B3B: Can the usefulness of publishing models for statistics and data science education journals be improved?

Session Handout and Outline

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1. **INTRODUCTION TO THE SESSION AND THE ACTIVITIES**

2. **FLOOR DISCUSSION BEFORE PRESENTATIONS BY EDITORS**

   Did you have a chance to browse through our journals before this session? If you did not, take five minutes to please look at APPENDIX A to find their addresses and once there, search for statistics or data science education keywords that reflect your interests (googling the journal names will do as well).

   Ask yourself the following questions (Q1 and Q2). You may write your answers in this handout -pens are available. Then pair with the person or persons sitting next to you and share your answers with them.

   Q1. How often do I read statistics and data science education journals to find resources, inspiration, professional development, and research that can inform instruction? (Note: If you read journals other than SERJ, JSDSE, TS, ST, which are those journals?)

   Q2. If I do not read statistics and data science education journals, where do I get resources to improve and modernize my teaching, professional development, and research?

3. BRIEF PRESENTATIONS BY JOURNAL EDITORS- Feel free to ask the editors questions during the presentations, but we will also have a whole discussion afterwards, so asking your questions at the very end is fine. You may use this space to take notes during our presentation.

4. **FLOOR Q&A AND DISCUSSION AFTER PRESENTATIONS**

Before we open the floor for questions to the presenters, take five minutes to reflect and discuss with your group your impressions about what you heard from us, addressing if possible the following questions (write your own thoughts in the space provided). The Aims and Scope of each journal discussed during the presentations can be found in APPENDIX B.

Q3. What do we need from statistics and data science education journals that would make our research and teaching in statistics and data science more effective in schools, universities, and workplaces both within and across disciplines?

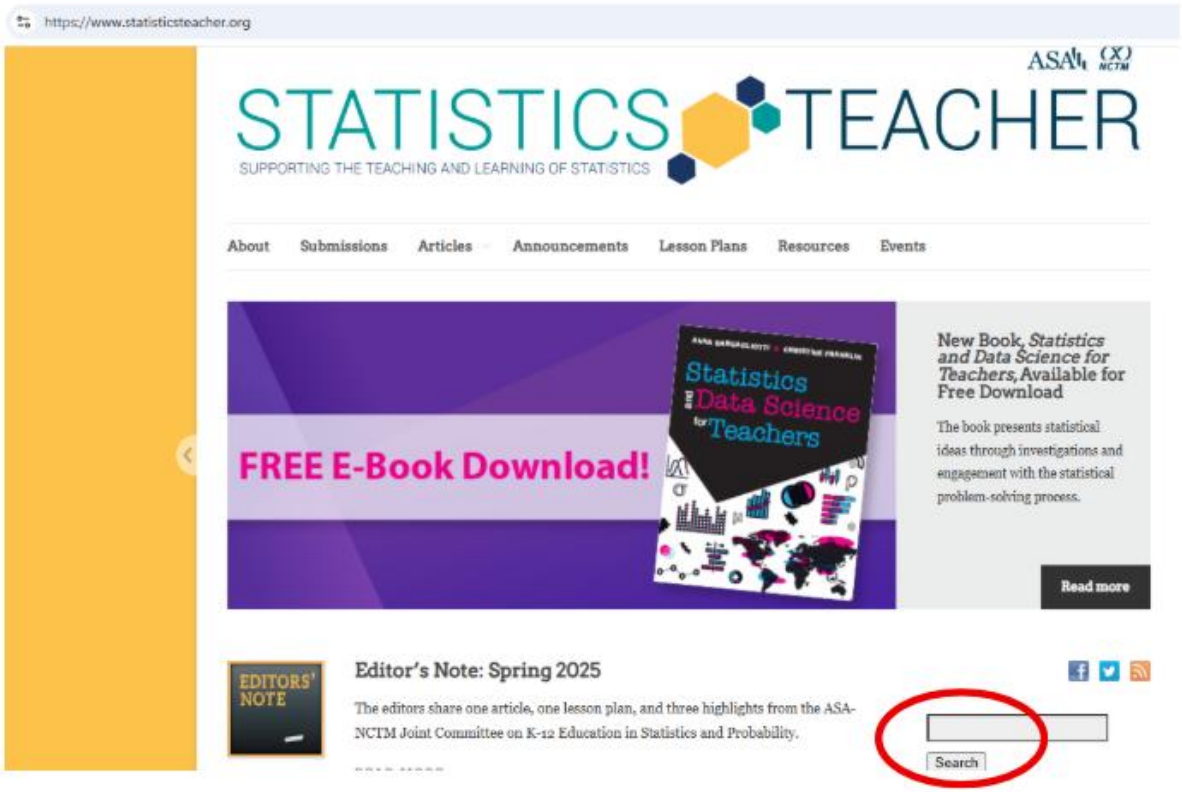
Q4. We printed in Appendix B the Aims and Scope of each of our journals that we also discussed in the presentations. How could aims, scope and criteria be extended or changed to increase usefulness of statistics and data science journals for readers and potential authors? You may select just one aim and scope, if you want.

