



International Council of Associations for Science Education

Supporting and promoting science education internationally
The ICASE Newsletter

April/May 2021

Welcome to the ICASE April/May 2021 Newsletter!

Welcome to the ICASE April/May 2021 Newsletter! The ICASE Newsletter is a publication containing current information about ICASE initiatives conducted by ICASE member organisations, and topics of interest in the field of science education. The table of contents for this issue is in the right-hand column.

The International Council of Associations for Science Education (ICASE) was established in 1973 by leadership at the United Nations Educational, Scientific and Cultural Organization (UNESCO) to link national science teacher associations and to extend and improve science education for children and young people throughout the world. Today, ICASE is a network of science teacher education associations, institutions, foundations and companies, working together to promote science and technology education internationally. ICASE facilitates communication and cooperation at national, regional, and international levels. The ICASE Strategic Plan (2013-2023) calls for ICASE member organisations to adopt a position of Excellence and Leadership in Science Education.



International Council of Associations for Science Education

Over the past 40+ years, over 200 organizations have been members of ICASE. Currently, there are 32 organizations from 30 countries contributing to the financial administration of ICASE.

www.icasonline.net/membership.htm

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ICASE Annual Membership Update

It's time to renew your organizational ICASE member fees!

We are updating our records, please complete the [ICASE member information sheet](https://www.icasonline.net/membership.html) found on our membership page: <https://www.icasonline.net/membership.html>

Membership fees are due January 1st each year and three-year options are available at a reduced rate!

Membership renewal is easy and can be done totally online on the ICASE Website at:

<http://www.icasonline.net/membership.html> and a receipt will be sent to you. If your organization needs to receive an invoice, please notify us to request an invoice.

ICASE provides opportunities for member organizations and their representatives to promote excellence and innovation in science teaching and learning for all through:

- connections to the members of other science organizations around the world;
- opportunities to serve in ICASE international leadership positions on standing committees and in international research initiatives;
- communication venues to disseminate information internationally to the members of international science organizations through the ICASE listserv, newsletter and peer-reviewed ICASE journal;
- collaborative funding opportunities to promote science education at regional levels; and
- organization of ICASE World Conferences, regional events, and workshops providing opportunities for professional development and networking.

How are your membership fees put to use?

ICASE membership fees are used for financial support of regional activities.

Approval for funding will be considered based on a written submission (request for funding support) to the ICASE secretary, which clearly indicates how the activity meets the following criteria.

All financial support for activities will be approved by the ICASE management committee, in consultation with the Executive Committee, and is subject to the availability of funds (generated by ICASE membership fees).

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Procedure to request financial support of regional activities

1. The applicant organisation must be a current financial member of ICASE.
2. The activity must promote science education at a regional level.
3. The applicant organisation should provide a description of the activity and the potential benefits (including the extent of benefits - number of beneficiaries, and how the activity meets the short-term and long-term goals of promoting science education in that region).
4. ICASE must be acknowledged as a sponsor on all publicity material, including the website advertising the initiative. The ICASE logo must be displayed on all materials associated with the funding.
5. Funding requests will be accepted for the following range in US dollars: \$500 – \$2,000. These funds are intended to cover special initiatives associated with activities occurring in benefit of each region.
6. The applicant organisation must provide a budget for the activity including other sources of funding.
7. The applicant organisation must have an institutional bank account for the transfer of funds.
8. The applicant organisation must nominate a person in their organisation who will take responsibility for the activity, all expenditures and reporting (via presentation and in writing) at the subsequent ICASE World Conference.

The report may be presented via video conferencing if the organization is unable to fund a member to attend an ICASE World Conference. Please note that the ICASE Management Committee reserves the right to approve funding for second and subsequent applications from the same region within a three-year period, even when the application may come from a different organisation.

BECOMING A MEMBER ORGANISATION

ICASE invites national, sub-national and multi-national organisations interested in the promotion of science and technology education to join its worldwide network. Organisations eligible to join are Science Teacher Associations (STAs), Science Societies, Institutes, Universities (or University Departments/Faculties), Industries, Companies, Centres and Museums. These organisations may have a sole interest in science education (or in one of its sub-disciplines such as biology, chemistry, physics, Earth sciences, etc.) or have wider interests, one of which is science education. Following the ICASE Constitution, requests for new members, whether full or associate, are approved by the ICASE Executive Committee.

ICASE provides opportunities for member organizations and their representatives:

- to promote excellence and innovation in science teaching and learning for all through
- connections to the members of other science organizations around the world;
- to serve in ICASE international leadership positions on standing committees and involvement with international research initiatives;
- to disseminate information internationally to the members of international science organizations through the ICASE listserv, newsletter and peer-reviewed ICASE journal;



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- to obtain collaborative funding aimed at promoting science education at regional levels; and
- to participate in ICASE World Conferences, regional events, and workshops providing opportunities for professional development and networking.

In addition, ICASE member organizations and their representatives receive reduced conference registration fees for attendance at all ICASE World Conferences. <http://www.icaseonline.net/membership.html>



Renew your organizational ICASE member fees and contribute to the leadership mission and vision of ICASE.

Are you interested in becoming more involved in ICASE?

Begin by connecting with your ICASE Regional Representative and joining ICASE Committees of interest.

Contact information for the ICASE Executive Committee, including the Management Committee, Regional Representatives, and the Chairs of all ICASE Standing Committees can be found on pages 25-26.

