the meeting. ●

Minutes and presentations from the 51st IEA General Assembly are available at www.iea.nl/51st_ga.html.

Upcoming 52nd IEA General Assembly meeting

**10–13 October 2011
Dublin, Ireland**

For information please contact the IEA Secretariat (department@iea.nl). Minutes and presentations from the 52nd General Assembly will be posted on the IEA website after the meeting.



IEA AWARDS

IEA offers two annual awards to recognize high quality empirical research that makes use of IEA data. These awards were established in 1985 and 2005 to commemorate the significant contributions made to the field of educational research and the association by the late Dr Bruce H. Choppin and Dr Richard M. Wolf, respectively.

The Bruce Choppin award recognizes outstanding master's theses or doctoral dissertations that employ empirical research methods and use IEA data. The Richard Wolf award is given to the author(s) of a paper published in a refereed journal, monograph, or book that includes analysis of data from one or more IEA studies.

The intention of the IEA awards is to encourage and promote outstanding research by graduate students, postgrad-

uates, and established researchers. Both awards are offered annually, with a prize of €500. (However, in any given year, the IEA Awards Committee may decide not to make one or both of the awards.)

2011 Bruce Choppin award winner

IEA is pleased to announce that this year's winner of the IEA Bruce H. Choppin Memorial Award is Dr Chanho Park for his doctoral

dissertation, *A Multilevel IRT Model for Group-Level Diagnostic Assessment with Application to TIMSS*. Dr Park completed his Ph.D. at the University of Wisconsin-Madison in 2008, under the mentorship of Dr Daniel M. Bolt.

Abstract

Educational tests such as TIMSS are developed to compare units above the student level (i.e., countries). This dissertation proposes and investigates a statistical modeling approach based on application of multilevel item response theory (ML-IRT) for group-level diagnosis, which can be used for cross-national comparisons. The model—referred to as the item feature model (IFM)—is first fitted to the TIMSS 2003 Grade 8 mathematics assessment dataset using

a Markov chain Monte Carlo (MCMC) procedure implemented in WinBUGS. The application of the IFM studies the content and cognitive features of items as potential contributors to differential item functioning (DIF) across countries. Application of the IFM to the TIMSS data provides results comparable to the methods already used with TIMSS. However, the current methodology likely more effectively separates the relative effects of the cognitive and content features than the current TIMSS reports based on the distribution of separate proficiencies at the group level. Simulation analyses using conditions similar to those of the TIMSS application reveals that item feature confounding is an important factor to consider when designing and developing a test for diagnostic assessment. Reducing residual variability in item difficulty across

countries and maximizing item feature variability also appear to help the model perform better. Another set of simulation analyses suggest that the results should be interpreted with caution as a basis for concluding the significance of feature effects, as Type I error inflation does occur under some forms of model misspecification. Strengths and limitations of the current modeling approach with future directions of research are also discussed.

Members of the IEA Awards Committee

- Dr Larry Hedges, Northwestern University, Illinois, USA
 - Dr Seamus Hegarty, IEA Chair
 - Chair: Dr David Robitaille, University of British Columbia, Canada
- Additional experts may be added to the committee as required. ●



Dr Chanho Park

The application deadline for the IEA awards is 31 March of each year.

Full details about the entry requirements can be found at www.iea.nl/awards.html.

REDESIGN OF THE IEA WEBSITE

Recent growth in our activities, coupled with greater possibilities for electronic dissemination of the IEA reports and study data, pointed to the need for updating both the content and design of the IEA website. Staff from the IEA Secretariat, in cooperation with the DPC, carried out extensive work this year to renew the IEA website. In August 2011, the new website was launched. The redesign incorporates a number of familiar elements from the original IEA website—such as lists of studies, publications, and members—with a new look and improved functionality. The pages on the website were reorganized with an aim of ‘growing’ with the association and making it easier for visitors to locate relevant information on IEA and its projects—past, present, and future.

Design elements

Each of the nearly 30 completed studies has its own page which includes a description of the study, summaries of



key findings, and a related bibliography, including links for downloading publications that are available in electronic form. The data page directs researchers to the relevant software and to the IEA data repository for downloading data.

