CALL FOR PAPERS: INCLUSIVE STATISTICS EDUCATION WITH DIGITAL RESOURCES

2024 SPECIAL ISSUE OF THE *STATISTICS EDUCATION RESEARCH JOURNAL* (*SERJ*)

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1. BACKGROUND

The International Conference on Teaching Statistics (ICOTS) provides an opportunity for diverse communities to come together with a common goal of improving the learning and teaching of statistics. Statistics educators, statisticians, teachers and educators at large contribute to the scientific programme of ICOTS. The 11th International Conference on Teaching Statistics (ICOTS-11) was held in a hybrid format from September 11-16, 2022 in Rosario, Argentina. The conference incorporated 14 topics that can be found at: https://icots.info/11/?topics

During ICOTS-11 and afterwards, specific themes were identified as "hot topics". These topics arose from having gone through a pandemic, with most of us as educators being obliged to conduct teaching and learning activities and research online. At the conference, many discussions were held around how inclusive the experiences were, both for students and teachers, and to what extent digital resources were a true facilitator of teaching and learning for all students. The current statistics education landscape, together with the emergence of new areas of learning and research such as data science, demands that we reflect deeply on these changes.

2. POSSIBLE TOPICS

For the 2024 Special Issue of SERJ, we are interested in scholarly articles that address the aspects of Inclusion and Digital Resources in Statistics Education. From our perspective, the topic of inclusion is considered and interpreted in a broad sense. With the expansion of and shift to inclusion, learners' individually different interests, learning opportunities, attitudes, language or linguistic diversity, and cultural backgrounds are gaining attention in the design of instruction, at least since the ratification of the UN Convention on the Rights of Persons with Disabilities. Inclusion in education aims to ensure that all learners, regardless of their individual competencies, are recognized in the classroom with their personal needs and special characteristics addressed so they can participate actively in the classroom both professionally and socially. Recognition and participation include the adequate and individual support of all learners. We see, for instance, digital resources as one way to address inclusion.

We encourage not only original empirical research (both quantitative and qualitative) and design-based research with learners in K-12, tertiary/academic, and adult education contexts, but also conceptually-oriented articles that address issues of learning and teaching, including curricular issues and issues for teacher education and professional development, within the context of inclusive statistics

education with digital resources. Some issues and questions that may be discussed in manuscripts for this Special Issue are:

- What affordances and what challenges does today's technology bring to teaching and learning statistics? In which way can technology be seen as a key to inclusion?
- What potential directions and implications for inclusion will the increasing demand for data science/computational competencies bring to the curriculum?
- How can emerging technologies enhance the development of statistical understanding for all students?
- What evidence do we have of how technology and multimedia resources support the learning of all students?
- What do we know about preparing teachers to teach using today's technology and multimedia resources?
- How do we provide teacher educators with the knowledge and skills required to incorporate emerging technologies into their teacher preparation programs?
- What strategies show promise in making emerging technologies available to those in countries and areas of the world that have limited support and access?
- How can technology promote access and build statistical literacy and competence for a diverse population of students in terms of their needs, backgrounds, and cultures, or how can it introduce barriers for some?
- In which way do systemic issues and policies play a role in the realization of inclusive teaching and learning?

Submissions may be based on these ideas and fall under the following subtopics:

- Challenges in teaching statistics for students with special needs, including students with exceptional abilities;
- Impact of social, cultural, and economic conditions on the teaching of statistics;
- Inclusive education using data science and machine learning approaches;
- New ways for teaching statistics in developing countries, such as visualizing data with graphs and infographics;
- Teaching with digital resources in less developed countries;
- Using computers to enhance learning in physically-challenged students' academic performance.

For instance, we are looking for articles that:

- Describe design and/or curriculum approaches that support the development of statistical and probabilistic thinking and reasoning at all levels (K-12, tertiary/academic, and adult education contexts) within inclusive statistics education with digital resources.
- Report and critique research about teaching and learning statistics and probability under the perspective of inclusive statistics education with digital resources.
- Analyse approaches to teaching and learning particular aspects of statistics and probability, such as learners' reasoning about data and chance in formal and informal contexts, under the perspective of inclusive statistics education with digital resources.
- Evaluate research on teacher education or professional development and learning in statistical and probabilistic thinking under the perspective of inclusive statistics education with digital resources.

3. SUBMISSION GUIDELINES

A paper that is submitted to this Special Issue need not be one that was presented at ICOTS nor about teaching and learning during the pandemic. Any paper based on an ICOTS paper needs to be an expansion of that paper to allow for additional grounding in extant literature; more detailed descriptions of methods and theoretical grounding; expanded results that include additional data, whether additional results for those ICOTS papers that presented preliminary results or additional examples to support

theoretical constructs, etc.; and additional couching of results to make the contribution of the work to the field clear.

Expressions of interest (including abstract of max. 250 words) to contribute to this Special Issue have to be sent as a pdf file including authors names with affiliation details and email addresses to dafr@math.upb.de by **March 30, 2023**. Authors will be informed about the invitation to submit a full manuscript to this Special Issue by **April 30, 2023**. Full papers are expected to be submitted to the *SERJ* online submission system at https://iase-web.org/ojs/SERJ by **15 September, 2023**. Manuscripts for this special issue will be limited to a maximum of 8000 words of body text, and authors are encouraged to aim for approx. 6000 words of body text (apart from abstract, tables and graphs, references, and appendices). Manuscripts should be submitted in accordance with the *SERJ* Template, which can be downloaded from https://iase-web.org/ojs/SERJ/information/authors. The general author guidelines for *SERJ* can also be found at: https://iase-web.org/ojs/SERJ/information/authors.

Manuscripts written in Spanish or Portuguese are accepted but need to be accompanied by an English-translated version.

The Special Issue is currently planned to be published by **June 30, 2024**.