APPENDIX A. LOCATE AND SEARCH THE JOURNALS

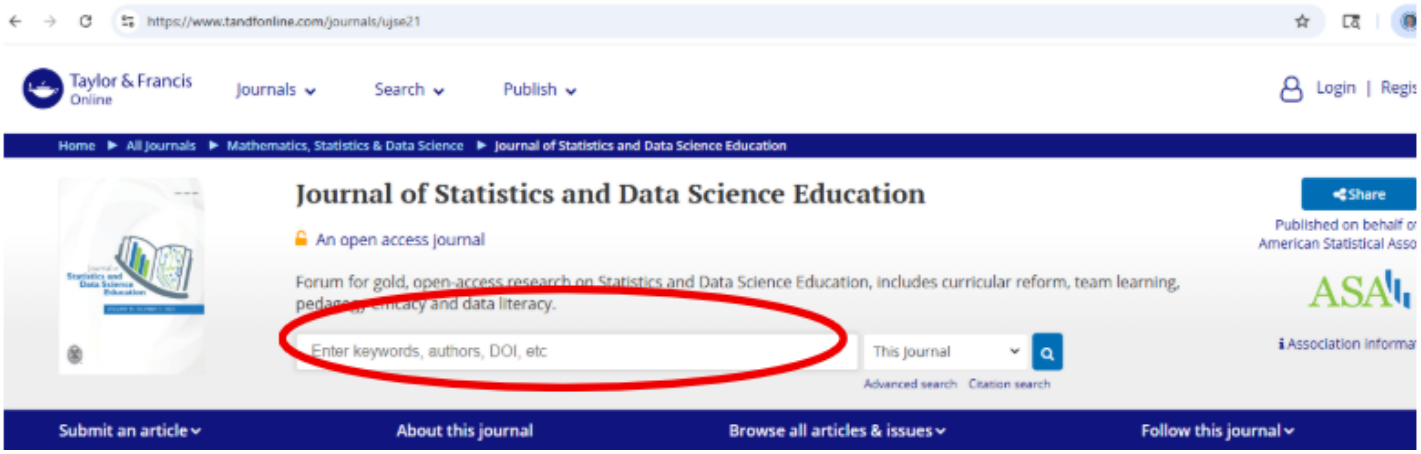
1.SERJ (open access) **https://iase-pub.org/ojs/SERJ**

2. TS (many articles are open access, for others use your library) **https://onlinelibrary.wiley.com/journal/14679639**

3. ST (open access) **https://www.statisticsteacher.org**



4. JSDSE (open access)
https://www.tandfonline.com/toc/ujse21/current



APPENDIX B. AIMS AND SCOPE OF EACH JOURNAL

https://onlinelibrary.wiley.com/page/journal/14679639/homepage/productinformation.html

TEACHING STATISTICS

An International Journal for Statistics and Data Science Teaching

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Aims and Scope

Teaching Statistics first appeared in 1979 and has been published three times a year ever since. It is published by the **Teaching Statistics Trust**.