A searchable publications database lists over 175 reports and monographs that are related to IEA studies. This list also includes links, wherever possible, for accessing the publications in electronic form.

A dedicated area for the IEA International Research Conference (IRC) provides a description of the conference and pages related to past IRCs, including a list of presented papers that are available for download.

The IEA website also presents a wealth of information on various aspects of the association: its history, membership, meetings (including a meetings calendar and presentations from recent General Assemblies), international committees, awards, and partnerships. Through links to the individual study websites, it provides access to information about study development as well as all contact coordinates for those interested in our association and its operations. ●

The new IEA website was designed by Basia Knobloch, Office for Modern Design & Communication. The website can be viewed at www.iea.nl.

Feedback and comments are welcome (department@iea.nl).

ACTIVITIES IN THE IEA STUDIES 2010–2011

The IEA projects represented a high level of activity in 2010–2011. The tasks undertaken by the study consortia ranged from field test preparations to reporting. This reflected the differing stages of development of the IEA studies (all of which are conducted over a period of several years).

CILS 2013: International Computer and Information Literacy Study

Instrument development was in full swing since the 1st national research coordinator (NRC) meeting in Amsterdam (June 2010). At the 2nd NRC meeting in Hamburg (February 2011), NRCs provided feedback on the field test instruments, as well as the platforms and procedures supporting the implementation of ICILS. The student test modules and questionnaire were developed in the live, computer-based testing environment. The instruments and field operations were advanced at the 3rd NRC meeting in Ljubljana (June 2011). Currently, preparations are underway for the field test, which will take place in 2012 in about 20 countries. Each national center's student instruments will be prepared entirely—from translation to verification—within an online, purpose-built translation platform, which allows translators, reviewers, and verifiers to complete their tasks directly in the software.



countries). Over 65 countries, representing nearly 60 languages, administered the TIMSS, PIRLS, and/or prePIRLS assessments, with about 40 countries participating in the joint assessment at the fourth grade.

Scoring training sessions for the constructed response items took place at the 6th PIRLS national research coordinator (NRC) meeting in Rome (February 2011) and 6th TIMSS NRC meeting in Bangkok (March 2011). Looking forward, a major focus is planning the analyses for the PIRLS, TIMSS mathematics, TIMSS science, and joint TIMSS-PIRLS international reports. At the upcoming 7th TIMSS & PIRLS NRC meeting in Vienna (December 2011), country data and the draft report outlines and exhibits will be reviewed.

Preparing the data for analysis

The IEA DPC has been working closely with participating countries to clean and process their data files, in preparation for scaling and data analysis. As of the end of September 2011, more than 80% of the 148 expected data sets were submitted to the DPC.

ICCS 2009: International Civic and Citizenship Education Study

In the period since the publication of the first findings report in June 2010, a number of further ICCS reports have

been released, including the international report (November 2011), European report (November 2011), and Latin American report (April 2011). The international database was released in June 2011 together with the user guide. The technical report is currently being prepared for publication, and is due to be released in late October 2011. The Asian report and ICCS encyclopedia are under preparation.



TEDS-M: Teacher Education and Development Study in Mathematics

Over the past year, work by the study consortium, with support from the IEA technical and publications committees, has continued in preparing two volumes for publication: an international report and a policy report. The international report will present the major findings on outcomes in mathematics teacher education in 17 countries. The policy report will address the national policies (development, contexts, and conditions of teacher education) and regulatory arrangements in the participating countries. ●



TIMSS 2011: Trends in International Mathematics and Science Study &

PIRLS 2011: Progress in International Reading Literacy Study

During the last 12 months, the main data collection for TIMSS and PIRLS was carried out (October–December 2010 for southern hemisphere countries; March–June 2011 for northern hemisphere

UPCOMING STUDIES

Initial planning is underway for several new cycles of IEA studies.