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A Condolence Letter For Professor Norm Lederman

Federation International
des Associations de
Professeurs de Sciences

INTERNATIONAL COUNCIL OF ASSOCIATIONS
FOR SCIENCE EDUCATION

Federación Internacional
de Asociaciones de
Profesores de Ciencias

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China
Immediate Past President
Bulent Cavas
Turkey
President Elect
Declan Kennedy
Ireland
Secretary
Sarfraz Aslam
China
Treasurer
Mary Mullaghy
Ireland

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Journal Editor
Steven Sexton
New Zealand
Representative to UNESCO
Teresa Kennedy
USA

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Nigeria
Asian Representative
Manabu Sumida
Japan
Australia / Pacific Representative
Leah Moore
Australia
European Representative
Manuel Filipe PCM Costa
Portugal
Latin American / Caribbean Representative
Cesar Mora
Mexico
North American Representative
Teresa Kennedy
USA

Standing Committees

Early Years STEM Education
Sue Dale Tunnicliffe
United Kingdom
International Projects
Jack Holbrook
Estonia
Membership
Virgilio Umangay Manzano
The Philippines
Pre-Secondary / Informal Science Education
Steven Sexton
New Zealand
Research / Publications
Baohui Zhang
China
Safety in Science Education
Bob Worley
United Kingdom
Science and Technology Education Centres
Janchai Yingprayoon
Thailand
Sustainability / Environmental Education
Yasemin Ozdem
Turkey
University Liaison
Miia Rannikmae
Estonia
Web Communications
Bulent Cavas
Turkey
World Conferences
Ben Akpan
Nigeria
World Headquarters Coordinator
Declan Kennedy
Ireland



<https://www.icaseonline.net/>

Mar. 21, 2021

ledermanj@iit.edu

Dear Professor Judy Lederman,

My name is ZHANG BaoHui. I am the president of ICASE (International Council of Associations of Science Education). The ICASE executive committee members had our regular meeting last night on Mar. 20, 2021 (China time). Prof. Teresa Kennedy shared the news about Professor Norman G. Lederman.

We were all deeply saddened to hear about the death of Norm. Although some of us heard the news late, we still decided to write this letter to express our deep condolences. So I am writing this letter on behalf of ICASE executive committee members. May he rest in peace.

Bulent Cavas shared the photo taken with Norm and you. Other professors gave their best wishes to you and your family. Norm worked as a representative of North America for ICASE before, so people all felt appreciative for his service.

I am a former student of Prof. Joseph Krajcik. We met before but it has been quite some years. I graduated in 2003 from the University of Michigan. Since I am now working in China, I could also read news about you and Norm about your academic exchange trips to China. His scholarship and friendship will be sorely missed by Chinese colleagues as well.

We thank you for giving us permission to reprint the story about Norm and publish the information on ICASE newsletter. We understand you and the family are going through a tough time. We will always be here to support you, Best wishes.

Sincerely yours.

ZHANG BaoHui



A sad announcement: *Passing of Professor Norman G. Lederman*
Originally distributed by the Association of Science Teacher Educators (ASTE)

It is with a heavy heart that we write to you with the sad news of the passing of **Professor Norman G. Lederman**. Norm passed away on the morning of **26 February 2021** after a brief and unexpected illness. As always, his wife and partner, Judy Lederman was right by his side. He embodied in his career the often-sought goal in our community of bridging the worlds of science teachers, science teacher educators, and science education researchers. Over the course of 47 years, Norm led a distinguished and impactful career as a science teacher, science teacher educator, and science education researcher and leader.

Norm held assistant professor positions in science education and teacher education at Syracuse University, State University of New York–Albany, and Oregon State University (OSU). At OSU, he was promoted to associate and then full professor. In 2001, he chaired OSU's Department of Mathematics and Science Education, and left that year to found and chair IIT's new Mathematics and Science Education Department. In 2011, Norm was named an IIT Distinguished Professor. By the time of his retirement in 2020, his IIT department had become a local, national, and international force in discipline-based mathematics and science education. Along the way, Norm was a Visiting Research Professor at National Changhua University of Education, Taiwan; Fulbright Scholar at the University of Pretoria, South Africa; Honorary Professor at the Hong Kong Institute of Education; Guest Professor at Beijing Normal University, China; and Distinguished Foreign Expert at the State Administration of Foreign Affairs, China. At the time of his passing, Norm was a "virtual" visiting professor at the University of Science and Technology of China. Norm was elected Fellow of the American Association for the Advancement of Science (2009) and American Education Research Association (2010). He was recognized with an honorary doctorate from the University of Stockholm, Sweden (2008). In 2011 NARST honoured him with the Distinguished Contributions to Science Education through Research Award for his outstanding and continuing contributions, notable leadership, and substantial impact in the area of science education.



Fig. 1 NSTA conference in 2019

The science education community worldwide lost a colleague, relentless advocate, and visionary leader with exceptional passion and dedication to the causes of science education. For those of us who knew Norm as an outstanding teacher, dedicated advisor, supportive mentor, and lifelong friend, our loss is even graver. We will miss him sorely. Judy Lederman can be reached at ledermanj@iit.edu or by mail at 239 Spartina Cove Way, Wakefield, RI 02879, USA.



**Prof. ZHANG BaoHui, President of ICASE, Visited the
Beijing Association for Science and Technology**

Dr. Sarfraz Aslam

On 5 April 2021, Professor ZHANG BaoHui, President of the International Council of Associations for Science Education (ICASE), was invited and visited the Beijing Association for Science and Technology.

Mr. MA Lin, Party Secretary of the Beijing Association for Science and Technology (BAST, <http://www.bast.net.cn>), and CHEN Weicheng, a senior inspector of BAST, along with other officials from the science popularization and international relationship offices, secretary-general of Beijing Association for Science Education Museums, BASEM) attended the meeting. The Chinese news has been posted on the website of BAST:

http://www.bast.net.cn/art/2021/4/6/art_23312_477704.html

Mr. MA welcomed Prof. ZHANG's visit. He provided an overview of BAST. He focused on the Beijing Association for Science Education Museums (BASEM) work because this association intended to join ICASE as her member.

