Subject: IASE Newsletter

Date: Friday, September 20, 2024 at 8:01:55 PM Central Daylight Time

From: International Association for Statistical Education (IASE)

To: Sorto, M Alejandra

IASE Newsletter - September 2024 Issue · IASE-WEB.ORG · VIEW EMAIL IN BROWSER





Associação Internacional para a Educação Estatística (AIEE/IASE)

JUNTA-TE À COMUNIDADE AIEE/IASE!



BENEFÍCIOS DE MEMBROS

- Fazer parte de uma comunidade estatística internacional
- Taxas de inscrição reduzidas nos congressos IASE e ISI (Instituto Internacional de Estatística - https://www.isi-web.org/)
- · Acesso gratuito a eventos de desenvolvimento de carreira
- Receba boletins informativos regulares do ISI e IASE e respetivos relatórios de atividades
- Assinatura a preço reduzido de revistas estatísticas
- Compre publicações IASE e ISI a preços reduzidos
- · Associação institucional
- · Acesso ao fórum de discussão dos membros da IASE

Junta-te a nós na revolução da educação global em estatística para um mundo orientado por dados!

https://iase-web.org

Junta-te a nós agora: https://bit.ly/iasereg

Upcoming Events

12th International Conference on Teaching Statistics Brisbane, July 12-17, 2026



The main topics, first call form contributions, and timelines for ICOTS 12 will be published later this year.

We are pleased to announce the logo and the theme for ICOTS 12.





About the logo

Australia is a complex and delicate balance of ancient and modern, in landscapes and people. It is now one of the most multicultural countries in the world, but the first Australians are the oldest continuing human culture on earth. From the ranges to the sea, and from the Gold to the Sunshine Coasts, South East Queensland encapsulates much of Australia's beauty. The logo represents part of the Brisbane River, Maiwar in the language of its traditional people the Turrbal, as it winds through Meeanjin

(Brisbane) on its complex 345 km path from rainforest ranges to Moreton Bay. Maroon is Queensland's colour, and the dot marks the conference venue.

The river is as much a part of today's Meeanjin as it was for ancient cultures, and as it will be for ICOTS 12. The river symbol features in indigenous art and on modern skyscrapers. The logo also represents both the continuity of the statistics education community and navigating the complexities of statistics and data science education.

The theme for ICOTS 12 is What? Who?When? How? About the theme

Since 1968, the international statistical community has been meeting to share discussion, findings, reflections and plannings on the teaching and learning of statistics and statistical thinking. The first three ICOTS and the first eight roundtables were organised by the ISI education committee, with each of these ICOTS attracting between 400 and 600participants, and the third ICOTS leading to the establishment of IASE in 1993. Since then, IASE has organised ICOTS, roundtables, satellites to the World StatisticsCongress (WSC) and sessions in other international conferences.

From the beginning, all these meetings have ranged widely over school, tertiary and workplace contexts within and across disciplines, technologies, research at all levels, and training to teach. Themes and topics have emphasized cooperation, data, diversity, universality, outreach, sustainability, literacy, technology, development and looking forward.

Why then is this ICOTS asking such questions? Asking questions is fundamental to good statistical practice, including good practice in statistical education, and these questions reach across all facets and contexts of the teaching of statistics. In addition, because the statistical and data sciences are amongst the youngest and most rapidly developing disciplines and are pervasive across all others and all of society, we must constantly analyse and appraise their teaching.

At the heart of recent developments are data and technology, with diversification and access rapidly expanding for both. The asking of what, when, how, where and why has always been crucial to good data practices, and this must now be much more emphasized in teaching. Technology opens doors to tackling more and more complex problems and data, and although there is no magic solution to all the teaching

challenges this poses, the statistical and data science education community needs to bring collaborative and collective wisdom, analysis and research to the what, who, when and how.

Although there was no theme for ICOTS 1 in1982, the introductory speech by Vic Barnett, the chair and one of statistics education's pioneers, was a question: "Why teach statistics?" But this was not why as in whether; rather that in order to consider what and how, we must first consider to whom and when, namely, the student context, cohort type and level. The moral that context is core to statistics must also apply to its teaching –the what, to whom and when need more attention. And this refers to statistics in the broadest sense, including probability and data science in the context of the sciences of indeterministic phenomena, data and information.

As well as what and to whom, who by and how are, as always, challenging questions. Collaboration is at the heart of good statistical practice and again, applies here whether it be to the teaching in other disciplines, including education and mathematics, or across educational levels within the statistical and statistical education community to empower our collective voice. And what and how should statistical teaching fitness in tertiary education be acquired?

All of these questions are inter-related, and in particular, the how, with its analysis, expertise and research, constantly feeds into cycles of investigation and interpretation.

ICOTS 12 invites participation from all to bring together analysis, expertise, examples, reflections, ideas, research, evidence and reviews from across the world and across school, tertiary, workplace and society contexts, to collectively consider these questions in contributing to the meaningful nourishing of the teaching of the statistical and data sciences and their impact in every endeavour.