TIMSS 2015: Trends in International Mathematics and Science Study

TIMSS 2015 will assess primary and middle school students' achievement in mathematics and science for the sixth time in a 20-year time span (previous assessments were given in 1995, 1999, 2003, 2007, and 2011). The first meeting of the national research coordinators will take place in February 2013.



TIMSS Advanced 2015: Trends in International Mathematics and Science Study Advanced

Previously conducted in 1995 and 2008, TIMSS Advanced 2015 will evaluate the achievement of final-year secondary school students in advanced mathematics and physics. The first meeting of the national research coordinators will take place in February 2013 (together with the first TIMSS 2015 study meeting).



PIRLS 2016: Progress in International Reading Literacy Study

PIRLS 2016 is the fourth assessment in a five-year cycle (2001, 2006, and 2011) of assessments of reading comprehension at the primary school level. The study will be initiated in March 2013, at the first meeting of the national research coordinators. ●



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USE & IMPACT of TIMSS & PIRLS data in the Russian Federation

'The participation of the Russian Federation in IEA studies is considered as an important benchmark in evaluation of the quality of education in the country'

DR GALINA KOVALEVA, RUSSIAN ACADEMY OF EDUCATION, CENTER FOR EVALUATING THE QUALITY OF EDUCATION

The Russian Federation has participated in a number of IEA studies over the last 20 years, including TIMSS (1995, 1999, 2003, 2007, 2011), PIRLS (2001, 2006, 2011), TIMSS Advanced 2008, ICCS and CIVED, TEDS-M, SITES (M1, M2, 2006), and the Language Education Study. The country's long involvement in TIMSS and PIRLS provides a particularly rich perspective on the use of IEA study outcomes.

Dr Galina Kovaleva, IEA's General Assembly representative for the Russian Federation and current national research coordinator of TIMSS 2011, PIRLS 2011, and TEDS-M, provided examples that illustrate a wide variety of uses of the TIMSS and PIRLS data in the Russian Federation. She noted that these uses have intensified in the last five years, covering areas of policy as well as academic research.

Direct use of the results for informing

different audiences (such as policy-makers, teachers, researchers, and students) has included the publication of articles for educational magazines and newspapers, public presentations, and national reports.

A number of specialists in different areas have become involved in secondary analyses of the TIMSS and PIRLS data. In a 2010 report published by the Higher School of Economics (in Russian), results from five secondary analysis projects on PIRLS 2006 covered topics including progress in Russian students' reading literacy, contexts and practices related to reading achievement, item analyses, and analysis of Russian textbooks.

The IEA study data have also resulted in the initiation of new studies, for example to explore contradictory findings in the Russian Federation's results from PIRLS 2006 and PISA. The data have been used in joint projects with other



countries, such as a project on TIMSS 2007 supported by the small grant program of READ (Russia Education Aid for Development) CICED (Center for International Cooperation in Education Development), in which Russian specialists worked with mathematicians from Tajikistan.

The TIMSS and PIRLS data have played a role in capacity building and the development of educational standards. At the national level, the TIMSS and PIRLS stud-

ies were organized to allow specialists of different subjects to be involved at various stages of implementation (framework review, item development, data analysis, etc.). These specialists then began using the best international practice in their work. For instance, specialists involved in standards development analyzed the TIMSS and PIRLS frameworks and on this basis developed recommendations for the new state educational standards for primary school, which are being introduced in 2011.

The TIMSS and PIRLS databases were used in seminars conducted by the Russian TIMSS & PIRLS national center for training regional coordinators and specialists in educational measurement and data analysis.

In 2009, two new master's degree programs in educational measurement and evaluation were established at the Higher School of Economics and the Academy of National Economy. Included in the programs' curricula is a course on international comparative studies,

in which students are asked to conduct data analyses using the TIMSS and PIRLS data sets. Several students participated in the IERI 2011 spring training academy.

One of the crucial missions of IEA is to enable policy-makers and researchers to enter into a dialogue with and learn from their colleagues around the world. IEA regularly invites country representatives and other experts to speak at the General Assembly meeting about the dissemination of IEA study results and the impact of these results on educational reforms in their countries. At the upcoming 52nd General Assembly meeting, panel presentations with speakers from several countries that participated in ICCS will address topics related to the regional modules and dissemination of results. ●

IEA invites submissions of reports on country experiences in disseminating IEA studies and their impact on educational policy, practice, and research to its secretariat.

