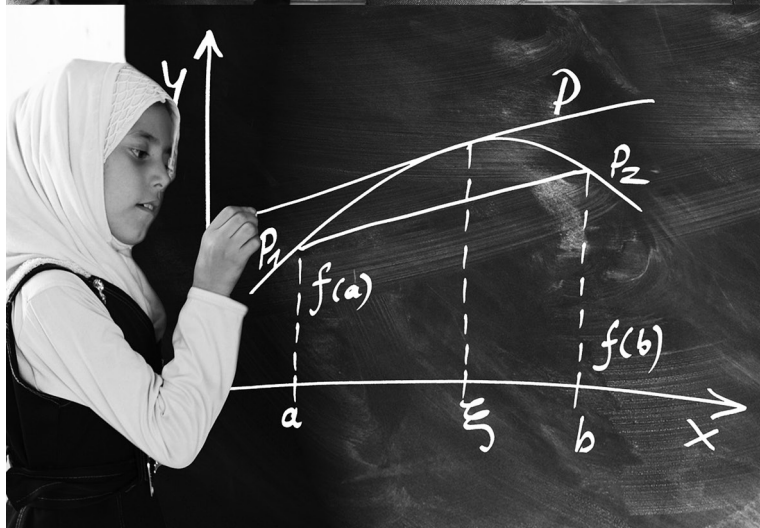




INSIDER



IEA Insider N°01



October 2019

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IEA INSIDER N°01

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Dr Dirk Hastedt
IEA Executive Director

Welcome to the first edition of **IEA Insider**, presenting a new name and new image for our annual celebration of IEA's activities. We have had a busy year with exciting developments across our studies, projects, and communication activities, in addition to significant organizational and leadership changes. Our flagship studies, **TIMSS** (Trends in International Mathematics and Science Study) and **PIRLS** (Progress in International Reading Literacy Study) continue to go from strength to strength. This year, we conducted the seventh cycle of TIMSS assessments, TIMSS 2019, which also marked the introduction of the digital version of the assessment, eTIMSS. We are looking forward to the release of TIMSS 2019 results in December 2020. PIRLS is also

transitioning to a digital format, with more than half of the PIRLS 2021 countries preparing to implement digitalPIRLS. Introducing this option will ensure that PIRLS continues to evolve to keep pace with our changing education systems.

I thank the TIMSS & PIRLS International Study Center at Boston College and all of the IEA and wider teams involved with developing and implementing the assessments.

Following the successful 2009 and 2016 cycles, our International Civic and Citizenship Education Study (ICCS) will be conducted again in 2022 led by the international study center, Australian Council for Educational Research (ACER). Preparations are underway with an assessment framework and study content already in development. Country enrollment is progressing well and there is a particularly strong representation from European countries following confirmation that the European Commission will support international study fees for European countries participating in ICCS 2022.

Our focus for the latter half of 2019 is the release of the International Computer and Information Literacy Study (ICILS) 2018 results. Led by ACER, ICILS 2018 marks the second cycle of the study and the first that included an optional module on computational thinking. We are

looking forward to sharing insights from the study and to discussing their implications for educators and policymakers. The next cycle, ICILS 2023, will build on the framework of the two previous cycles. New countries are welcome to join the study and it offers a valuable opportunity for trend measurement among re-joining countries.

IEA is proud to work with a wide range of international and German national partners to implement a variety of large-scale assessment studies. As the international study center for the OECD's **TALIS** (Teaching and Learning International Survey) and **TALIS Starting Strong Survey**, our main focus this year was on the production of the technical reports and international results. We were also pleased to work with the European Commission's Structural Reform Support Service on a project about risk factors for **early school leaving in Malta**. In Germany, our work on the Evaluation of Integration Courses (**EvIk**) study, which assesses literacy and cultural integration courses for new immigrants, has been a particular highlight for this year.

The diversity of our activities continues to grow and this year, we have created two new teams to meet this demand. Our **Scaling** team within the Research and Analysis Unit is helping to

strengthen our capacity for data analysis in large-scale assessments. Meanwhile, our **Capacity Building** team is working on a variety of projects to help countries develop their own assessment capabilities and a new initiative, **Rosetta Stone**, to help link regional assessments to the TIMSS and PIRLS scales. Jointly developed by IEA and the TIMSS & PIRLS International Study Center at Boston College, the project represents an exciting opportunity to map results from regional assessments to TIMSS and PIRLS scales, which are recognized by UNESCO as international standards for measuring progress towards achieving UN Sustainable Development Goals in education. Another major change over the past year was in IEA's leadership team. **Dr Thierry Rocher** was elected to the IEA Chair position at the 59th **General Assembly** (GA) meeting in Astana, having previously served as a Standing Committee member and GA representative for France. In July, **Juliane Hencke** was appointed to the Director position at IEA Hamburg, supported by Deputy Directors **Svenja Bundt** and **Christian Groth**. They join the existing team of IEA Amsterdam Director, Andrea Netten, and Financial Director, Roel Burgers. I am delighted to welcome Thierry, Juliane, Svenja, and Christian to

their new positions and I look forward to working with them further.

Strengthening the visibility and public dissemination of IEA studies, data and services remains an important focus for our development. Our two open access publication series with Springer, the **Large-scale Assessments in Education** journal and the **IEA Research for Education** book series, continue to grow and have become key resources for the education community. I am also pleased to report the ongoing success of the **IEA Compass: Briefs in Education** series, which, this year, included articles that attracted attention from policy institutes and educational media.

This year, we hosted IEA information stands at **key conferences** including the American Educational Research Association (AERA), Comparative International Education Society (CIES), and European Conference on Educational Research (ECER), that helped to bring IEA resources to wider research communities.

Online communications have also been a key priority: we launched our **new website** in June, our social media presence continues to grow, and our email newsletter, **IEA Updates**, allows us to share the latest news and opportunities with the IEA community.

For me, the IEA International Research Conference (**IRC**) was a highpoint of the past year. Held in Copenhagen, the meeting was our largest IRC to date—demonstrating the enduring appeal and relevance of IEA's work and support for researchers. It was a pleasure to meet with so many long-term IEA colleagues and friends and to welcome a new generation of researchers to the IEA family.

As ever, I would like to extend my thanks to all of our staff, partners, and collaborators for their hard work. In addition, I am grateful to the IEA member institutions, the countries participating in our studies, and, of course, the students, teachers, principals, and parents who participate in our studies. I am proud of what we have achieved this year and I look forward to many more exciting developments to come.

Building on IEA's strengths

THIERRY ROCHER



Dr Thierry Rocher
IEA Chair

It has been my honour to chair the IEA since January. I would like to reiterate how privileged I feel to be part of an institution that I have always admired, from the very beginning of my professional career as a statistician at the French Ministry of National Education. These first months have been very instructive. Even after my experience as a General Assembly member since 2011 and a member of the Standing Committee from 2014 to 2017, I still had a lot to learn. The enthusiastic support of IEA staff and partners has helped me to understand the rich and complex dynamics of our association and the important place we hold in the wider educational research community. I have enjoyed working closely with the members of the Standing

Committee and the IEA Executive Director, Dirk Hastedt. I have had the pleasure of meeting with different IEA stakeholders and the opportunity to participate in many IEA meetings and events, during which I was able to confirm the strengths of the IEA. I also met with the teams at the IEA offices in Amsterdam and Hamburg and witnessed the impressive level of commitment of the staff, as well as the variety and quality of expertise that the IEA possesses and uses to undertake its own studies along with other international and national projects.

I had the opportunity to participate in two National Research Coordinator meetings (ICCS and PIRLS), where I observed the collaborative spirit with which IEA studies are built. Issues were discussed in an open and friendly environment and the contributions of all participants were respected. Disagreements, which of course arise, are resolved collectively. I consider this collaborative spirit as one of IEA's great strengths, which we should continue to maintain. I look forward to participating in the release event for the ICILS 2018 results in November and joining the TIMSS National Research Coordinator meeting in December. I also had the great pleasure of participating in the IEA

International Research Conference in Copenhagen in June, where I was impressed by the high quality of the presentations. Moreover, the diversity of the subjects, variety of perspectives and methods, and the contrasting profiles of the presenters made this conference a unique opportunity for sharing knowledge and experiences. It was encouraging to see this extensive network of researchers, all committed and dedicated to IEA's mission of researching education and improving learning.

I found these different meetings (with the staff of the IEA, the enactors of the IEA studies, and the wider research community) very energizing and a great confirmation of IEA's diverse strengths and expertise. Building on this strong base, it is clear that there are many areas upon which we can focus.

This leads us to reflect on the IEA strategy in the medium and long term. In 2016, a strategic document was elaborated, under the leadership of the former IEA Chair, Anne Berit-Kavli, who I take the opportunity to warmly acknowledge for her important contribution. Looking back three years later, with the IEA Standing Committee, we are pleased to note that some objectives have already been achieved while other, new objectives have emerged.

For instance, the emphasis on the defined IEA communication strategy has been very successful and, in the past three years, IEA has significantly increased its visibility and communication activities. Yet, the place of research and innovation, which is increasingly growing in importance in the field of educational assessment, could be highlighted more in the IEA strategy. I had the opportunity to mention this during my speech at the last General Assembly; in my opinion, IEA should clearly be at the forefront regarding innovation and research. Reviewing the IEA strategy is, I hope, a first step in this direction.

In this spirit, since February, the Standing Committee has reflected on updating priorities and launched a consultation process to take on board the views of IEA stakeholders and representatives (IEA staff, IEA study directors, Technical Executive Group members, etc.) regarding the IEA strategy in the medium and long term. We will invite General Assembly representatives to add their input during the 2019 General Assembly meeting in Ljubljana. I am convinced that this process will lead to important actions for our association in the future.

I would simply like to conclude by saying that the term "family" applies perfectly to the spirit of the

IEA, a realisation for me that has been growing during these past few months and the very spirit that I wish to help keep alive.

News updates

SIVE FINLAY

New Hamburg Directors
Juliane Hencke was appointed as the new Director of IEA Hamburg from July 1, 2019.

The appointment follows Heiko Sibberns' decision to step down from his role as IEA Hamburg Director, a move that will allow him to re-devote his attentions to other aspects within IEA.

Juliane has a wide range of experience and expertise across IEA activities. Since joining IEA in 2000, she has worked across a variety of research, data processing, and study management roles. Most recently, Juliane served as the co-head of the International Studies Unit and member of the Executive Team at IEA Hamburg. Juliane

will be supported by two Deputy Directors: Svenja Bundt (Field Operations and HR) and Christian Groth (Finance).

Juliane and the Deputy Directors will join the existing IEA Directors' team of Dirk Hastedt (Executive Director), Andrea Netten (IEA Amsterdam Director), and Roel Burgers (Finance Director).