He also introduced the Beijing International City Science Festival Alliance in the popularization of science and improved citizens' scientific literacy. He said that the popularization of science in the new era should pay more attention to disseminating scientific ideas and scientific methods and letting young people see the world from a scientific perspective.

President ZHANG thanked Mr. MA for calling for the meeting. He introduced the mission of ICASE and its work in the field of youth science and technology education, talent training, research, and teacher professional development.

He especially emphasized the urgent need for top researchers and science and technology teacher educators. He appreciated the work done by BAST and BASEM in the mechanical construction of popularizing science and technology literacy.

Professor ZHANG further mentioned some ways for ICASE to collaborate with BAST and BASEM, such as organizing conferences, developing teacher professional development workshops, and the like. He also hopes BAST can contribute to the popularization of science and technology internationally so that the world can "understand China."

Professor ZHANG promised to communicate with the ICASE Executive Committee and members about the good intention expressed by Mr. MA and his colleagues at BAST and BASEM.

The participants also had in-depth exchanges on museum-school integration projects, theme research, theme exhibitions, talent training, popular science activities, academic exchanges, and other aspects, which laid a good foundation for further collaboration.

Relevant leaders from the Science Popularization Department of the Beijing Association for Science and Technology, the International Department, Beijing Science Popularization Development Center, and Beijing Science Education Center Association attended the meeting.



Fig. 1: The meeting is in progress



Fig. 2: A Collective Photo



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**ZHANG BaoHui, President of ICASE Attended the
World Higher Education Conference (WHEC 2021) National Consultation Meeting of China**
Dr. Sarfraz Aslam

The Zhejiang University (Hangzhou) China hosted a national consultation meeting entitled the **World Congress on Higher Education** on 24 April 2021, in close co-operation with UNESCO's China Representatives. Professor ZHANG BaoHui, President of the International Council of Associations for Science Education (ICASE), was invited to provide a speech on the topic ***Professional development of higher education personnel is the key for the sustainable development of higher education.***

The meeting on behalf of the participants of this conference included UNESCO's official representatives for China, China's Ministry of Education and China's Higher Education relevant representatives of society, and experts and scholars in related fields. Professor WU Xiaocheng, Deputy Secretary of Zhejiang University Party Committee, gave the opening speech, Prof. XU Xiaozhou, Chair of UNESCO Entrepreneurship Education and President of Zhejiang University of Media and Communications, Professor Shahbaz Khan, Director of UNESCO's China Office and Robert Parua, Education Program Specialist at UNESCO also delivered their speeches. The conference participants, policymakers, researchers, and experts in higher education, practitioners discussed the challenges and crises of higher education in the current context and plan for the future of higher education in China and the world in 2030. President ZHANG thanked the hosting committee for calling for the meeting. He also introduced the mission of the ICASE and its work in the field of science and technology education, talent training, and research in science, technology, engineering and mathematics (STEM).

The first and second UNESCO World Higher Education Conferences were successfully held in Paris, France, in 1998 and 2009. **UNESCO will host the Third World Higher Education Conference (WHEC 2021) in Barcelona, Spain, in October 2021.** This meeting is significant to the international community in the wake of the COVID-19 global pandemic. The influence of an important conference held against the background is also oriented towards 2030 and guides the future development of higher education. The **Third World Congress on Higher Education** will bring together all relevant stakeholders for higher education systems and machines, formulate and prepare the road map for the new era. This roadmap will address the various forms of crisis that people and the planet face, focusing on the global devastation caused by COVID-19.

In addition, higher education needs to be based on the guidelines provided by UNESCO's "**Future of Education Initiative**" anticipate and prepare for it next to play a role in society ten years later. The Third World Congress on Higher Education aims to move away from traditional higher education models that open the door to new, innovative, creative, and visionary concepts that not only serve the current global sustainable development agenda, but also pave the way for the learning community of the future, a community for everyone, including all lifelong learners.

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Fig.1: A Group Photo



Fig.2: ICASE President is delivering a speech



Fig.3: Interactive Dialogue

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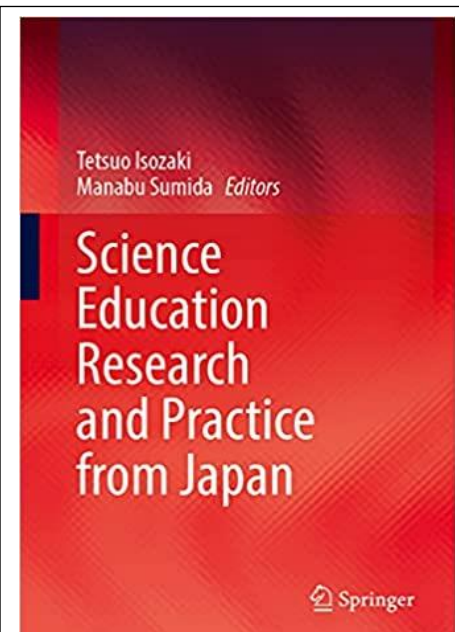
Science Education Research and Practice from Japan

Editors: Isozaki Tetsuo and Sumida Manabu (Eds.)

This book project poses a major challenge to Japanese science education researchers in order to disseminate research findings on and to work towards maintaining the strength and nature of Japanese science education. It also presents a unique opportunity to initiate change and/or develop science education research in Japan. It provides some historical reasons essential to Japanese students' success in international science tests such as TIMSS and PISA. Also, it helps to tap the potential of younger generation of science education researchers by introducing them to methods and designs in the research practice.