MAIN MESSAGES OF THE REPORT

EUROPEAN COMMISSION REPORT ON EDUCATION & TRAINING

The 2010 annual report prepared by the Directorate-General for Education and Culture, Unit A4 (Analysis and Studies) provides data and research findings to underpin policy cooperation in education and training at the European level.

A number of issues raised in this report are addressed in the ongoing IEA studies, which soon will provide new data to update existing indicators. For some others, planned projects can become a source of empirical information for verifying and improving educational policies.

The authors indicated twelve main messages of the report:

1 Educational performance improved since 2000 in all five areas for which benchmarks for 2010 were agreed by European Education ministers (early school leavers; low achievement in reading; upper secondary completion; maths, science and technology graduates; adult lifelong learning). Nevertheless, the benchmarks will not be achieved, apart from the benchmark on increasing the

number of math, science and technology graduates.

2 Looking forward to the benchmarks set for 2020 (participation in early childhood education; low achievers in reading, maths and science; early school leavers; tertiary attainment; adult lifelong learning), past trends would suggest that most of these will be attainable, albeit with extra policy effort for some.

3 Two of the five benchmarks for 2020 have been given higher political status as headline targets of the Europe 2020 strategy, namely: the share of the young adult population holding tertiary or equivalent degrees should reach 40%; and the share of early leavers from education and training should be less than 10%. An analysis of trends would suggest these are achievable. Nevertheless, the preliminary national targets for their achievement set by several Member States in their draft national reform programmes are somewhat conservative, suggesting that the future rate of progress may be less than what is required.

4 Participation in early childhood education is increasing. Pre-school participation (4 years–start of compulsory schooling) has increased by 6 percentage points since 2000 to reach over 92% of young children.

5 The share of low achievers in reading literacy among pupils in lower secondary education in the EU has decreased. From 2000 to 2009 the proportion of low performers in reading literacy aged 15 decreased from 21.3% to 20.0% (after having had increased to 24.1% in 2006). This still falls short of the benchmark set by the Council for 2010, equivalent to a rate of 17%. PISA 2009 results show that performance for reading, mathematics and science has improved in a number of EU countries which had previously

performed below average. Nevertheless there are widespread and very high gaps in performance linked to socio-economic status and between native pupils and pupils with an immigration background.

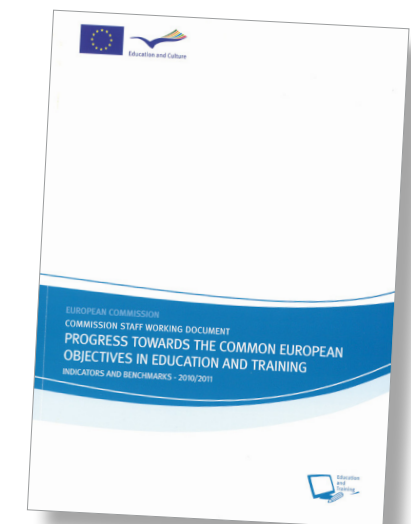
6 Vocational programmes play an important role in reducing the share of young people who are not employed nor participating in education and training (NEETs), and vocational programmes have been successful in some member states to reduce early school leaving.

7 Learning mobility of young people is increasing but it remains far from being an opportunity open to all young people. It is best developed in third-level education, where more than half a million EU students study outside their country of origin, most in another EU country. This is an increase of over 50% since 2000. Learning mobility remains markedly lower in vocational education.

8 Participation in adult lifelong learning improved in the period 2000–2005 but has since slightly declined and currently reaches a level short of the benchmark of 12.5% agreed for 2010 and significantly below the 15% target for 2020.

9 Early teaching of foreign language is advancing in Europe. In lower secondary education, earlier teaching of English is becoming widespread. Moreover, the average number of foreign languages taught per pupil in upper secondary school education has progressed since 2000, but still falls short of the Barcelona objective of 2 languages per pupil. Language learning within vocational education has grown but remains substantially below general education.