WERA Visiting Researcher Award

Congratulations to Dr Celeste Combrinck, University of Pretoria, South Africa, who received the inaugural WERA (World Education Research Association) Visiting Researcher Award 2019. Supported by IEA and the University of Hamburg, the award provides both academic support and funding



Dr Celeste Combrinck

for a researcher to work with the Diversity in Education Research Lab (DiVER) at the University of Hamburg and the IEA Research and Analysis Unit.

Dr Combrinck will use her award to work on a research project based on PIRLS 2011 and 2016 results from South Africa.

Academic Visitor Program

The IEA Academic Visitor Program enables visiting researchers to develop their own research projects while benefiting from the individual support of IEA Hamburg experts working in different fields related to international large-scale assessments. We were pleased to welcome two academic visitors over the past year, Stephan Daus and Elif Tugba Toprak, who both worked with the Research and Analysis Unit.



IEA Directors (from left to right):

Svenja Bundt, Roel Burgers, Dirk Hastedt, Juliane Hencke, Andrea Netten, and Christian Groth

Applications are accepted four times per year. Please see our website for further details.

Communication highlights

Communications and outreach have been key areas of focus for IEA this year. We are taking a more active role in promoting our studies, supporting researchers, and in raising awareness of IEA's activities among the wider education community.

In February, we joined the Education Policy Institute in the UK for an event hosted at the Royal Society in London to mark the release of our new Compass Brief, *Do both boys and girls feel safe at school—and does it matter?* Dirk Hastedt introduced the brief and joined a panel of education experts who discussed implications of the report for England. The event attracted significant interest from the education community



Paulína Koršňáková, Andrea Netten, Thierry Rocher, and Dirk Hastedt at the AERA 2019 meeting in Toronto

and received coverage in national media.

In April, we were pleased to host IEA information stands at the AERA (American Education Research Association) and CIES (Comparative International Education Society) conferences. It was a great chance to share information about IEA data

and services in an international forum, promote our opportunities for researchers, and to connect with old and new members of the IEA family.

IEA joined the World Education Research Association (WERA) network in 2018 and we were delighted to continue our



Participants of the ICCS symposium at the WERA 2019 meeting Tokyo.

relationship with the organization this year. In August, IEA hosted a symposium at the WERA conference in Tokyo. Fitting the conference theme, “Future of Democracy and Education: Realizing Equity and Social Justice Worldwide,” the session focused on ICCS results.

In September, we hosted an information stand at the European Educational Research Association’s European Conference on Educational Research (ECER), in Hamburg. The conference also featured presentations and workshops from IEA staff along with a special meet and greet session on publishing opportunities with IEA.

The new IEA website, with a refreshed design and updated structure, was launched in June. We hope that the revisions will make the site more user friendly for the research community, partners,


and collaborators. Thank you to all the colleagues and partners who helped with the revisions of the site.

Throughout the year, we have also contributed a wide range of articles to external publishers highlighting the value and insights to be found from IEA studies. These include a series with the Times Education Supplement (TES) Magazine, articles for the Global Development Blog, UNESCO Institute for Statistics SDG4 Data Digest, and contributions to newsletters for partner organizations.

We are continuing to grow our social media presence (Twitter, Facebook, LinkedIn, and YouTube) and use the platforms to both share news and opportunities from IEA and engage with wider education policy and research communities. In 2019, we also launched a new email newsletter, IEA Updates, to share our latest news and opportunities

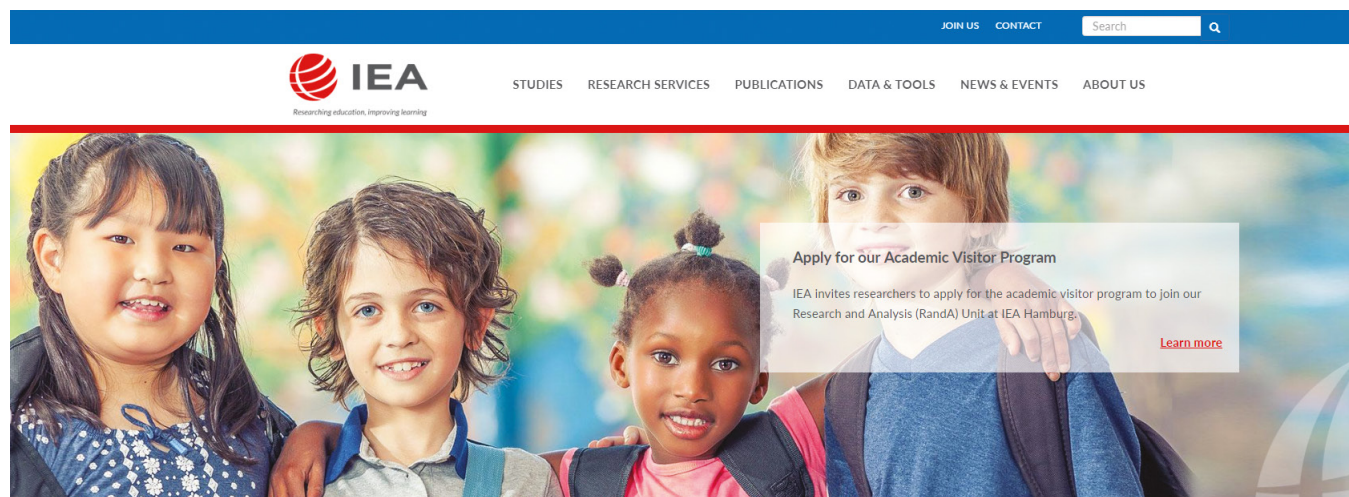
with IEA members and partners. For the latest news about opportunities, publications, and upcoming events from IEA, please visit our website (iea.nl) or follow us on social media.

Please follow IEA on social media for all our latest news and announcements

 @iea_education

 IEAResearchInEducation

 IEA



ABOUT IEA

IEA (International Association for the Evaluation of Educational Achievement) is an international cooperative of national research institutions, governmental research agencies, scholars, and analysts working to research, understand, and improve education worldwide.

IEA Studies

We conduct high-quality, large-scale comparative studies of education across the globe in order to provide educators, policymakers, and parents with insights into how students perform.

Since their inception, our flagship TIMSS & PIRLS studies have been directed by the TIMSS & PIRLS International Study Center at the Lynch School of Education in Boston College. Our ICCS and ICILS studies are directed by the Australian Council for Educational Research®. IEA is grateful for the expert guidance of our study centers.

NEWS & EVENTS



Release of ICILS 2018 results
 Carnegie Institution for Science,
 Washington D.C., USA
 Results of the International Computer and

TIMSS 2019 data collection completed; eTIMSS a success

SHIRLEY GOH



Schools worldwide posted photos on social media of **eTIMSS**, with students tapping, clicking, and typing their way through mathematics and science items on tablets and computers. From top left: Students participating in eTIMSS 2019 in Canada, Turkey, Spain, Qatar, the United Arab Emirates, Russian Federation, France, and the Czech Republic.

More than 410,000 students across the world in 64 countries and eight benchmarking systems participated in IEA's TIMSS (Trends in International Mathematics and Science Study) 2019 this past year, with data collection completed

in Southern Hemisphere countries in December 2018 and in Northern Hemisphere countries in June 2019. The seventh in the TIMSS cycle of assessments, TIMSS 2019 marks the introduction of eTIMSS, the digital version of the assessment. More than half of the TIMSS countries made the

transition to the digital format from the paper-and-pencil format.

eTIMSS is designed to be an engaging, interactive, and visually attractive assessment that allows TIMSS to assess complex areas of the frameworks and increases operational efficiencies. "One significant benefit of eTIMSS is that we can go beyond the limits of paper and pencil to measure aspects of the frameworks that are difficult to measure in the traditional format," said Dr Ina Mullis, Executive Director of the TIMSS & PIRLS International Study Center at Boston College. "A digital version opens up so many possibilities to innovate in how we

"One significant benefit of eTIMSS is that we can go beyond the limits of paper and pencil to measure aspects of the frameworks that are difficult to measure in the traditional format."

assess what students know and can do in mathematics and science,” she added.

eTIMSS includes innovative problem solving and inquiry tasks (PSIs), which simulate real world and laboratory situations. The eTIMSS PSIs call on students to integrate and apply process skills and content knowledge to solve mathematics problems and conduct scientific experiments or investigations. The tasks—such as designing a building or studying plants’ growing conditions—involve interactive scenarios that present students with adaptive and responsive ways to follow a series of steps toward a solution.

eTIMSS also presents the opportunity to digitally track the paths students take to solve problems. Studying the process data about which student approaches are successful or unsuccessful in solving problems may provide information to help improve instruction.

Transitioning TIMSS, a long-standing paper-and-pencil assessment, to a digital environment was a momentous and challenging endeavor. “Developing a digital version of TIMSS that offers innovative

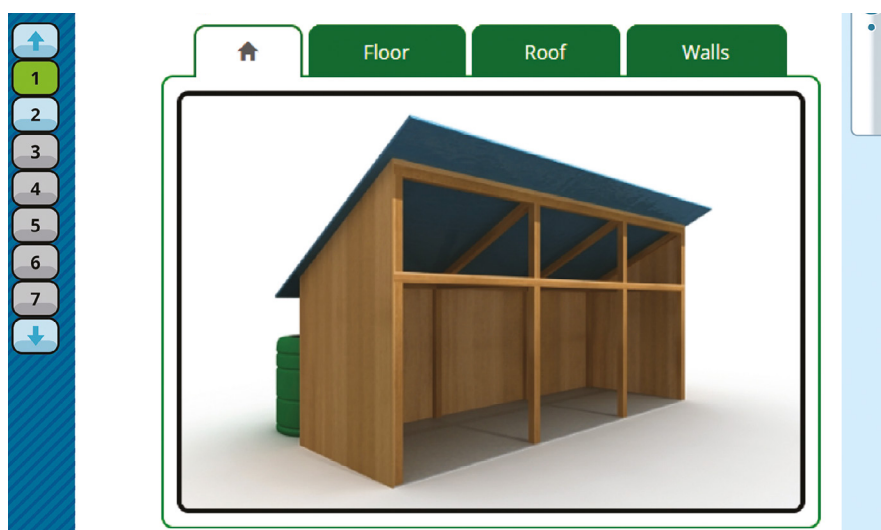
elements while also ensuring that we can put countries administering the paper-based and digital assessments on the same achievement scale was certainly a challenge,” said Michael Martin, Executive Director of the TIMSS & PIRLS International Study Center. “All the countries collaborated to make it a success, from helping to develop items to administering the assessment in accordance with standardized procedures designed to ensure comparability, and we are extremely pleased with how smoothly data collection went.”

eTIMSS was very well received in the participating countries, with school coordinators commenting especially that students found the tasks engaging and motivating, and often quite a change from their usual assessments. As one International Quality Control Monitor reported, “Pupils were engaged, enthusiastic, and delightful... this was for the most part a highly successful project especially in terms of the response of the pupils and the schools’ willingness to engage with and participate in the processes fully.”