Tetsuo Isozaki is a professor of science education at the Graduate School of Humanities and Social Sciences, at Hiroshima University. He has taught general principles of science teaching, and history of science education for more than twenty years. His research interest is history of science education using comparative history, and science teacher education. He is the former vice president of the Japanese Society of Science Teaching, and a former executive member of East-Asian Society for Science Education.

Manabu Sumida is professor of science education in the Faculty of Education at Ehime University. He holds a PhD in Science Education from Hiroshima University. He was a visiting researcher at the University of Georgia in 1998 and a visiting scholar at the University of Cambridge in 2012. His research interest is science education for gifted learners. He has been director of Kids Academy Science for ten years. He is an advisory committee member of the Super Science High Schools. He is currently director general of Japan Society of Science Education, and the **Regional representative for Asia of the International Council of Association for Science Education (ICASE).**



Benefits

- Presents a unique opportunity to initiate change and/or develop science education research in Japan.
- Provides historical reasons essential to Japanese students' success in international science tests such as TIMSS and PISA.
- Explores aspects of Japanese science education by gathering the latest research findings.

For more detail visit

<https://www.springer.com/gp/book/9789811627453>



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Commonwealth Association of Science, Technology and Mathematics Educators (CASTME) Report



Dr. Sue Dale Tunnicliffe, PhD
Chair

Dr Balasubramanyam Chandramohan PhD, FHEA
Vice Chair and Webmaster

The Commonwealth Association of Science, Technology and Mathematics Educators (CASTME) links science, technology, engineering, and mathematics (STEM) educators across the Commonwealth. It has a UK-based board of trustees, with regional groups in Africa, Asia, and Europe. Globally, CASTME supports the UN Sustainable Development Goals, especially SDG4 (Education) and SDG5 (Gender).

CASTME was established in 1974 as an NGO recognized by the Commonwealth Secretariat. CASTME has members throughout the Commonwealth. It has advisers based in Australia, Canada, India, Malta, Mauritius, and Nigeria.
<https://www.castme.online/about>

In collaboration with Philip Harris/Findel, CASTME makes awards; in 2021, the Education Award, the Protect Our Planet Award, and the Community Award. <https://www.castme.online/https://wwwcastmeonline/>

CASTME publishes a regular Newsletter and has dedicated presence on Facebook and Instagram
<https://www.castme.online/othermedia>

Select CASTME's activities are publicised in
<https://www.castme.online/activities>

CASTME helps educators through regular updates on Resources
<https://www.castme.online/https://castme-onlinesquarespacecom/config/pages/resources>

Information on professional events in the UK and across the Commonwealth can be accessed at
<https://www.castme.online/notice-board>

ICASE members are welcome to use the resources and/or engage with/extend the ideas/practices underpinning the work of CASTME.

NOTE: The Facebook page and Instagram function list activities for mothers/carers and young children, and also contains activity sheets for pre-secondary science at home on the resources section of the webpage.

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UNESCO NEWS



Information compiled by Dr Teresa Kennedy
ICASE Representative to UNESCO

From the Collective Consultation of NGOs on Education 2030 (CCNGO)

GLOBAL EDUCATION MONITORING REPORT WORKSHOP

Take part in a GEM Report workshop to discover our latest SDG 4 monitoring tool - PEER, 2 June 2021

The GEM Report team invites you to join in a one-hour virtual workshop to learn about its new online monitoring tool, Profiles Enhancing Education Reviews (PEER). PEER presents comparable, systematic and up-to date information on national education laws and policies on selected topics. The profiles contain two chapters so far. The first covers inclusion in education, the theme of the 2020 GEM Report. The second chapter covers equitable finance, with additional chapters on non-state actors and climate change also under preparation.

Join the workshop to explore the use of PEER as an essential tool for comparative research on policies and legislation on issues central to achieving SDG 4.

[Register](#) for the virtual workshop on Wednesday 2 June, 15:00-16:00 CEST/09:00-10:00 EDT

Monitoring and Evaluation of Climate Change Education Project (MECCE)



[Click here](#) to listen to the One Planet podcast focusing on issues facing people and the planet with Anantha Duraiappah, Director of UNESCO's Mahatma Gandhi Institute of Education for Peace and Sustainable Development MGIEP, among others.

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UNESCO News Cont.

START ACTING BY LEARNING FOR OUR PLANET



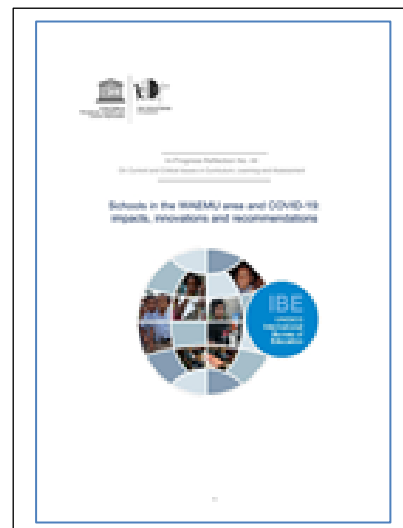
Watch and share the powerful [Start acting by learning for our planet](#) video produced for the UNESCO [World Conference on Education for Sustainable Development](#) which will be held as a virtual event from 17 to 19 May 2021.

JUST PUBLISHED



[International Forum on AI and the Futures of Education, developing competencies for the AI Era, 7-8 December 2020: synthesis report](#)

[Developing a hybrid learning curriculum framework for schools](#)



UNESCO News Cont.

JUST PUBLISHED, cont.