Stephanie Budgett (IPC Chair), Michael Bulmer (Information Manager), Helen MacGillivray (LOC Chair)

IASE Free October Webinar

Designing positive first experiences with coding for introductory level statistics and data science students

22 October 2024; 20:00 UTC (click <u>here</u> for localized date/time) Webinar duration: 90 minutes

Presenter: Anna Fergusson, University of Auckland | Waipapa Taumata Rau,
New Zealand

Teaching recommendations for implementing statistics and data science at the introductory level often promote coding (computer programming) as a tool for learning from data. However, there is minimal research concerned with how to design tasks that balance the demands of learning new code-driven tools at the same time as learning new statistical concepts. Using a design-based research approach, I developed four structured tasks for teaching statistical modelling at the same time as introducing the programming language R, which were implemented with high school statistics teachers. A main consideration in designing these tasks was to ensure that learners' first experiences with coding were positive and inclusive. A task design framework for introducing code-driven tools was produced by using retrospective analysis on the four tasks to identify, evaluate, and refine key design principles and processes.

Concurrently with my research, I designed and implemented a new introductory level statistics course (STATS100) that introduced the programming language R alongside GUI-driven tools. The task design framework developed from my research explicates important features of the tasks used in the research, which include: using unplugged and GUI-driven tools before code-driven tools; extending the familiar into the unfamiliar; using the informal before the formal; and carefully targeting, sequencing and connecting specific human-computer interactions for statistical modelling. These features are also present in the tasks developed for STATS100. In this webinar, I will summarise my research approach, present the task design framework, and demonstrate some of the tasks and data technologies used with learners in both research and teaching contexts to further illustrate the task design principles. I will also discuss key conceptual and practical design considerations for creating and hosting web-based tasks that include videos, progressive revealing of task components, code exercises, and quiz questions.

Anna Fergusson is passionate about teaching, data technologies, and developing inclusive, engaging, accessible, effective and fun ways to introduce people to learning statistics and data

science. She has over 20 years teaching experience, 12 years at the high school level and nearly 10 years at the university level. Anna has worked with the New Zealand Ministry of Education and the New Zealand Qualifications Authority on the development of national curriculum frameworks, assessment standards, examination papers, project-based tasks, and teaching resources for statistics. At the university level, she has led several statistics and data science curriculum design projects, including the rewrite of the very large introductory-level statistics course (over 4000 students per year).

Anna completed her PhD in 2022, with a thesis focused on task design for introducing computer programming as part of data science at the high school level. She supports and advances her teaching, research and data analysis activities by creating new software tools and educational technologies. Her research specialty is data science and statistics education, with a focus on technology-based and technology-informed pedagogy, including but not limited to: large-scale teaching and assessment practices and tools; introduction of computer programming for data science and associated design principles for tool and task design; tool-mediated development of statistical concepts and reasoning, such as graphical and visual inference; frameworks for observable integrated statistical and computational thinking practices.

Register here

Previous Webinar

Conversation about statistics education in Asia

10 September 2024; 01:00 UTC

Webinar duration: 90 minutes

Presenters: Boon Wooi Yeo, Yun Joo Yoo, Lisa Grace Bersales, Kazuhiro Aoyama

This was a conversation about statistics education in Asia from four speakers. By clicking on their names you have access to their slides.

<u>YEO Boon Wooi Joseph</u> from Singapore, <u>Yun Joo Yoo</u> from South Korea, <u>Lisa Grace</u>

<u>Bersales</u> from the Philippines and <u>Kazuhiro AOYAMA</u> from Japan.

Webinar Recording

News from SERJ

The website for the Statistics Education Research Journal (SERJ) is moving!

- The current webpage will be active through October 2.
- SERJ will not be accessible from October 3rd to October 5th.
- After October 5th, the SERJ website address will be https://iase-pub.org/ojs/SERJ (Please do not use this new link yet--it is not yet active.)

Please make note of these dates to submit reviews or manuscripts or to access articles.

Tribute to Jim Ridgway



Our friend and colleague Jim Ridgway sadly passed away on 3rd May 2024, aged 75

years, after a short illness. The May 2024 newsletter of IASE announced his death.

Jim was a prolific researcher and author who has made numerous contributions to the field of statistics education and to the statistics (and mathematics) education communities through many research papers, talks, and workshops, and through serving in various professional capacities.

An expanded Tribute to Jim has been written by *James Nicholson*, *Joachim Engel*, *Iddo Gal*, and *Sean McCusker*, which can be accessed <u>here</u>. In that Tribute we remember Jim as a person, highlight his academic work and expand on his interest and contributions to statistics education and to the promotion of statistical literacy.

That Tribute is based in part on a shorter tribute which was published by the journal <u>Teaching Statistics</u> in its July 2024. That issue also has a tribute to another departed friend and leader in statistics education from the UK, Prof. Peter Holmes, and it also includes Jim's last co-authored paper entitled "New viruses are inevitable; pandemics are optional--Lessons for and from statistics", published posthumously. For those who cannot access the Teaching Statistics website, the attached Tribute (see link above) has more information on contacting the authors for a private copy via ResearchGate.

Webinar Series

Since November 2021 IASE has been holding webinars about statistics and data science education. On the IASE webinar page you can find links to previous webinars.