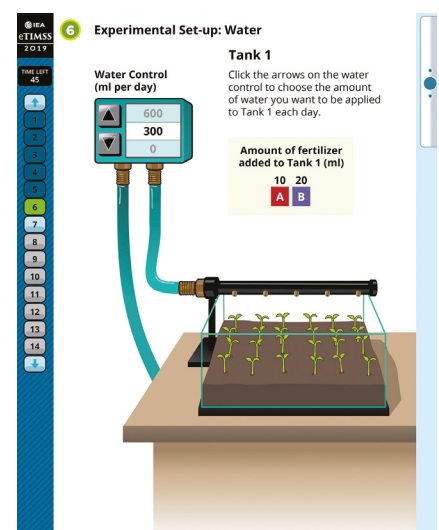
One efficiency that a digital assessment provides is automated

scoring. Many of the eTIMSS constructed response items can be scored by computer. A numeric keypad enables students to enter answers to many questions, eliminating the need for a person to score the responses. Other constructed response items that can be computer scored use drag and drop or sorting functions to answer questions about classifications or measurements.

In keeping with previous TIMSS cycles, the students and their teachers, principals, and parents or guardians completed questionnaires about the home and school contexts in which teaching and learning mathematics and science takes place. The TIMSS & PIRLS International Study Center has commenced data analysis and reporting activities, and the TIMSS 2019 international results will be released in December 2020. The results will provide 24 years of trend data to countries that have participated since TIMSS was first conducted in 1995. TIMSS 2023 will complete the transition to an all “e” assessment, with newly developed, digitally enhanced item types and more problem solving and inquiry tasks.



This illustrative eTIMSS 2019 problem solving and inquiry task calls for students to construct a building



Students study plants’ growing conditions in this example eTIMSS 2019 task

PIRLS 2021: Assessing the new digital literacies

INA V.S. MULLIS AND MICHAEL O. MARTIN

Around the world, student reading has migrated from paper to digitally based formats, and IEA's PIRLS (Progress in International Reading Literacy Study) has evolved to match the times. Directed by the TIMSS & PIRLS International Study Center at Boston College, PIRLS has provided countries with trend data in reading achievement at the fourth grade every five years since 2001.

The PIRLS transition to a digital format was initiated in 2016 with the launch of ePIRLS, an innovative assessment of internet reading, and continues in PIRLS 2021 with half the countries transitioning to a fully digital assessment.

PIRLS 2021 is remarkable:

- This fifth PIRLS cycle will provide 20 years of trend data.
- It is the first stage in the PIRLS transition to a completely digitally based format.
- The digital environment enables integrating regular PIRLS and ePIRLS online reading into the same administration sessions.

ePIRLS assessment of internet reading

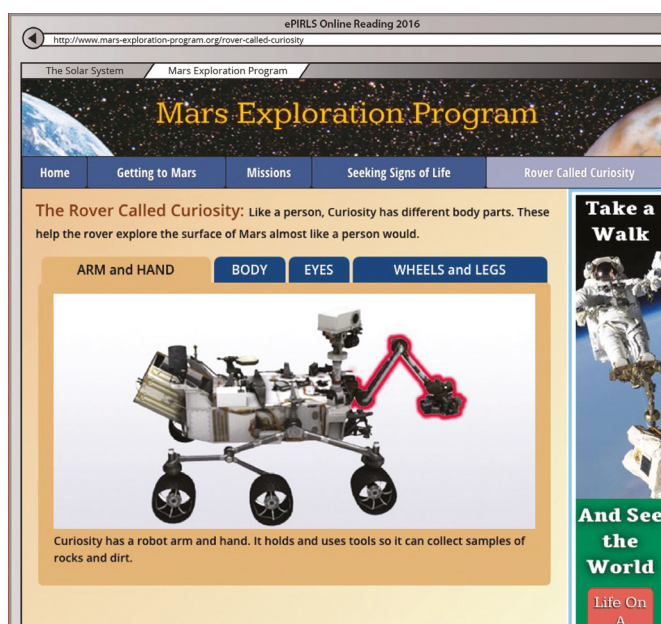
In some respects, the internet has changed what it means to be a good reader. ePIRLS is designed to simulate an authentic internet reading experience, but within a computer-based environment suitable to fourth grade reading levels and a timed

assessment. It reflects the types of internet reading students are asked to do as part of school-based projects and reports. A teacher avatar moves students through various webpages and presents questions.

ePIRLS was offered in addition to the PIRLS 2016 paper-and-pencil assessment on a voluntary basis, with 14 countries conducting the ePIRLS sessions on the next day. Examples below from the "Mars" task show the website window with visually attractive and engaging interactive features (tabs, animations, and hyperlinks) and the assessment window with the teacher avatar.

digitalPIRLS 2021

Approximately half the PIRLS 2021



countries are transitioning from paper-and-pencil assessment to the new digitalPIRLS 2021 format. The digitalPIRLS user interface is shown below.

Most of the screen is devoted to the reading passage and supporting visuals, which is typical of today's environment where students are exposed to a wide variety of multimodal reading materials. Students can scroll through the reading passages page by page using the darker orange rectangles. The assessment questions are accessed via a "questions window." Students can scroll through the reading passage while the question window is open or they can close the window using the black tab. The ability to view the passage and questions together received positive feedback in cognitive lab interviews during the development process, with student comments such as: "I like how you can read the passage while you answer the questions."

Students can easily navigate back and forth through questions by clicking on the green arrows at the bottom of the questions window. There is a highlighter tool, if students want to underline parts of the passage. There is a timer in the upper left hand corner and the last screen in the questions window informs students of any

questions they did not yet answer.

Because the PIRLS 2021 assessment of students' achievement in reading literary and informational materials is now digitally based, the ePIRLS assessment of internet reading can be integrated into the same test administration sessions. This is much more convenient for countries, extends the assessment to address a wider range of digital literacies, and enables PIRLS to continue exploring the relationship between reading with and without internet features.

The digital environment also enables tracking of students' behavior as they read the passages and websites together with answering the assessment questions. It is anticipated that tracking students' behavior will provide valuable information about their test taking strategies, as well as text-task interactions.

Maintaining trends

Following extensive reviews by the PIRLS countries and international reading experts in the PIRLS Reading Development Group, 12 literary and informational passages (six each) and two new ePIRLS tasks have been selected for the international field test in March–April 2020. The digitalPIRLS countries will field test the newly developed materials in the

digital format. To provide maximum flexibility for the PIRLS countries, digitalPIRLS can be delivered via the web, a PC that acts as a local server, or a USB drive that connects to each student's digital device.

Following the field test, six newly developed reading passages will be selected to be assessed in 2021 together with 12 trend reading passages previously administered in 2016. For the paperPIRLS countries, all 18 reading passages will be in the paper format just as in the past. For the digital/"e" countries, the 12 trend reading passages will be transferred to the digital format, and PIRLS 2021 will consist of 18 reading passages in the digital format and four to five ePIRLS tasks.

Countries using the digital format will also administer the trend reading passages in the PIRLS 2016 paper format to provide a bridge between PIRLS 2016 and PIRLS 2021. This enables PIRLS 2021 to maintain trends from previous PIRLS assessments.

Data collection for PIRLS 2021, in digital and paper formats, is scheduled for October–December 2020 in the Southern Hemisphere and March–June 2021 in the Northern Hemisphere. The PIRLS 2021 international results will be released in December 2022.

37:16

PIRLS 2021

IEA TIMSS & PIRLS BOSTON COLLEGE

The Green Sea Turtle's Journey of a Lifetime


From *Turtle Travels*
By Gary Miller

Out From the Sand

It's a starry night in August. A nest of eggs lies buried in the sand more than two feet below the surface of a Costa Rican beach. The nest holds more than 100 green sea turtle eggs, each about the size of a golf ball.

One of the baby sea turtles begins to stir and hatch from her egg. The hatchling tears at the shell of her egg with the sharp point on her beak. Still buried beneath the sand, the baby sea turtle breaks free. Soon, the whole nest is alive with motion.

The baby turtle uses her flippers to climb up and up. It can take more than a day to reach the surface of the sand.



Questions

37:16

PIRLS 2021

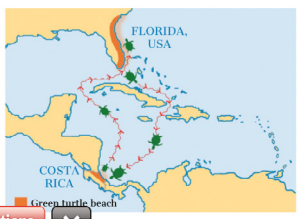
IEA TIMSS & PIRLS BOSTON COLLEGE

Back to the Sand

When the turtle is about 26 years old, her adult shell is over 3 feet long and she weighs around 300 pounds. Now she sets out on a new adventure. She begins her long trek back to the beach where she was born. She is going to lay her own eggs.

The sea turtle may have to travel over 600 miles, but she is well equipped for the journey. Her flippers are like wings. She flies through the water.

Scientists are still learning how a sea turtle can find its way through the ocean. They think the turtles may sense changes in Earth's magnetic field. That may help the turtles make their way back to the beach.



Questions

12. How old is a female green sea turtle when she first sets out to lay her eggs?

- A about 3 years
- B about 10 years
- C about 26 years
- D about 80 years

12/17

Growing support and participation in ICCS 2022

PAULÍNA KORŠŇÁKOVÁ AND RALPH CARSTENS

The International Civic and Citizenship Education Study (ICCS) assesses the ways in which countries prepare young people to undertake their roles as citizens. It is the largest and only international study dedicated to civic and citizenship education. Following two cycles in 2009 and 2016, ICCS 2022 is well underway. National Research Coordinators met in Rome in May to discuss the study's assessment framework and content directions. ICCS 2022 is designed to answer key questions of interest in civic education related to digital citizenship and the use of social media, young people's views of the political system, migration, and diversity, education for sustainable development, and global citizenship education, the latter in consultation with UNESCO. We are also looking forward to offering a computer-based assessment option for the first time, which will be taken up by the majority of participating countries. Participating in ICCS provides countries with reliable, comparative data to help shape educational policies in critical areas while also helping to monitor progress towards the UN's Sustainable Development Goals, particularly target 4.7 focusing on the knowledge and skills needed to promote sustainable development. The study is expertly directed by

the ICCS consortium consisting of the Australian Council for Educational Research as study center and Laboratorio di Pedagogia Sperimentale at Roma Tre University and LUMSA University in Rome as the associate research centers.