[Learn for our planet. A global review of how environmental issues are integrated in education](#)

[Also available in French and Spanish](#)



[Mission: Recovering education in 2021](#)

Also available in French and Spanish

[Women in higher education: has the female advantage put an end to gender inequalities?](#)

[Mujeres en la educación superior: ¿la ventaja femenina ha puesto fin a las desigualdades de género?](#)



UNESCO News Cont.

WORLD EDUCATION BLOG – REPRINT (Posted on 3 May 2021 by GEM Report)



<https://gemreportunesco.wordpress.com/2021/05/03/female-science-and-mathematics-teachers-better-than-they-think/>

[Listen to this blog](#) or read the transcript below.

Female science and mathematics teachers: Better than they think?

By Dirk Hastedt (*International Association for the Evaluation of Educational Achievement*),
Justine Sass (*UNESCO*) and Matthias Eck (*UNESCO*)

More urgently than ever before, more girls and women are needed in science, technology, engineering and mathematics (STEM). In over two-thirds of education systems, less than 25% of students in engineering, manufacturing, construction, or information and communication technologies (ICT) are women. Yet STEM careers are growing in demand and needed to solve the current challenges facing the world, including the current COVID-19 crisis, climate change and food and water security.

Considering this urgency, [UNESCO](#) and the [International Association of the Evaluation of Educational Achievement](#) (IEA) investigated how teacher self-efficacy – or belief in your own capacity to master a task or accomplish a goal – and gender are related in mathematics and science teaching in a [special issue of the IEA Compass: Briefs in Education Series](#).

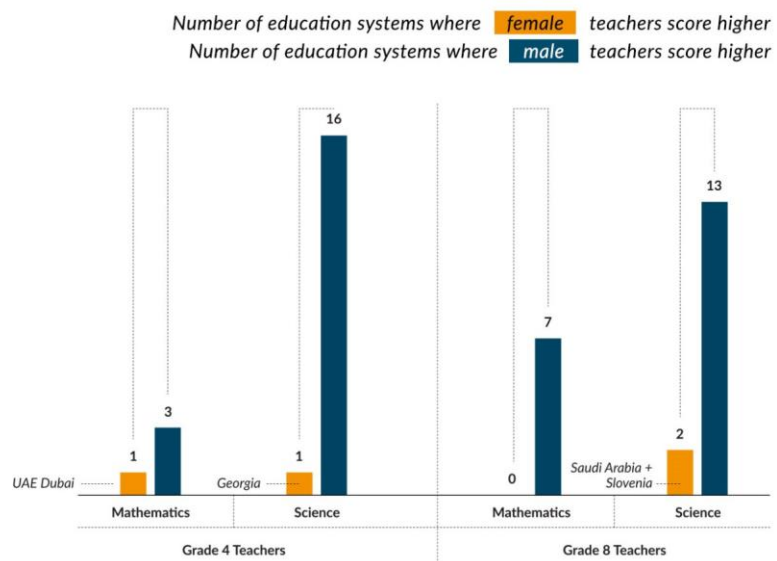
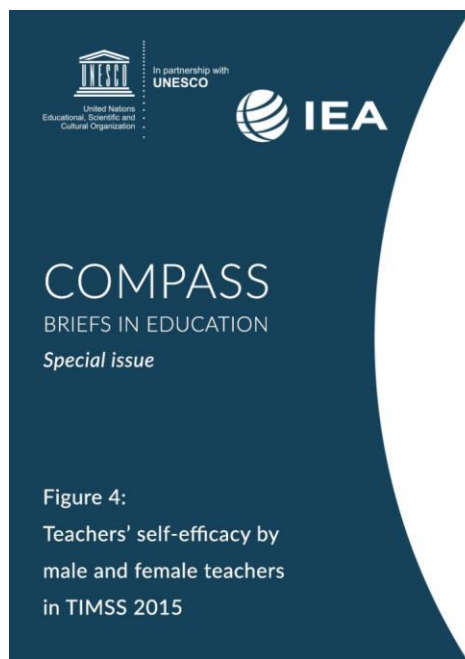
Using data from IEA's [Trends in International Mathematics and Science Study](#) (TIMSS) 2015, the [analysis](#) looked at 43 education systems at Grade 8 and 52 education systems at Grade 4. The results of this new analysis show that there is no direct relationship between the gender of the teacher and students' performance in science and mathematics. Grade 4 and 8 students taught by female teachers perform just as well in science and mathematics as their peers by male teachers.

However, the analysis finds that female science and mathematics teachers have less self-efficacy overall than their male counterparts. This is particularly the case for science. Grade 4 female science teachers reported lower levels of self-efficacy than their male counterparts in 16 education systems. This was also the case at Grade 8, where female science teachers reported lower levels of self-efficacy in 13 education systems.

UNESCO News Cont.

WORLD EDUCATION BLOG – REPRINT (GEM Report continued part 2)

<https://gemreportunesco.wordpress.com/2021/05/03/female-science-and-mathematics-teachers-better-than-they-think/>



Female teachers have long been associated with improved educational experiences and enhanced learning outcomes for girls in some contexts. By acting as positive role models for girls, female teachers are found to effectively dispel myths about innate abilities among boys, and can improve girls' perceptions, interest, and self-efficacy in STEM. But the analysis of grade 8 data for science suggests that lower self-efficacy of female science and mathematics teachers may be affecting girls' own self-efficacy in these subjects, and subsequently their pursuit of STEM careers. This could unlock many answers to finding better gender balance in STEM studies and careers.