Teaching Statistics is intended for all those who teach or develop teaching in statistics and data science within or across any disciplines, including STEM, health, business, social sciences, and education. It is for teachers of students at any educational level, especially for those who teach school age students, or tertiary students who are building their statistical and data thinking and skills, no matter what their formal educational background. The emphasis is on good practice in teaching, consistent with the statistical and data sciences as a distinct discipline, and which reflects knowledge of statistical and data science education. Teaching contexts should be clearly identified. Contributions can seek to enrich, inform, stimulate, guide, inspire, correct, or entertain, but with accessibility to a wide audience. Research, whether educational, statistical, or in any discipline, should link with teaching practice, and teaching practice should link with the scholarship of teaching the statistical and data sciences. Formal or theoretical material should be kept to a minimum or placed in supporting information. *Teaching Statistics* is a refereed journal, with double-blind reviewing.

https://www.statisticsteacher.org/about-statistics-teacher/

About *Statistics Teacher*

Statistics Teacher is an online journal published by the American Statistical Association – National Council of Teachers of Mathematics Joint Committee on Curriculum in Statistics and Probability for Grades K-12.

***Statistics Teacher* Articles:**

- Are targeted to teachers and teacher educators
- Display and discuss interesting statistical and statistical education concepts and ideas and showcase exemplary lesson plans
- Have a relaxed expository style
- Do not have abstracts
- Have sidebars for definitions and brief technical explanations
- Include articles with limited citations, but authors are encouraged to include a Further Reading section at the end of the article where additional references can be listed
- Rarely have footnotes
- Have creative and informative graphics, photographs, and tabular displays
- May link to online videos (please include YouTube or Vimeo links in your Word document)
- Are 6-15 double-spaced pages, including appendices and figures
- Follow the **ASA Style Guide**

***Statistics Teacher* Lesson Plans:**

Please visit **Statistics Education Web (STEW)** for the lesson plan template and additional guidance.

https://www.tandfonline.com/journals/ujse21/about-this-journal#aims-and-scope

About this journal

Share

Aims and scope

The ***Journal of Statistics and Data Science Education*** (JSDSE) is an open access peer-reviewed journal published by the American Statistical Association. It disseminates accessible knowledge for the improvement of data science and statistics education at all levels, including: elementary, secondary, post-secondary, post-graduate, continuing, and workplace education. Although JSDSE is a journal of the American Statistical Association, submissions are welcome from educators, practitioners, and researchers around the world.

Article types include, but are not limited to:

Original Research Articles:

- Curricular reform
- Innovative methods of instruction or assessment
- Research (including case studies) on students' understanding of data science, statistics, and probability
- Research on the teaching of statistics and data science and on attitudes and beliefs about statistics and data science
- Creative and tested ideas (including experiments and demonstrations) for teaching statistics, data science, and probability
- Articles that describe how students can develop data fluency and data acumen
- Articles that describe how students learn computational techniques and

undertake the entire data analysis cycle, and master a broader set of learning outcomes
- Articles that help bridge the gap between traditional statistics, computational science, and domain applications in data science
- Use of active learning and student centered pedagogies (e.g., cooperative learning and projects, growth mindset)
- Statistical and data literacy
- Data ethics
- Distance education and online learning

Overviews and reflective essays:

- Scholarly overview of the literature on topics in statistics and data science education
- Reflective essays by scholars with extensive experience in data science and statistics education

Reviews of software, books, and teaching materials:

- Reviews of teaching materials must describe actual experiences using the materials

Datasets and Stories:

- Description of the pedagogical uses of multivariate dataset(s) (including discussions of achievable learning outcomes, potential pitfalls, helpful teaching tips), with the associated dataset(s) available for download with the manuscript for instructional use in classes and further analysis

Research in K-12 Education:

- Research related to the teaching, learning, and assessment of statistics and data science in K-12 settings

Statistics and Data Science Education in the Health Sciences:

- Teaching and learning of statistics and data science in the health sciences
- Biostatistics and data science literacy, competency, applications, and assessment
- Use of real world health data in the classroom
- Biostatistics curriculum development and reform