European Commission support

While ICCS participation is open to countries around the world and enrollment continues, there is a particularly strong representation from countries in Europe. The European Commission regards ICCS as a valuable (and the only) source of comparable survey data on civic and citizenship education. The international ICCS 2016 team developed a European regional report, the Commission produced several policy notes based on 2016 data, and ICCS was included in the Education and Training Monitor in 2018.

Promoting active citizenship is one of the long-term key objectives within the strategic framework for European cooperation in education and training. Recognizing the analytical and policy importance of the study, the European Commission kindly provided financial support for ICCS 2016 and ICCS 2009.

IEA was delighted to receive confirmation that the European Commission would support the international study fees for European

countries participating in ICCS 2022. In May 2018, the Council of the EU adopted a Recommendation on Common Values, Inclusive Education and the European Dimension of Teaching. Among other actions, the Council recommends countries to take measures to promote the teaching of not only active citizenship, but also common values and ethics education. ICCS 2022 participation is supported in this context.

The Education, Audiovisual and Culture Executive Agency, acting on behalf of the Commission, is responsible for implementing the support scheme for ICCS by co-financing up to 75 percent of the international costs of individual Erasmus+ program countries participating in ICCS 2022. The funding is available for EU member states, EFTA, and EEA countries as well as candidate countries. A total of 21 eligible countries are participating in the scheme: Belgium (Flemish), Bulgaria, Croatia, Cyprus, Denmark, Estonia, France, Germany, Italy, Latvia, Lithuania, Malta, the Netherlands, Norway, Poland, Romania, Serbia, Slovakia, Slovenia, Spain, and Sweden. Conversations with additional countries in Europe and beyond continue.

IEA is grateful to the European Commission for their kind support and we look forward to developing ICCS 2022 further.



Participants of the ICCS 2022 National Research Coordinator meeting held in Rome, May 2019

Release of the ICILS 2018 results

JENNIFER ROSS

We are very excited that the results of the second cycle of the International Computer and Information Literacy Study (ICILS) will be released on November 5 this year. As with the first cycle in 2013, ICILS assesses grade 8 students' computer and information literacy skills, in order to answer the critical question: how well are students prepared for study, work, and life in a digital world? ICILS 2018 also introduces a new assessment of students' computational thinking skills. This cycle has seen more than 46,000 students and 26,000 teachers from 12 countries, and two benchmarking systems, take part. ICILS 2018 also gathered valuable background information about students' and teachers' use of, and attitudes towards, technology. Over the past four decades, information and computer technology has had a profound impact on our daily lives, work, and social interactions. ICILS deals with the core knowledge, skills, and understanding students need to succeed in this dynamic information environment. Participating in ICILS provides countries with reliable, comparable data about young people's development of 21st century computer and information literacy skills. On top of this, ICILS

is unique in directly assessing computational thinking skills of students.

The 2013 cycle of ICILS exposed the myth of the "digital native"—the assumption that just because young people have grown up surrounded by digital technology, they will have excellent ICT skills. The study showed that, while the vast majority of students reached the minimum level of knowledge of basic software, just two percent achieved the highest level through demonstrating an ability to apply critical thinking skills while searching for information online. We are looking forward to revealing what changes have occurred over the intervening five years between cycles.

The international report will be released at 10am CET on November 5, with a launch event later that day in Washington D.C. held at the

Carnegie Institution for Science. We are pleased to be hosting a joint event with the National Center for Education Statistics (NCES), which will also feature the release of the US national report. The event will also be live webcast and the recording shared via the IEA website and social media channels. Please contact the IEA communications team for further information.

Remember to keep a look out for the upcoming volume 8 publication in the IEA Research for Education series, *Gender differences in computer and information literacy. An in-depth analysis of data from ICILS* that contains secondary analysis of the ICILS 2013 results.

Perhaps it will get you inspired to work with the new 2018 data!



The ICILS 2018 family: participants of the **ICILS 2018 National Research Coordinator meeting** held in Jyväskylä, Finland in June 2019

Sign up for ICILS 2023!



Registration is now open for the third cycle of the International Computer and Information Literacy Study (ICILS) 2023.

In addition to measuring international differences in students' computer and information literacy skills, countries participating in ICILS 2023 have the option for their students to complete an assessment of computational thinking and approaches to writing software programs and applications. In an exciting development, the European Commission announced that they will fund the international costs for Erasmus+ countries to participate in ICILS 2023. The initiative is being led by the Education,

programme countries are highly encouraged to participate in the upcoming cycle of the study, ICILS 2023, to maximize cross-national comparability of results. The European Commission will support participating EU Member States and Erasmus+ programme countries with funding up to a total of 75% of international costs to the IEA."

Commenting on the decision, IEA Executive Director, Dirk Hastedt said:

"We are delighted for ICILS 2023 to receive this generous support from the European Commission. The funding will create a valuable opportunity for even more countries to find out how well their

*"We are delighted for ICILS 2023
to receive this generous support from the
European Commission."*

Audiovisual and Culture Executive Agency and the funding is expected to be available from 2020.

The Commission released the following statement:

"The European Commission highly recognizes the value of the IEA ICILS study as an important contribution to the evidence base for development of European education policies. EU Member States and Erasmus+

students are prepared for study, work, and life in our digital world. IEA enjoys a close working relationship with the European Commission on a variety of projects and I would like to thank them for their continued support."

For further information about ICILS, including how to participate, please contact IEA Amsterdam.

Delivering the TALIS 2018 and the TALIS Starting Strong Survey 2018

STEFFEN KNOLL, RALPH CARSTENS, AND JULIANE HENCKE

Our expertise in conducting large-scale assessments in education enables IEA to work across a variety of subjects and topics. From mid-2015, IEA led a consortium including Statistics Canada and the Australian Council for Educational Research as partners in a four-year agreement to implement the third cycle of the OECD Teaching and Learning International Survey (TALIS) 2018, covering almost 50 countries, a core survey at lower secondary level and several optional levels and links. After almost four years of intense and rewarding collaboration with the national teams, expert groups, governing bodies, and the OECD, we were proud to see the results released in 2019.

TALIS yields valuable information and insights into teacher's motivation to join the profession, practices and classroom management, professional development needs and activities, and more generally the environment teachers and principals work in at school.

The findings build on previous large-scale assessments. For example, around half of the teachers in TALIS 2018 adopt practices that involve students' cognitive activation—engaging in cognitive demanding tasks and asking questions that require the

evaluation of information and the application of knowledge in order to solve problems. In comparison, in 1995, IEA conducted the Third International Mathematics and Science Video Study, which observed mathematics classrooms at grade 8 in Germany, Japan, and the United States. Teachers in these three countries reported that they used challenging problems and posed demanding tasks. However, the direct classroom observations then revealed that such problems and questions were used in Japanese classrooms but not so often in German or United States classrooms. The developments identified by TALIS 2018 results point towards the need for more in-depth classroom-level investigations in future studies, to see whether what is reported by teachers matches the reality.

Across countries, two thirds of the teachers participating in TALIS 2018 reported that entering the profession was their first choice. About 90 percent of the teachers said that the opportunity to influence young people and to contribute to society was a moderate or even important reason to choose the profession. Conducted across 17 countries in 2008, IEA's Teacher Education in Mathematics Study (TEDS-M) revealed a differentiated picture

for primary and lower secondary mathematics teachers when answering similar questions. These results emphasize the need to study initial teacher preparation—a continued interest for IEA and a goal shared with TALIS.

The TALIS consortium led by IEA contributed to the success of the survey's final phase through analysis and scaling of the data, table production, review of draft report chapters, producing a technical report, and managing the international database. As with all our projects, we also added TALIS 2018 data to the IEA IDB Analyzer, which is designed to handle the data from complex multi-matrix survey and sampling designs.

IEA is also wrapping up another OECD project, the TALIS Starting Strong Survey 2018, which commenced in 2016. The survey focused on early childhood education and care (ECEC) staff, their professional development, their work with young children, the ECEC environment, and the impact that staff can have on the children in their care.

Building on TALIS (both in terms of content and the methodologies and survey operations used), the TALIS Starting Strong Survey 2018 seeks to identify strengths and opportunities for early childhood learning and well-being

across different countries. The information gathered will help to inform and facilitate policy discussions, particularly regarding staff organization and strategies to enhance the overall quality of the ECEC workforce.

IEA Hamburg is the international study center for the project, in collaboration with RAND Europe. IEA was responsible for coordinating all survey operations tasks, including sampling, weighting, translation and verification, development of guidelines, manuals, and software, monitoring data collection, international data processing, scaling, analysis, and table production. RAND Europe was responsible for the development of the conceptual framework and study instruments.

The TALIS Starting Strong Survey 2018 focused on the environments, working conditions, and practices of staff and leaders in two populations

of interest: in ECEC centers at the pre-primary level (nine countries) and in services for children under the age of three (four countries).

IEA, together with all study participants and partners, is eagerly awaiting OECD's release of the first volume of the international reports in October this year. The final international database, the technical report, and the user guide are currently in preparation and will be released alongside the international report.

With the completion of the TALIS Starting Strong Survey 2018, IEA was able to continue its work in the area of early childhood education and care. This followed IEA's Early Childhood Education Study Policy Report in 2016, which highlighted key differences and similarities across a range of early childhood education policies.

We are delighted to have brought these projects to completion. As

the international study directors for all TALIS cycles so far, we take pride in the surveys' success and are grateful for the fantastic support, professional collaboration, and enjoyable encounters with our partner teams across the world.



Participants of the **TALIS and TALIS Starting Strong Survey international database workshop** hosted by IEA in Lüneberg, Germany in March 2019. IEA also hosted a webinar in June to support researchers working with the studies' data.

Evaluation of Integration Courses (Evlk): Integration and literacy courses for refugees in Germany

DOREEN HUGET AND JOHANNA ZAHN

Recently, the Field Operations Unit and National Data Management team at IEA Hamburg secured the contract to organize and implement the Evaluation of Integration Courses (Evlk) in Germany. The innovative design of this new, extracurricular study results in some special characteristics and demanding challenges.

The study was an initiative by the research center for migration, integration, and asylum of the Federal Office for Migration and Refugees (BAMF-FZ). Since 2015, the significant increase in immigrants coming to Germany as a result of a variety of humanitarian issues has meant that the composition of participants in literacy and integration courses has changed. Previously, working migrants from Eastern European countries represented the largest group of course participants. Now, most course attendees are vulnerable persons from non-European countries.

In the context of increased integration requirements, the Evlk study investigates whether integration and literacy courses for refugees still meet integration needs in Germany. In addition, the study endeavors to identify which measures could contribute

to creating an efficient and useful language-training program that also includes a communication of values. The goal of the study is to deliver comprehensive findings for the adaptation of the German language and integration course system to current requirements. To address the complexity of these questions, the study takes a holistic perspective and integrates information from participants, instructors, and providers.