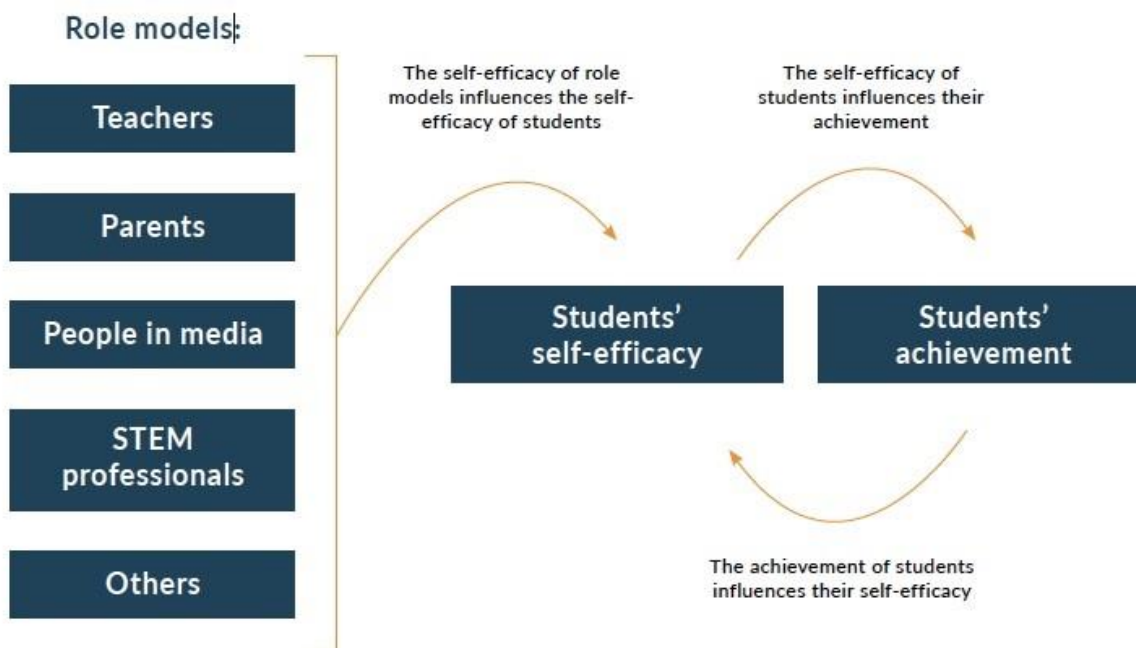
Currently, significantly fewer girls than boys expect to work in science and engineering professions. These expectations are not related to performance: fewer girls who are top performers in science or mathematics expect to work in science and engineering, compared to boys who are top performers. If these expectations are linked to self-esteem, as our model suggests, this is something that urgently requires further research to unpack and resolve.

UNESCO News Cont.

WORLD EDUCATION BLOG – REPRINT (GEM Report continued part 3)

<https://gemreportunesco.wordpress.com/2021/05/03/female-science-and-mathematics-teachers-better-than-they-think/>

Figure 2: A model of the relationship between role models and student achievement



“As a teacher, I see girls and boys demonstrating different attitudes in mathematics and chemistry subjects, with girls feeling less confident than boys in these subjects”, says Tanja Neuschmidt, a mathematics and chemistry teacher at the Heinrich-Hertz-Schule in Hamburg, Germany. “I did not expect that this could be linked to teachers’ self-esteem.”

Tanja is keen to discuss the findings of this brief with her peers to encourage more girls to build self-confidence and to value their success in STEM fields as they explore their future careers.



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UNESCO News Cont.

WORLD EDUCATION BLOG – REPRINT (GEM Report continued part 4)

<https://gemreportunesco.wordpress.com/2021/05/03/female-science-and-mathematics-teachers-better-than-they-think/>



I see girls and boys demonstrating **different attitudes** in maths and chemistry, with girls feeling **less confident** than boys. I did not expect that this could be linked to **teachers' self-esteem**.

Tanja Neuschmidt
Teacher, Germany

#GirlsInICT

A focus on self-efficacy has other potential benefits worth exploring further. The UNESCO-IEA analysis also revealed a positive relationship between self-efficacy of science and mathematics teachers and job satisfaction, and this relation was found to be particularly strong for female science and mathematics teachers.

These findings have several implications. Leadership and training of female science and mathematics teachers must include the objective of raising awareness of their strengths and building their self-esteem. Similarly professional training programs tailored to enhance female teachers' self-efficacy beliefs need to address issues related to job satisfaction and overall teacher well-being, such as working conditions and school climate.

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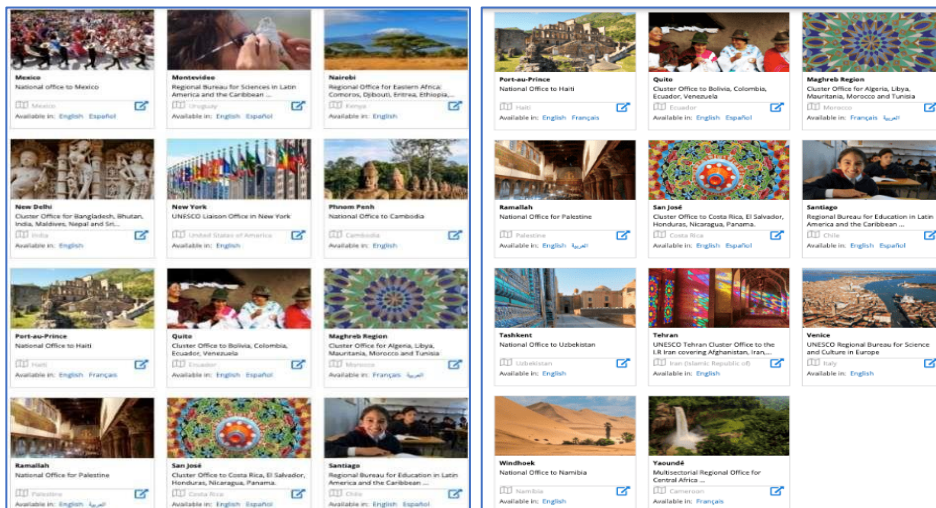


UNESCO FIELD OFFICES

Through its field offices, UNESCO develops strategies, programmes and activities in consultation with national authorities and other partners. UNESCO also operates a number of specialized institutes and centres. Check the list below to see the location of the UNESCO Field Offices.