2024 Webinars up to September

- 10 Sep 2024: <u>Conversation about statistics education in Asia</u> | YEO Boon Wooi Joseph, Yun Joo Yoo, Lisa Grace Bersales & Kazuhiro Aoyama
- 27 Aug 2024 : <u>Teaching and Learning Statistics in an Al World</u> | Gail Burrill & Amanda Ellis
- 20 Jun 2024 : <u>Statistical Tools to learn about Climate Change</u> | Joachim Engel, Laura Martignon & Tim Erickson
- 15 May 2024 : think-cell & IASE Data Storytelling Masterclass | Felix Malzfeldt

- 17 Apr 2024 : <u>ISLP Poster Competition ISLP in association with IASE</u> | Hugo Hernández, Adriana D'Amelio, Patrizia Collesi, Soledad Estrella, Volker Kraft & Adenomon Monday Osagie
- 12 Mar 2024 : Recent research in probability education | Carmen Batanero

2023 Webinars

- 5 Dec 2023: <u>Teachers' autonomy and their reactions to teaching essential</u> <u>statistics and mathematics about global crises: A multinational view</u> | Sarah Bansilal, Jill Fielding, Iddo Gal, Vince Geiger, Delia North, Mauren Porciuncula & Karla Schreiber
- 13 Nov 2023: <u>A collection of SERJ papers by new researchers</u> | Karin Landtblom, Kelly Findley & Thomas Metzger
- 25 Sep 2023: <u>Emerging Trends in Statistics Education from 2017-2022 What next?</u> | Maxine Pfannkuch & Gail Burrill
- 23 Aug 2023 : <u>Challenges in Statistics Education-Today and Tomorrow</u> | Ayse Bilgin, Dani Ben-Zvi, Alejandra Sorto
- 14 Jun 2023 : <u>Desinformação estatística</u>: <u>desafios contemporâneos para justiça</u> <u>social | Statistics disinformation</u>: <u>contemporary challenges for social justice</u> | <u>Leandro Souza</u>
- 23 May 2023: <u>Statistical Edutainment an ISLP webinar in conjunction with IASE</u> | John Bailer, Paolo Noceda, Maulana Faris, José Pinto Martins & Jo Roislien
- 26 Apr 2023: <u>Publishing in SERJ: Processes and Suggestions</u> | Jennifer Kaplan & Sue Peters
- 7 Mar 2023 : <u>Machine learning in secondary statistics education challenges</u> and possible ways to address them | Rolf Biehler & Yannik Fleischer

2022 Webinars

- 7 Dec 2022: <u>Statistical and Data Literacy in Policy-Making ISLP in association</u> <u>with IASE</u> | Reija Helenius, Steve MacFeely, Walter Radermacher, Giulio Sabbati, Milo Schield, Katharina Schüller & Gaby Umbach
- 29 Nov 2022: <u>Through a glass darkly question and answer session</u> | Chris Wild
- 6 Oct 2022: <u>Critical Theory in Statistics Education</u> | Lucia Zapata-Cardona & Travis Weiland

- 22 Jul 2022 : CODAP: starting from zero (workshop 2) Tim Erickson
- 21 Jul 2022 : CODAP: starting from zero (workshop 1) Tim Erickson
- 21 Jun 2022 : <u>Projetos de Aprendizagem Estatísticos na Educação Básica e Superior | Statistical Learning Projects in Basic and Higher Education | Proyectos de Aprendizaje Estadístico en la Educación Básica y Superior | Mauren Porciuncula
 </u>
- 12 May 2022: <u>Using the R/exams package for an efficient workflow to design,</u> produce and mark online assessments while safeguarding the academic integrity | Jaslene Lin
- 11 Apr 2022: Raising statistical modeling accessibility to young learners |
 Michal Dvir
- 14 Mar 2022: What every (numeracy) educator working with (young) adults should know about Civic Statistics, and why | Iddo Gal
- 9 Mar 2022: What does data science mean for statistics education? | Rob Gould & Helen MacGillivray

2021 Webinars

- 15 Dec 2021 : <u>Statistical literacy demands are evolving How do we cope with</u> the challenge? | Iddo Gal
- 8 Nov 2021: <u>Using simulations to make sense of the world: the pandemic</u> | Gail Burrill

News from IASE Community

Royal Statistics Society Webinar

The Royal Statistics Society (RSS) Teaching Statistics Section is pleased to announce that the next online seminar will take place on Wednesday 25 September, 2-3pm. The seminar will be given by Ayse Bilgin, former President of the International Association for Statistical Education, who will inspire us to join the growing international community in improving statistics and data education. The event is online and free to attend. You can register here.



Copyright (C) 2024 International Association for Statistical Education. All rights reserved.

You are receiving this email because you opted in via our website.

Our mailing address is:

International Association for Statistical Education Henri Faasdreef 312 Den Haag, Zuid-Holland 2492 JP

Netherlands

Want to change how you receive these emails?

You can <u>update your preferences</u> or <u>unsubscribe</u>

CAUTION:. This email originated from outside the TXST network. Do not click links or download files unless you know the sender and content are safe.