The study design requires that a survey takes place at the beginning and end of an integration course. Courses usually last six to seven months, which means that all preparation and implementation steps for the survey need to be organized in parallel within a very short time period. In autumn 2019, a pilot study will be conducted in cooperation with 12 course providers. The pilot serves to check the survey instruments and to identify how the implementation of the main survey in 2020 can be optimized.

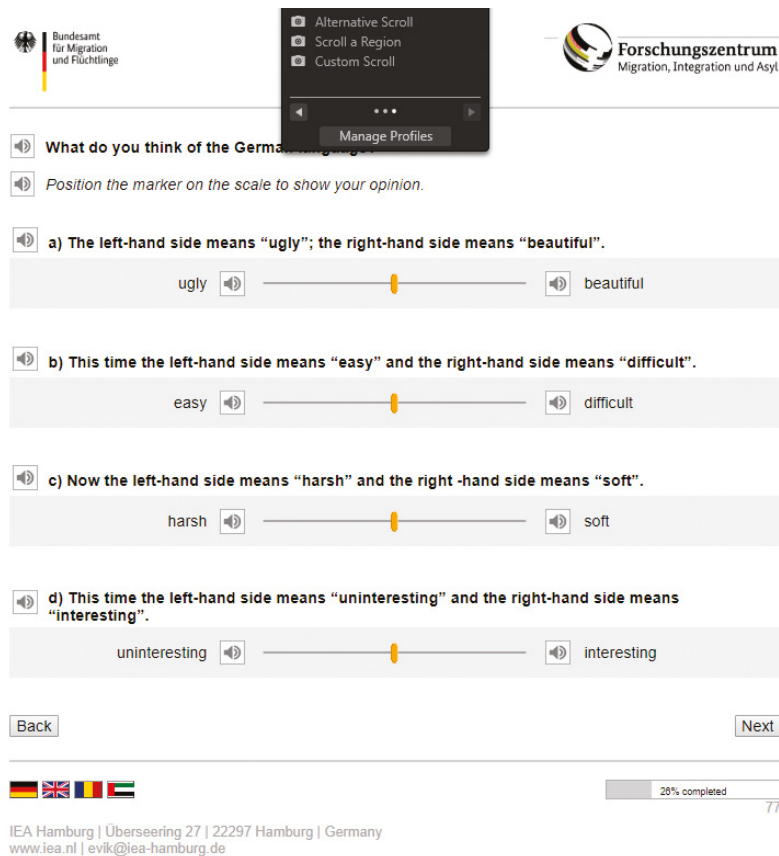
IEA Hamburg has been commissioned with the essential tasks of preparing and implementing the study, the technical implementation of the survey instrument, data carrier logistics, and data management.

Technical requirements of the online survey

Data will be collected by means of online questionnaires that are supported by audio texts for those participants with low reading skills. To conduct the tablet-based survey online, and to enable data transfer from the tablets to the survey server, a secured SSL connection needs to be installed via a prepared hotspot to the database of the survey software. In July 2019, we successfully tested a first trial installation with 10 tablets.

The implementation of the complex requirements of the questionnaire design is a great challenge, particularly the audiovisual delivery. Guaranteeing the item comparability is a very important aspect considering the linguistic and cultural diversity of the participants. To meet the diverse requirements, the online questionnaire, as well as all information and data protection material, is being translated into Arabic, German, English, and Romanian for the upcoming pilot study.

For the online survey, we use a flexibly programmable software to edit the different questionnaire versions. Although the technical implementation is based on comprehensive experience and well-established procedures gained from other studies, it also



Screenshots from the Evlk online questionnaire

requires the development and implementation of completely new procedures. The software allows us to integrate audio files (in 10 languages for the main survey in 2020) and a text-to-speech procedure. Additionally, it facilitates the collection of metadata such as timestamps, capture of residence time, completed questionnaire versions, and an illustration of a graphical progress bar.

Adaptation of the survey instruments to different target groups

During the survey, it is possible for participants to switch between any one of the four languages and to read the question or to listen to the question in the selected language. Audiovisual instructions for the completion of the questionnaire are also provided at the beginning. These measures will support participants from a variety of backgrounds.

The German questionnaire was adapted into simple language and this form was used as the basis for further translations. This will make it easier for participants with lower literacy skills to complete the questionnaire. Language translations were completed in July 2019 and subsequently verified for quality control before being incorporated into the software. In August, we invited selected people to test the translated online questionnaire version under authentic conditions.

Special requirements for test administrators

The test administrator training in Hamburg in September 2019 is a further challenge. Apart from training in the content, the session also needs to prepare and train test administrators for the characteristics of the study's

target groups. With this in mind, we are recruiting test administrators so that they match the specific target groups and have special qualifications. For example, test administrators with foreign language qualifications and experience in adult education are preferred. In addition, test administrators will have to provide intensive support to the participants before, during, and after the survey. To ensure high quality and a standardization of the test administrator operations, two test administrators will conduct the survey in each course.

With this project, IEA Hamburg proves once again our ability to combine effectively a standardized study implementation with tailor-made study support and innovative procedures. We look forward to conducting the study and gaining insights into this important area.

IEA International Research Conference 2019

PAULÍNA KORŠŇÁKOVÁ

The IEA International Research Conference (IRC) is an international forum for colleagues working with IEA data. Held every two years, it creates an opportunity to exchange ideas and information on critical issues related to working with IEA data along with a space for informal discussions and networking. Over the past few years, the IRC has seen growing numbers of submissions as well as devoted support from colleagues across countries and disciplines who provide their expertise during the review process to improve the perspective and quality of the accepted contributions. Since the IRC in 2015, it has been my pleasure to team up with the hosts and colleagues from IEA to organize the conference and shape its agenda. Each of the previous conferences has brought some innovation—symposia were introduced in 2015 while 2017 launched our poster session and the poster prize in honor of Professor Constantinos Papanastasiou who pioneered the IRC idea in 2004. This year, we trialed a new format of hosting panel sessions to provide a platform for ongoing discussion among researchers and other stakeholders of IEA studies. During these three past IRC editions (2015, 2017, and 2019), I have witnessed a change related to the quality and focus of the submitted

proposals. Traditionally, IEA IRCs have been organized around the strands of IEA trend studies: TIMSS, PIRLS, ICCS, and ICILS. Since 2015, we have facilitated three new strands to cater for the overarching methodological issues in large-scale assessments, the policy impact, and facilitating the use of IEA studies for practitioners (teachers and teacher educators).

The most recent IRC, the 8th IEA IRC, took place on June 26-28, 2019 in Copenhagen, hosted by IEA member institution, the Danish School of Education, Aarhus University.

Our conference theme was “The differences that make the difference,” and we did indeed achieve some!

The achievement was not only quantitative (an increased number of submissions and participants), but also qualitative as we saw an increase in both the quality of research presented as well as in the number of submissions related

to methodological aspects and analytical approaches in using IEA data. There was also a clear and growing interest in strategies for making research findings accessible and relevant for others.

I would like to thank our hosts, Christian Christrup Kjeldsen and all of the team at Aarhus University, for their warm and generous hospitality. The IRC continues to offer a unique opportunity to stimulate the exchange of ideas among researchers from different research orientations as well as the wider educational community.

While keeping our roots in educational research using IEA data, let us aim to break new grounds in educational practices to continue to improve both attainment and motivation to learn in future generations.

I cannot wait to see you at IEA IRC 2021!



203

conference participants

99

workshop participants

66

*accepted submissions:
53 papers, 9 posters, 4 symposia*

Impressed by the quality of all submissions, our judges selected two joint winners for the *Constantinos Papanastasiou Poster Prize*. Congratulations to:

Kondwani Kajera Mughogho:

An Application of PRMSE to Evaluate Subscale Score Value in TIMSS 2015 Fourth Grade Mathematics

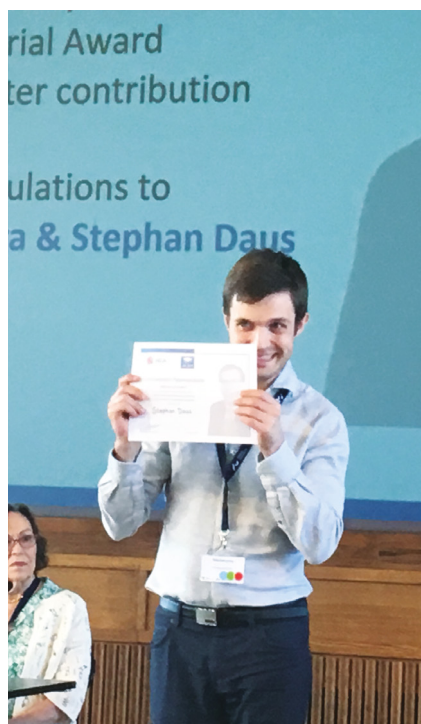
Stephan Daus:

Norwegian Science Teachers' Content Coverage in Middle School: Patterns and Factors

For highlights of the conference including photos and video recordings of our three keynote presenters, please visit our website: www.iea.nl



Kondwani Kajera Mughogho



Stephan Daus

Join us at IRC 2021

The 9th IEA IRC will be hosted by the United Arab Emirates Ministry of Education from *June 23-25, 2021* with pre-conference workshops held on *June 21 and 22*.

We look forward to seeing you there!

Update from the Capacity Building team

CLARA BEYER

Supporting countries to develop their capacity to implement and learn from educational assessments is an important part of IEA's activities. Recently, IEA Hamburg created an official group, under the auspices of the International Studies Unit, devoted to meeting a growing demand for the development of educational monitoring projects focused on capacity building in both IEA and non-IEA member countries. The new Capacity Building team, led by Oliver Neuschmidt, is comprised of Clara Beyer, Sebastian Meyer, and Adeoye Okeyan.

The team has been busy this past year, with activities that include: concluding the Haiti National

Evaluation reporting period; implementing the Rosetta Stone project in Latin America, while endeavoring to further develop the project to include other regional assessments around the world; and overseeing the administration of the nascent Literacy and Numeracy Assessment (LaNA) linking assessment in Serbia and the Republic of North Macedonia, while preparing for further administrations.

The Haiti National Evaluation, which took place in spring 2017, examined how fourth grade students in Haiti perform in the subjects of mathematics, French, and Creole. As described in previous newsletters, the IEA's role in the Haiti National Evaluation was to

focus on capacity building in areas related to assessment. During the past year's reporting period, this took the form of data processing; writing two reports based on the results of the gathered data; and training Ministry of National Education and Vocational Training (Ministère de l'Éducation Nationale et de la Formation Professionnelle; MENFP) representatives on how to analyze the gathered data.