For more information see:

https://en.unesco.org/fieldoffice?field_country_reference_target_id=All



For all UNESCO Offices by Region see: <http://www.unesco.org/new/bfc/all-offices/>

International Council of Associations for Science Education (ICASE)
<http://www.icaseonline.net>



International Council of Associations for Science Education

Supporting and promoting science education internationally
The ICASE Newsletter

April/May 2021

Up Coming Events

The Association for Science Education UK (ASE) Annual Conference 2021



The Association for Science Education in the UK (ASE) will hold its next annual conference on 5 – 8 January 2022.

The first day is the **International Day**. Proposals for sessions usually have to be received by the end of May. Further details will be posted on www.ASE.org.uk

The 2021 conference was extremely successful. It was entirely online and took place in early January. Important sessions were recorded and available for one month after the last conference day for delegates who paid registration. Exhibits were available to view online between sessions.

The conference is scheduled to be held in a face-to-face at Sheffield Hallam University in Yorkshire but there will be some online facility too. Should the pandemic still persist, the conference will be entirely on-line.

Day tickets are available for the online conference. For more information, contact:

Katherine Robertson

Events and Business Support Officer

The Association for Science Education

Promoting Excellence in Science Teaching and Learning

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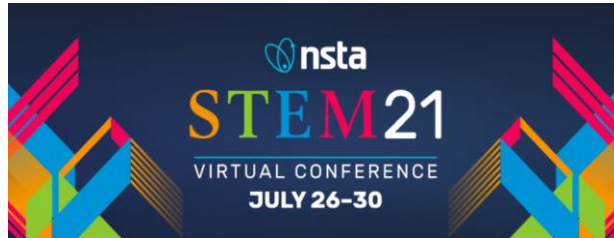
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Up Coming Events

The National Science Teaching Association (NSTA) July 2021 Virtual Conference



REGISTER (Early bird pricing ends: 9 July 2021) <https://www.nsta.org/stem2>

Conference Details

Five days of innovation, inspiration, and connection: From thought-provoking presentations and sessions, to lively Marketplace partner workshops, to the latest teaching tools and techniques for an evolving educational landscape.

Conference Highlights

Each day of the five-day conference will concentrate on a different grade band or strand. Generate new ideas, share resources, and connect with colleagues in a collaborative space designed to promote community and create lasting experiences.

Monday, July 26 • Elementary Day

Elementary Day features a diverse range of STEM sessions, presentations, and workshops—providing innovative ideas for teaching our youngest learners!

Tuesday, July 27 • Middle Level Day

Calling all middle level teachers—this day is designed specifically for you! Session topics include argument-driven engineering, 3D printing integration, and linking math and science through decoding models.

Wednesday, July 28 • High School Day

Quantum computing, data analysis, equity and inclusion, and Esports—these are just a few of the amazing topics you'll find while exploring sessions and workshops on High School Day!

Thursday, July 29 • Postsecondary Day

Postsecondary Day, a day you don't want to miss! Learn new and innovative teaching strategies and research-based techniques, and become better equipped to drive change in the STEM educator preparation field.

Friday, July 30 • STEM Ecosystems

STEM Ecosystems provide the structure for cross-sector learning, offering students access to rich learning environments so they can develop important skills and engagement in STEM throughout preK–16. This day—open to all attendees—highlights the successful preK–16 efforts that support access and equity in STEM Ecosystems through practice and partnerships.

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ICASE Journal - Science Education International

Steven Sexton – Editor

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Year 2021

Volume 32, Issue 1

ISSN: 2077-2327

The **first issue of 2021 for *Science Education International*** was published March 3rd. This issue brought together nine papers from Estonia, Nigeria, Sweden, Turkey, and The United States of America.

Highlighted Article: The fifth article from Sweden's Eva Davidsson and Pernilla Granklint-Enochson comments on teachers' ways of contextualising the science content in lesson introductions. Davidsson and Granklint-Enochson highlight that several large-scale studies have identified a lack of interest and negative attitudes towards learning science to include countries that achieve high results on international large-scale science tests such as PISA (Program for International Student Assessment) and TIMSS (Trends in International Mathematics and Science Study). Davidsson and Granklint-Enochson noted while students may achieve high results on these kinds of tests, they may also find school science generally irrelevant or uninteresting. The socioscientific approach to science instruction has been promoted as a way of enhancing students' interest and motivation for learning science. Davidsson and Granklint-Enochson's interest was in exploring how teachers employ school science and relate it to other societal contexts. Their study reported a variety of ways in which teachers used contextualisation, specifically at the intersections between school science context and the context of everyday life, other school subjects, or language. The researchers went on to note that teachers tended to employ several different contexts to highlight and explain the scientific content in their lesson introductions. Davidsson and Granklint-Enochson concluded it is likely that the tool of contextualisation is not an obvious or self-evident way of conducting science teaching. Consequently, organising the teaching setting to also involve contextualisation could be an educational competence to be studied in professional development and in teacher education. This article, and the other eight in this issue, can be found at:

<http://www.icasonline.net/journal/index.php/sei/issue/view/16>

The **second issue for 2021 is expected to be published in early June**. ICASE also welcomes new reviewers. If you are interested, please contact **Dr. /Prof. ZHANG BaoHui**, Chair, ICASE Research and Publications Standing Committee at icase2017bhzhang@163.com

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International Council of Associations for Science Education







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ICASE Executive Committee 2020-2023

ICASE membership spans the world led by an Executive Committee, with a Management Committee (President, President-Elect, Immediate Past President, Secretary, and Treasurer) responsible for the day-to-day administration and working closely with Appointments Co-opted to the Management Committee, Regional Representatives, and Chairs of Standing Committees. Presidential terms are noted below.