10 Gender gaps remain significant in education—in performance (girls outperform boys very sharply in reading), in subject choice (men outnumber women among MST graduates) and in patterns of educational participation (boys outnumber



girls in VET) and non-participation (boys are predominant among early school leavers).

11 Public spending on education as a percentage of GDP has stagnated since 2000 and the volume of private spending, which plays such an important role in the US, especially in higher education, has hardly changed. The EU member states would need to invest on average over 10,000 euro more per student per year (or almost 200 billion euro a year) in higher education to reach the levels of the US.

12 The economic crisis has affected people differently depending on their level of education, with a stronger impact on those with low educational attainment. Low-skilled males have experienced the most severe downturn in their employment prospects. ●

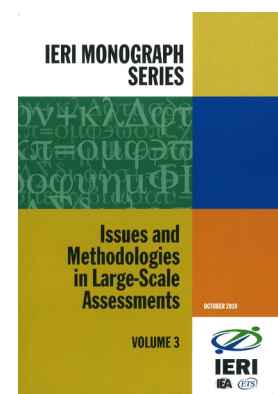
Progress Towards the Common European Objectives in Education and Training: Indicators and benchmarks 2010/2011. European Union, 2011.

Recent publications related to IEA studies

- Brese, F., Jung, M., Mirazchiyski, P., Schulz, W., & Zuehlke, O. (2011). **ICCS 2009 User Guide for the International Database**. Amsterdam: IEA.
- Kerr, D., Sturman, L., Schulz, W., & Burge, B. (2010). **ICCS 2009 European Report: Civic knowledge, attitudes, and engagement among lower-secondary students in 24 European countries**. Amsterdam: IEA.
- Schulz, W., Ainley, J., Fraillon, J., Kerr, D., & Losito, B. (2010). **ICCS 2009 International Report: Civic knowledge, attitudes, and engagement among lower-secondary school students in 38 countries**. Amsterdam: IEA.
- Schulz, W., Ainley, J., Friedman, T., & Lietz, P. (2011). **ICCS 2009 Latin American Report: Civic knowledge and attitudes among lower-secondary students in six Latin American countries**. Amsterdam: IEA.



- Schulz, W., Fraillon, J., Ainley, J., Losito, B., & Kerr, D. (2010). **Estudio Internacional sobre Educación Cívica y Ciudadana: Marco de la evaluación [International Civic and Citizenship Education Study: Assessment framework]**. Madrid: Instituto de Evaluación.
- Schulz, W., Fraillon, J., Ainley, J., Losito, B., & Kerr, D. (2010). **Indagine Internazionale sull'Educazione Civica e alla Cittadinanza: Quadro di Riferimento [International Civic and Citizenship Education Study: Assessment framework]**. Frascati, Italy: INVALSI.



- von Davier M., & Hastedt, D. (Eds.). (2010). **IERI Monograph Series: Issues and methodologies in large-scale assessments** (Vol. 3). Hamburg: IEA-ETS Research Institute. ●

These publications can be downloaded free of charge from www.iea.nl/publications.html. Please send announcements of any national publications to the IEA Secretariat for inclusion in forthcoming issues of the newsletter.

Upcoming meetings

7 October 2011	IEA Technical Executive Group meeting, Dublin, Ireland
8–9 October 2011	IEA Standing Committee meeting, Dublin, Ireland
10–13 October 2011	52 nd IEA General Assembly, Dublin, Ireland
4–9 December 2011	7 th TIMSS & PIRLS NRC meeting, Vienna, Austria
24–29 June 2012	8 th TIMSS & PIRLS NRC meeting, Singapore
26–28 June 2013	5 th IEA International Research Conference / with pre-conference workshops on conducting analyses of IEA data on 24–25 June /

Forthcoming issues

- ➔ Highlights from the 52nd IEA General Assembly meeting
- ➔ Progress update on the IEA studies
- ➔ New IEA studies

Colophon

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