Two reports on the fourth grade assessment were released: one in October 2018, and the other in July 2019. The content of the reports were a collaborative effort based on input from the MENFP and the Inter-American Development Bank. IEA traveled to Haiti to present the results of both reports and administer a training in the use of the IEA IDB Analyzer, which was configured to analyze the Haiti National Evaluation 2017 datasets. While IEA's official role has now concluded, we hope to foster a lasting dialogue and contribution towards the ongoing effort to inform and improve the Haitian Education system.

Another key development in the Capacity Building team during the last year concerns the Rosetta Stone project developed by the TIMSS & PIRLS International Study Center at Boston College and IEA. The objective is to



Oliver Neuschmidt presenting results from the **Haiti National Evaluation 2017** to the Ministry of Education, May 2019.

help monitor progress towards Sustainable Development Goal (SDG) 4, which aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.” Rather than inviting all countries to participate in TIMSS and PIRLS for SDG 4 reporting purposes, the Rosetta project seeks to link the results of regional assessments with the TIMSS and PIRLS achievement scales by constructing a concordance table. This would make it possible to project the achievement distribution of each country participating in one of the linked regional assessments onto the TIMSS and PIRLS scales.

Following a successful field test in Chile in 2018, during which Rosetta Stone booklets were administered in tandem with the Regional Comparative and Explanatory Study (ERCE), a main study administration of the Rosetta Stone booklets in

addition to ERCE booklets in three Latin American countries is planned for August-October 2019. As a collaborative effort between the TIMSS & PIRLS International Study Center, IEA, LLECE (Latin American Laboratory for Assessment of the Quality of Education), UNESCO, and the participating countries (Chile, Colombia, and Guatemala), the Rosetta Stone project plans to link assessment results of ERCE to TIMSS and PIRLS by 2020. Given the success of the Rosetta Stone project’s implementation in Latin America, additional iterations involving regional assessments in other parts of the world are envisioned in the coming years.

Finally, preparations for LaNA—an assessment specially designed for education systems in which TIMSS and PIRLS may be too challenging to administer for a variety of reasons—have continued. During the past year, the Capacity Building

team has overseen administration of LaNA booklets in tandem with TIMSS booklets in two TIMSS 2019 countries: Serbia and the Republic of North Macedonia. From April to May 2019, both countries administered both sets of booklets to students in their countries, enabling the two assessments (i.e., TIMSS and LaNA) to be linked in a later step. Such a linkage offers both the potential of providing further data for reporting on the SDG 4, as well as the overarching goal and benefit of capacity building within participating countries. IEA is in the process of finalizing the development of LaNA, with the goal of preparing for a worldwide application of the assessment.

In the coming year, the Capacity Building team looks forward to continuing to develop new projects that help to address a more diverse cohort of education systems worldwide.



Carlos Cayumn Cofré (UNESCO), Maria Baez Cruz, Kerry Cotter (both from TIMSS & PIRLS International Study Center, Boston College), Sebastian Meyer (IEA), and Francisco Andrés Gatica Eguiguren (UNESCO) at the **ERCE/Rosetta Stone meeting** in Panama City, June 2019.

Building up a Scaling team at IEA Hamburg

JUSTIN WILD AND SABINE MEINCK

Since IEA Hamburg took over the role of international study center for selected studies, involving tasks related to development, management, and analysis of international large-scale surveys, it was decided to strengthen our capacity for data analysis; specifically, the analysis of latent constructs embedded in both self-report instruments and cognitive tests.

With recent additions to our staff, we succeeded in the efforts to establish a Scaling team within our Research and Analysis Unit (RandA). Dr Agnes Stancel-Piątak (deputy head of RandA and Sampling), is recognized as an expert in latent construct development and analysis, and was appointed to lead team development. Dr Minge Chen joined the team in 2017 with a Master's in Applied Statistics and a PhD focusing on curriculums and quantitative analysis in education. She was joined by Dr Justin Wild in 2018, bringing expertise in the field of latent modeling along with sophisticated programming skills. Dr Mojca Rozman complemented the team at the beginning of 2019 with knowledge of item response theory, a versatile tool for scaling. With the support of external experts such as Dr Eugenio Gonzalez, Dr Plamen Mirazchiyski, and Dr Hynek

Cígler, who have prior experience and knowledge regarding scaling analysis in large-scale assessments, the team has recently and successfully completed the scaling analysis for the TALIS 2018 and TALIS Starting Strong Survey 2018 studies, conducted in collaboration with the OECD.

The team is currently working with the field trial data of the Life Skills and Citizenship Education study in the Middle East and North Africa region with UNICEF and the World Bank, aiming for the development of valid instruments for this study. In addition, the team continues to grow with the recent hire of a young psychometrician, Dr Yuan-Ling (Linda) Liaw, who obtained her PhD in measurement and statistics at the University of Washington.

Professional development opportunities: Workshops offered by IEA

TAHIRA ALI QADRI, AYSEL GOJAYEVA, AND SABINE MEINCK



IEA has always strived to promote thorough understanding of and research in the provision of educational services to improve education worldwide. Through its studies, IEA gathers high-quality data on many strands of educational achievement and the contexts of learning. All data is publicly available and IEA encourages researchers worldwide to use it. However, the complex structure of large-scale assessment data poses some challenges for statistical analysis, interpretation

of the results, and their translation into policy-relevant messages. This inspired IEA to offer learning opportunities by means of professional development workshops and consultancy by experts in the field.

IEA conducts these workshops regularly at international research conferences, often in collaboration with partner institutes such as IERI (www.ierinstitute.org). IEA also provides workshops that are tailored to suit the specific needs and expectations of interested

parties. Our collaborative network of researchers and technical specialists enables us to share sophisticated research techniques and methods to build required capacities.

The workshops are designed to cater to all interested in learning about fundamental and advanced aspects of large-scale assessments. Responding to the latest research developments in the field, the workshop content is continually updated covering a variety of topics, including training on statistical data

analysis, and writing for various audiences.

Our workshops are arranged in thematic areas including statistical methods, designing surveys and implementing survey operations procedures, and report writing and publishing. Each thematic area consists of a series of basic and advanced courses, often building up on each other.

Workshops covered within the theme of Statistical Methods include training on quantitative analysis, analysis on large-scale assessment data, advanced modeling methods applied to large-scale assessment data (such as multilevel modeling, structural equation modeling, and multilevel structural equation modeling), and statistical techniques for measuring latent constructs (such as item response theory).

Workshops conducted under the theme of ILSA: Methods, Survey Design, and Implementation include survey operations procedures in comparative cross-national studies, models used in conducting educational surveys, sampling and methods to develop survey tools such as questionnaires, items, and test designs in the international large-scale assessment field.

For workshops training participants under the theme Writing and Publishing, the focus is on writing comprehensive thematic reports, policy briefs, and academic papers based on large-scale assessment data.

Workshops are conducted as a means to share skills, but also to provide an environment for exchanging ideas and developing research networks. The methods applied in IEA workshops are specifically selected to

accommodate this goal. All workshops are conducted as in-person sessions (i.e., participants and trainers meet in one location as opposed to remote trainings, such as webinars). Each workshop combines lectures and tutorials with opportunities for participants to apply and practice what they have learned, but also to discuss emerging issues amongst peers. Experienced instructors are on hand to provide guidance and advice to participants, and explicitly encourage exchange and collaboration. Participants share their ideas, approaches, and findings with the group, resulting in an inspiring atmosphere. Workshops benefit from the fact that the trainees usually come from multicultural backgrounds, bringing in multiple perspectives

on the topics. Catering to this audience, our workshops are mostly conducted in English but some are also available in German, Spanish, Arabic, and French.

To stay informed about our upcoming workshop events, for more detailed information on course topics, dates, or the prior knowledge required for any course, please contact us using the details below. We also welcome enquiries about tailor-made workshops and we would be delighted to discuss what we can offer to support your training requirements.

Contact

Website: www.iea.nl/research-services

Email: randa@iea-hamburg.de

Phone: +49 40 48500 658



Data protection update

HEIKO SIBBERNS

The General Data Protection Regulation (GDPR) issued by the European Commission entered into force as of May 25, 2018. Since IEA is registered in the Netherlands and many member countries are located in Europe, the rules of the GDPR also apply to IEA and its partners. Regulations have an influence on procedures in IEA studies at several levels, but also on web presence, submission of newsletters, and internal procedures like processing of staff data.

In the first half of 2018, we undertook general GDPR preparations such as identifying areas where GDPR compliance issues play a role. We focused particular attention on creating a clear overview of the flow of data within our studies and producing a comprehensive identification of all partners involved and their roles in processing the data. This happened at a general level but was detailed enough to serve as a template for all IEA studies.

In 2018, a one-day meeting at IEA offices in Hamburg took place, which involved a working group including IEA Hamburg's Data Protection Officers, staff working on international large-scale assessments, and external advisors. During the meeting the following topics were discussed:

- Final discussion and agreement of data flow chart;
- GDPR-related roles of the IEA,

participating countries, and National Research Coordinators (NRCs);

- GDPR-related roles of international study centers such as Boston College, Australian Council for Educational Research (ACER), and other external contractors;
- General compliance in relation to cross-border personal data transmittal to non-EU countries;
- Identification of the need for additional contractual agreements with partners within the IEA data flow process; and
- Technical and organisational measures taken by IEA to safeguard the data and ensure adequate protection of the personal data used.

After the meeting, model contract clauses were concluded with non-EU partners for transmission of personal data outside the EU. The model contract clauses were concluded with Boston College for TIMSS and PIRLS and with ACER for ICILS. Sub-processors such as Statistics Canada were also addressed. While the model contract clauses were taken as issued by the European Commission, a study-specific description of the technical and organisational security measures implemented by the IEA in Hamburg and by the partners also had to be prepared.

In the context of TIMSS 2019, Data Protection Declarations (DPD) were developed which are provided to

school principals, teachers, students, and parents. The documents which relate to the student instruments also include a consent form that needs to be signed by parents. Participating countries were asked to adjust the DPDs in view of compliance with national regulations and legal standards.

Since late 2018, a joint controller declaration clarifying GDPR-related roles and responsibilities as well as data transmission between the IEA and participating countries was prepared and finalized. Further contractual arrangements with partners, such as processing agreements, ruling exchange of data with external processors were prepared and executed. Processing agreements were issued for researchers who are not members of an international study center but needed access to study data in order to support the international study center. Currently, country-specific joint controller declarations are prepared in cooperation with TIMSS NRCs.

Apart from these activities, GDPR-compliant consent forms for sharing of newsletters were also prepared and are now in use. IEA's privacy policy on the website was updated for GDPR-compliance. Within the IEA, the process of processing staff data was reviewed and, where necessary, adjusted. IEA Hamburg staff were also informed and trained on GDPR-related matters.