Management Committee (2020-2023)

	<p>President (2020-2023) Dr. ZHANG BaoHui Qujiang Scholar Professor, Shaanxi Normal University, Xi'an, China E-mail: icase2017bh Zhang@163.com (Member Organization: National Association for Science Education, The Chinese Society of Education - CNASE) *Also Chair of Research and Publications Committee</p>		<p>Immediate Past- President Dr. Bulent Cavas Professor, Department of Science Education, Dokuz Eylul University Izmir, Turkey E-mail: bulentcavas@gmail.com *Also Chair of Web Communications Committee (Presidential Term: 2017-2020)</p>
	<p>President-Elect Dr. Declan Kennedy Senior Lecturer in Science Education Department of Education, University College Cork, Ireland E-mail: d.kennedy@ucc.ie (Member Organisation – Irish Science Teachers Association – ISTA) *Also World Headquarters Coordinator</p>		<p>Treasurer Ms. Mary Mullaghy Eureka Secondary School, Kells, Co Meath Dublin, Ireland E-mail: mmullaghy@gmail.com (Member Organization: Irish Science Teachers Association -ISTA)</p>
	<p>Secretary Dr. Sarfraz Aslam Postdoctoral Researcher, School of Education, Shaanxi Normal University, Xi'an, China E-mail: miansarfraz@hotmail.com (Member Organization: National Association for Science Education, The Chinese Society of Education - CNASE) *Also ICASE Newsletter Editor http://www.icasonline.net/news.html</p>		 International Council of Associations for Science Education ICASE Website http://www.icasonline.net/index.html

Appointments Co-opted to Management Committee (2020-2023)

	<p>Editor, Science Education International The Official Journal of ICASE Dr. Steven Sexton Senior Lecturer, Science Education, College of Education, University of Otago Dunedin, New Zealand E-mail: steven.sexton@otago.ac.nz (Member Organization: New Zealand Association of Science Educators - NZASE) *Also Chair of Pre-secondary & Informal Science Education Committee</p>		<p>Representative to UNESCO Dr. Teresa Kennedy Professor, Bilingual STEM Education University of Texas at Tyler Tyler, Texas USA E-mail: tkennedy@uttyler.edu (Member Organization: National Science Teachers Association of the U.S. - NSTA) *Also Past President and North America Representative (Presidential Term: 2014-2017)</p>
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Regional Representatives (2020-2023)

	<p>Africa Regional Representative Mr. David Itamah Director of Education, Chair of the STAN Board of Trustees; Chair of the Board of Directors of The STAN Place Ltd, the official publishers of STAN books Abuja, Nigeria E-mail: daitamah@yahoo.com (Member Organization: Science Teachers Association of Nigeria - STAN)</p>		<p>Europe Regional Representative Dr. Manuel Filipe Pereira Cunha Martins Costa Professor, Departamento de Fisica, Universidade do Minho, Campus de Gualtar Braga, Portugal Email: mfcosta@fisica.uminho.pt (Member Organization: Hands-on Science Network – HSCI)</p>
	<p>Asia Regional Representative Dr. Manabu Sumida Professor, Faculty of Education, Ehime University Bunkyo-cho, Matsuyama City, Japan E-mail: msumida@ed.ehime-u.ac.jp (Member Organization: Japan Society for Science Education - JSSE)</p>		<p>Latin America Regional Representative Dr. Cesar Mora, Professor Titular Posgrado de Física Educativa, Centro de Investigación en Ciencia Aplicada Tecnología Avanzada Unidad Legaria del Instituto Politécnico Nacional (CICATA-IPN) Del, Miguel Hidalgo, CP, México D.F. E-mail: ceml36@gmail.com (Member Organization: Latin American Science Education Research Association - LASERA)</p>
	<p>Australia/Pacific Regional Representative Dr. Leah Moore, Associate Professor University of Canberra Canberra, Australia E-mail: Leah.Moore@canberra.edu.au (Member Organization: Australian Science Education Research Association - ASERA)</p>		<p>North America Regional Representative Dr. Teresa Kennedy Professor, Bilingual STEM Education University of Texas at Tyler Tyler, Texas USA E-mail: tkennedy@uttyler.edu (Member Organization: National Science Teachers Association of the U.S. - NSTA) *Also Past President and Representative to UNESCO (Presidential Term: 2014-2017)</p>

Chairs of Standing Committees

	<p>Early Years STEM Education Dr. Sue Dale Tunnicliffe Senior Academic, UCL Institute of Education Leadership, Commonwealth Association of Science, Technology and Mathematics Educators - CASTME, United Kingdom E-mail: lady.tunnicliffe@mac.com (Member Organizations: Commonwealth Association of Science, Technology and Mathematics Educators - CASTME and the Association for Science Education of the UK – ASE)</p>		<p>International Projects Dr. Jack Holbrook Visiting Professor, Center of Science Education, University of Tartu Past President and Newsletter Editor Tartu, Estonia E-mail: jack@ut.ee (Member Organization: Hong Kong Association for Science and Mathematics Education - HKASME) *Also Past President (Presidential Term: 2008-2011)</p>
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Chairs of Standing Committees



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World Headquarters Coordinator

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***Also President Elect (Presidential Term: 2023-2026)**



Membership

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