Reducing early school leaving in Malta

EEMER EIVERS, RESEARCH CONSULTANT

Reducing early school leaving (ESL) rates in member states to below 10 percent by 2020 is one of the main education targets in the European Commission's "Europe 2020" strategy. With one of the highest rates of ESL in the European Union, this is a particularly ambitious target for Malta. Since the target was set, the Maltese Ministry of Education and Employment has launched a national strategy to reduce ESL,

encompassing a wide variety of interventions and compensatory measures. However, methods to allow early identification of at-risk students remained a gap. The Ministry therefore sought advice from the European Commission's Structural Reform Support Service (SRSS) about developing a centralised monitoring system to support the early identification of such students.

As a result, IEA was awarded a contract to complete a review of

Maltese policies and practices that might help or hinder early identification, and to propose options for a national monitoring system. It was my pleasure to lead this project. The work had a number of elements, including a review of current monitoring practices and of data sharing between schools, the Ministry, and other agencies. This, and stakeholder consultations, underpinned by relevant World Bank and UNICEF guidelines, helped to define the business



ESL project team meeting with the Minister for Education and Employment (MEDE). From left to right: Alex Farrugia (MEDE), Stephen Cachia (MEDE), Minister Evarist Bartolo, Eemer Eivers (Research Consultant, IEA), Paulína Koršňáková (IEA), Konstantin Scheller (SRSS), and Pamela Spiteri (MEDE)



Celebrating a successful project (from left to right): Konstantin Scheller (SRSS), Alex Farrugia (MEDE), Paulína Koršňáková (IEA), Joseph Chircop (MEDE), Eemer Eivers (Research Consultant, IEA), and Pamela Spiteri (MEDE)

objectives for a monitoring system. While the risk factors for ESL tend to be similar in different countries, local context can also influence their relative importance. To tailor a monitoring system to the Maltese context, we analysed longitudinal administrative data on the cohort of students who should have completed compulsory schooling in 2016/17. Not attaining European Qualifications Framework (EQF) Level 3 at the end of compulsory schooling was treated as an earlier proxy for ESL status (the European Commission's definition of ESL relates to those aged 18 to 24). The analyses helped to identify a number of risk factors, including some relatively specific to Malta. We include these risk factors as potential flags in the proposed monitoring system, which addresses a number of identified

problems with data access and sharing procedures, as well as targeting improved data security and accuracy. Finally, we mapped current Maltese policies with regard to ESL against the research literature and identified a number of gaps. Based on the outcomes of the mapping, the IEA team proposed that some Maltese interventions should be expanded and that a small number of interventions from other countries would be worth adopting.

The work was completed in September 2019 and the Ministry is currently considering how best to implement the recommendations. The implementation plans will form part of a symposium hosted by the Ministry in November, called "Early Leaving from Education and Training–The Way Forward." Ann-Kristin Koop from IEA Hamburg's

Research and Analysis Unit will present a paper on some of the characteristics associated with non-attainment of EQF Level 3 in Malta, while I will present a paper describing the broader project and its policy implications. We look forward to sharing research insights that will help to support future policy decisions.

Publication highlights

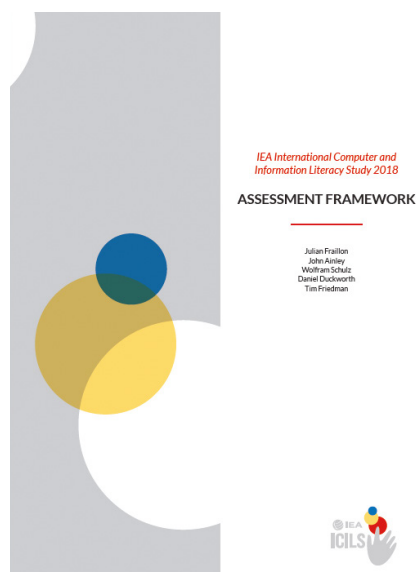
GILLIAN WILSON AND GINA LAMPRELL

This year, IEA has launched the first publication from ICILS 2018, added two volumes to the IEA Research for Education book series, released four new briefs in our IEA Compass: Briefs in Education series, and published several articles in the IEA-ETS Research Institute (IERI) journal, *Large-scale Assessments in Education*.

ICILS 2018

Ahead of the release of the ICILS 2018 international report on November 5, IEA recently published the accompanying ICILS 2018 Assessment Framework. ICILS measures students' computer and information literacy, offering an insight into how well students are prepared for study, work, and life in the digital age. The ICILS 2018 Assessment Framework provides a rationale to the structure, design, and content of the study, describes the field and constructs to be measured, and situates the study within the relevant literature. The 2018 framework differs from the earlier cycle of the study, as it introduces a new international option assessing students' computational thinking achievement. The assessment framework can be accessed from the IEA or Springer websites. The supporting technical report and user guide will be released after

the international report, in early 2020. As always with the launch of one of our major studies, we look forward to the wealth of further research generated as a result of the important data made available by ICILS 2018, and to sharing the in-depth national reports produced by participating countries.



IEA Compass: Briefs in Education

The IEA Compass: Briefs in Education series offers the opportunity for secondary analysis of data from IEA studies, addressing issues relevant to a broad range of educational stakeholders, including researchers and policymakers, in an accessible and easy-to-access format. Compass Briefs are open access and available on the IEA website.



Releases from the past year include:

- **Preparing the ground: The importance of early learning activities at home for fourth grade student achievement.** By Sabine Meinck, Agnes Stancel-Piątak, & Aimee Verdisco
- **Does reading literacy instruction vary according to language or culture? Similarities and differences in English-, German- and French-speaking education systems in PIRLS 2016.** By Dominique Lafontaine, Virginie Dupont, & Patricia Schillings
- **Academic achievement and feelings of safety: a closer look at gender and grade level differences.** By Ellen Prusinski, Dirk Hastedt, & Sandra Dohr
- **Promoting effective mathematics teaching. Analyzing teacher**

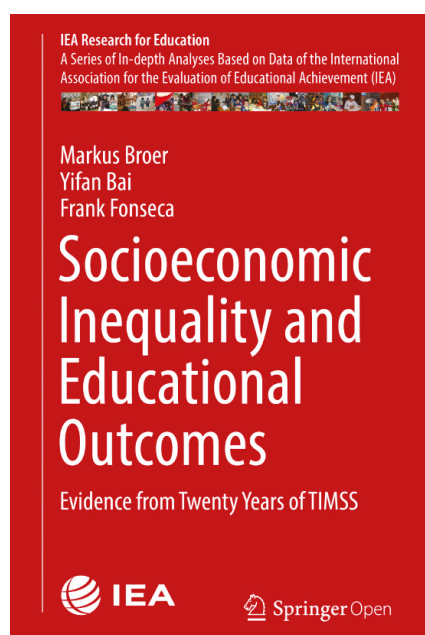
enactment of grade 8 mathematics curricula using TIMSS data. By Aaron Benavot, & Treisy Romero-Celis

IEA Research for Education

Our open access thematic book series, IEA Research for Education, presents in-depth, peer-reviewed, thematic reports, exploring critical questions in educational research and policymaking using the rich data provided by IEA studies. Download figures in the last year demonstrate the growth of the series, now well established as a key resource for educational researchers and policymakers alike.

This year, two more volumes have been published in the series, with a further two due to be released imminently. All volumes in this series are freely available from the Springer website. IEA publishes calls for proposals twice a year, and welcomes speculative proposals on topics related to IEA studies.

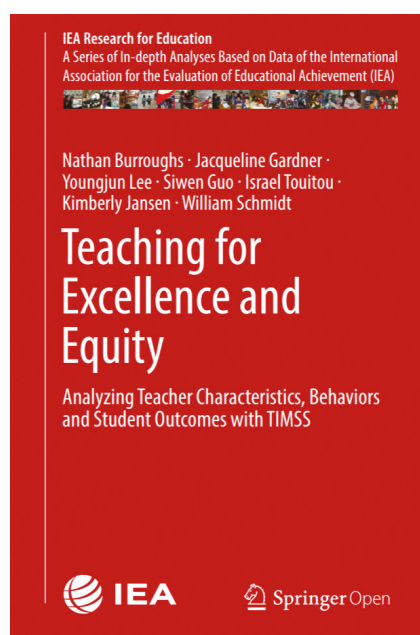
Recently published titles in the series include:



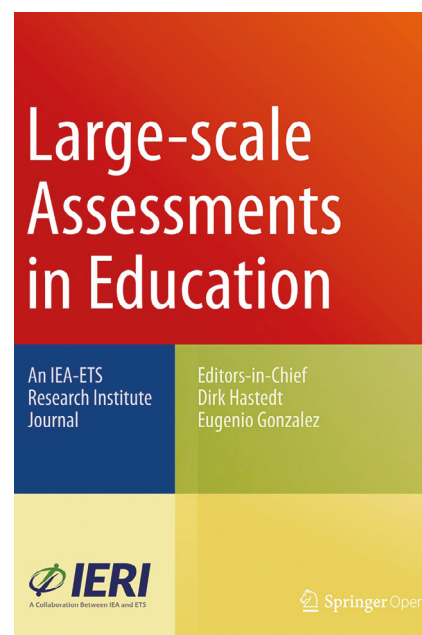
In March 2019, the American Institutes for Research (AIR) hosted a presentation and discussion on the fifth volume in the book series. Improving achievement among their disadvantaged students and narrowing the achievement gaps between students of low- and high-socioeconomic backgrounds is a common policy goal for many education systems, and 20 years of TIMSS data is a valuable resource for a deeper investigation of the topic. A full-length video recording of the webinar may be accessed on the AIR website.

Upcoming volumes in the series include:

- Michaelides, M., Brown, G.T.L., Eklöf, H., & Papanastasiou, E. (2019). *Motivational profiles in TIMSS mathematics. Exploring student clusters across countries and time*. IEA Research for Education: Vol. 7.
- Gebhardt, E., Thomson, S., Ainley, J., & Hillman, K. (2019). *Gender differences in computer and information literacy. An in-depth analysis of data from ICILS*. IEA Research for Education: Vol. 8.



Large-scale Assessments in Education



Large-scale Assessments in Education has grown significantly since the journal was established in 2013; this is reflected by both its increasing international downloads and the breadth of topics covered.

Recent titles include:

- Gray, H., Lyth, A., McKenna, C., Stothard, S., Tymms, P., & Copping, L. (2019). Sex differences in variability across nations in reading, mathematics and science: A meta-analytic extension of Baye and Monseur (2016). *Large-scale Assessments in Education*, 7(2).
- Hwang, J. (2019). Relationships among locus of control, learned helpless, and mathematical literacy in PISA 2012: Focus on Korea and Finland. *Large-scale Assessments in Education*, 7(4).
- Pivovarov, M., & Powers, J.M. (2019). Generational status, immigrant concentration and academic achievement: Comparing first and second-generation immigrants with third-plus generation students. *Large-scale Assessments in Education*, 7(7).

- Meinck, S., & Brese, F. (2019). Trends in gender gaps: Using 20 years of evidence from TIMSS. *Large-scale Assessments in Education*, 7(8).

The journal editors encourage submissions on a variety of topics, but articles suitable for publication in the journal must focus on improving the science of large-scale assessments and/or make use of data collected by large-scale assessment programs. You can find out about how to submit a paper to the journal on the Springer website, including guidelines for authors, and how to get in touch with any queries. *Large-scale Assessments in Education* remains open access, with publication costs covered by IERI; the IEA-ETS Research Institute.

Open access publishing with IEA

All works published by IEA are open access and free to download. IEA is committed to the production and dissemination of state-of-the-art empirical research in education, in support of our goal to improve the quality of education for all. By publishing open access, we ensure that the research has the widest possible reach and the greatest possible impact. We further promote our publications and research via press releases, email alerts, and social media. If readers are interested in collaborating on a Compass Brief, have a submission that they think may be suitable for the IERI journal *Large-scale Assessments in Education*, or have a thought-provoking concept for our IEA Research for Education series, they are invited to make contact with the IEA Publications team via the IEA Secretariat.

Details of all our publications are available on the IEA website at iea.nl/publications

ILSA Gateway

The ILSA Gateway, an initiative of NCES developed and maintained by IEA, is a regularly updated resource offering centralized access to all major international large-scale assessments (ILSAs) in education conducted by IEA and other organizations. The Gateway offers a platform from which to navigate and explore everything ILSA—providing detailed information on study frameworks and design, key results and characteristics of study data, and direct links to documents and data on the various external study websites. The Gateway continues to grow and expand as the ILSA community's key resource.

Access and explore the studies and resources at ilsa-gateway.org.



The high caliber of applications to our annual research awards resulted in our judging panel selecting three winners.

There were two winners of the Bruce H. Choppin Memorial Award for outstanding dissertation: Dr Annemiek Punter and Dr Stephan Daus. The Richard M. Wolf Memorial Award for an outstanding paper was presented to Dr Yoonjeon Kim.

Dr Punter received the Choppin Award for her PhD dissertation, *Improving the modelling of response variation in international large-scale assessments*. The thesis presents five studies that contribute to research in the field of education by deploying ILSA data in research areas where the availability of standardized data from multiple countries offers new research opportunities. The topics addressed are: computer and information literacy, parental involvement and reading literacy, and language demand in testing mathematics. Each chapter also explores methods for identifying and handling potential differential item functioning (DIF) in the framework of item response theory.

The thesis demonstrates how DIF analyses can be insightful by benefiting from the synergy between a methodological focus on validity and a focus on more substantive research questions. More than

simply a task to tick off before the “real” questions are investigated, DIF analyses can lead to insights into effects underlying test results. The thesis addresses how, in studies with a substantive interest in comparing groups, the study of validity on both test and questionnaire items should be integrated into the methodology. Though there is no clear-cut, one-method-fits-all strategy, the thesis shows that there are many ways to approach the issue.

Dr Annemiek Punter holds a degree in psychology and a research masters in social systems evaluation and survey research, both from the University of Twente. As a researcher at the University of Twente, Dr Punter became involved in the Dutch administrations of ICILS and several cycles of TIMSS. In 2015, she commenced her PhD research on data from ICILS, TIMSS, and PIRLS, which she completed at the end of 2018 at the university's Department of Research Methodology, Measurement, and Data Analysis. Annemiek is currently pursuing her research interests as an educational researcher at the Dutch School Inspectorate, with a focus on national assessments.

Dr Daus received the Choppin Award for his PhD dissertation, *Profiling and researching TIMSS by introducing a content lens on eighth-grade science (PARTICLES)*. TIMSS data is often

analyzed at the coarse-grained levels such as for the entire math or science subject or for an entire country. This thesis demonstrates that TIMSS, which is oriented towards the fairly-common curriculum across the participating countries, can offer fine-grained knowledge about curriculum specifics within countries, by analyzing the items and teachers' responses to questions about what topics they have covered.

The thesis investigates this curriculum-oriented nature of the TIMSS science assessment by evaluating the curriculum-sensitivity of the items. It offers an innovative approach that exploits the adjacent-grade design for Norway in TIMSS 2015 where eighth and ninth grade students are sampled within each school. The design accounts for the fact that students generally will perform better in higher grades by maturation and not necessarily through what has been taught, thus students' learning specifically related to curriculum teaching is being detected by the assessment.

The thesis raises a broader discussion of how to ensure that opportunity to learn variables can be improved and what kind of analytical approaches are needed, which is considered necessary to collect evidence that TIMSS is in fact linked to the curricula of the participating countries.

Having originally trained in Arabic



Dr Annemiek Punter



Dr Stephan Daus



Dr Yoonjeon Kim

and international development, Dr Stephan Daus' interests moved towards the challenges of education. He obtained his second master's degree in Social Research Methods and Statistics from the University of Manchester with a distinction, where he wrote his master's thesis on predicting science inquiry teaching using the TIMSS 2011 data. He was then offered a position as a Doctoral Research Fellow at the Centre for Educational Measurement at the University of Oslo where he continued digging deeper into the TIMSS data and assessment framework. He is currently employed at the Nordic Institute for the Studies of Innovation, Research and Education.

Dr Kim received the Wolf Award for her paper, *Revisiting classroom practices in East Asian countries: Examination of within-country variations and effects of classroom instruction*, published in Teachers College Record, 120(7).

Using the TIMSS 2007 data, Dr Kim's paper examines the heterogeneity of classroom organization within societies and the association between classroom practices and student achievement. Findings show that East Asian classrooms do tend to be more intensely teacher-centered and display less complexity than in other nations on average. However, classrooms with more complex and student-centered instruction within East Asian societies display higher achievement; an opposite

association is found when comparing between-country relationships worldwide. At the same time, these positive effects observed in East Asia diminish when characteristics of schools and the social-class backgrounds of students are taken into account, similar to patterns long observed in other societies.

These findings suggest a need to rethink the assumption of homogeneity of schooling within East Asian nations and to be cautious in generalizing about East Asian classrooms based on national average features. Often, classroom practices prevalent in East Asian countries are celebrated as best practices to emulate, criticized for their rigidity, or simply regarded as non-importable due to the distinctiveness of East Asian societies. But, as this paper shows, East Asian countries face educational challenges similar to those observed in any other countries. Once we acknowledge the commonality as well as the differences, cross-national research would allow us not only to better understand perennial educational problems and the assumptions we hold about classroom practices, but also inform valid implications for policy and practice.

Dr Yoonjeon Kim received her PhD in Education Policy, Organizations, Measurement and Evaluation from the University of California, Berkeley and is currently a research specialist at

the Center for the Study of Child Care Employment in Berkeley. Her research examines how macro-level social and cultural conditions shape the social organization of schooling and student learning, using a comparative and international perspective. Her work in the United States focuses on how social structures and families' cultural backgrounds shape the educational environment of immigrant children and their learning, using a transnational perspective. In recognition of her growing body of scholarship, she was selected as a member of the 2017-2018 American Educational Research Association and Society for Research on Child Development Early Career Fellow.

IEA Awards

IEA offers two annual awards to recognize high-quality empirical research that makes use of IEA data. These awards were established in commemoration of the significant contributions that Bruce H. Choppin and Richard M. Wolf made to IEA. In addition, the biennial IEA International Research Conference offers a poster award established in memory of Constantinos Papanastasiou. The intention of the awards is to encourage and promote outstanding research (using IEA data) conducted by graduate students, postgraduate students, and established researchers. For more information, please visit iea.nl/opportunities/award

Gordon Ambach (1934-2018)

Honorary Member IEA

HANS WAGEMAKER



Gordon MacKay Ambach

IEA was saddened to learn that Gordon MacKay Ambach passed away peacefully at home in 2018.

Educated at Yale and Harvard, Gordon had a long and distinguished career in education, which included appointments as the Commissioner of Education for New York State and Executive Director of the Council of Chief State School Officers. Less well known to IEA members was his passion for tennis and his involvement in later years with the New Haven Symphony Orchestra and the Smithsonian Institution, among others.

Gordon was appointed as the United States representative to IEA in 1990 and subsequently to the Standing Committee from 1991 to 2001. His appointment occurred at a critical point in the development of IEA and Gordon played a key role in

transforming IEA into a professional organization and developing links with funders. As a member of the Standing Committee, he also contributed significantly to the creation of policies for IEA's cycle of studies and was instrumental in helping secure support for the ongoing funding of TIMSS and PIRLS in particular. His contributions cannot be overstated.

As Executive Director at the time of his tenure, Gordon was always available to provide me with counsel and advice, which, inevitably, proved to be sound. His keen intellect was highly valued among the members of the Standing Committee as well

as the wider body of the General Assembly.

Gordon is survived by his wife, Lucy, his children, Kenneth, Alison, and Douglas, and 10 grandchildren.

We would like to extend our condolences to Lucy and his wider family.



Financial summary 2018

ROEL BURGERS

The financial summary statements below show a positive operating result for the year 2018. However, exchange rate fluctuations had, as in previous years, a significant impact on the results. The receivables position has increased for the

past three years and remains high compared to the overall budget of IEA. While IEA's overall asset position remains stable, relatively small surpluses and a limited cash position continue to restrict the possibilities of the Association.

Full details are available in the IEA Annual Report 2018.

BALANCE SHEET – on December 31, 2018

Assets

X 1,000	2018 US\$	2017 US\$
Fixed assets		
Tangible	641	739
Intangible	502	653
Total fixed assets	1,143	1,392
Current assets		
Receivables	7,415	6,032
Cash	4,264	4,495
Total current assets	11,679	10,527
Total assets	12,822	11,919

Liabilities and net assets

X 1,000	2018 US\$	2017 US\$
Liabilities		
Project funds	3,716	2,616
Current liabilities	2,988	3,285
Total liabilities	6,704	5,901
Net assets		
Continuity reserve	9,100	9,100
Project reserve / Net assets	(2,982)	(3,082)
Total net assets	6,118	6,018
Total liabilities and net assets	12,822	11,919

STATEMENT OF ACTIVITY

X 1,000	2018 US\$	2017 US\$
Revenue		
Subsidies and participation fees	23,564	20,723
Membership fees	499	436
Others	96	24
Total revenue	24,159	21,183
Operating expenditure		
Project costs	21,995	19,688
Management, admin, info services	1,747	1,460
Total operating expenditure	23,742	21,148
Excess of revenue over operating expenditure	417	35
Foreign exchange results	(317)	814
Excess of revenue over expenditure	100	849

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IEA
General Assembly Members
2018



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