

EDITORIAL

SERJ is in its fourth year of operation and it is clear that it is now well established as the research journal of the International Association for Statistical Education (IASE). The flow of new manuscripts, as well as their breadth, are increasing, and represent the growing interest in research and in new knowledge that can inform practice in statistics education. That said, many areas of importance for statistics education are underrepresented in current research, such as: learning about associations and correlations, learning advanced topics such as regression or inference testing, the link between knowledge of probability and learning of statistical inference, students' ability to apply and transfer knowledge to out-of-school situations which require activation of statistical understanding, or factors that affect and programs that can improve adults' understanding of real-world statistical messages and arguments.

The selected examples given above are far from being exhaustive; they are provided merely to illustrate the range of research areas that have a potential to contribute to improvement of statistics learning, teaching, and application by people in different educational, cultural and functional contexts. We encourage researchers and educators from diverse disciplines to collaborate, and to consider expanding and extending research plans, in order to address the research and practice needs of the international statistics education community.

This issue contains six papers, four of which appear in a special section on research on variation, which extends the special issue we published in November 2004 on that topic. We thank Joan Garfield and Dani Ben Zvi, who were the Guest Editors both for the former special issue as well as for the special section in the current issue, for their work and initiative regarding this important area.

The four papers on variation include two refereed research papers (Makar & Confrey; delMas & Liu) and two invited discussion papers (Garfield & Ben-Zvi; Pfannkuch). Katie Makar and Jere Confrey examine how prospective secondary mathematics and science teachers understand and articulate notions of variation as they compare two distributions. Bob delMas and Yan Liu examine students' understanding of the standard deviation, and the impact of using a customized computer applet, on their reasoning about the link between spread and center. Maxine Pfannkuch discusses broad implications of the empirical papers on reasoning about variation published in the November 2004 special issue, with an emphasis on the role of tools in students' learning and in future research, and the link between learning about variation and broader aspects of the statistical enquiry cycle. Joan Garfield and Dani Ben-Zvi further extend their reflection based on the empirical papers on reasoning about variation, by pointing to a model that can inform instruction, assessment, and future research. This issue also includes two regular research papers. Linda Brant Collins and Kathleen Mittag deal with the use of calculators in teaching statistics and their paper fills an important gap in the literature. Elena Papanastasiou describes a scale developed to measure "attitudes towards research" of college students, thus adding to the literature that so far has focused more on attitudes and beliefs regarding statistics.

We now turn to a brief report of changes and future plans at SERJ.

First, we plan a special issue on research on "learning and teaching of reasoning about distributions" for November 2006. A preliminary announcement was circulated a few months ago, and a more detailed Call for Papers appears later in this issue. The deadline for submissions is 1 November 2005. Interested authors are asked to submit a letter of intent and to follow the guidelines in the Call for Papers.

Second, there have been some recent changes to our editorial board. Three associate editors have departed, Carmen Batanero, Annie Morin, and Chris Wild. We thank all three for the many

contributions they have made to the development of SERJ while serving on the board. Carmen was a founding Editor and was instrumental in the transition from the former *Statistical Education Research Newsletter*. Chris was also involved with SERJ from the start and Annie joined soon after. Chris, while president of IASE, developed the Association's web pages and SERJ's web page is naturally part of that site. We welcome two new associate editors, Gilberte Schuyten from Belgium, and Ernesto Sanchez from Mexico. Biographical notes for both are given on the next page.

Third, Flavia Jolliffe's four-year term as co-editor ends on 31 December 2005. The search for a new co-editor is progressing, following a procedure recently formalised by the IASE Executive. A 3-person search committee is being formed, consisting of a member of the IASE Executive (chair) appointed by the IASE president, the continuing co-editor, and a member-at-large of IASE who is neither on the IASE Executive nor on the SERJ editorial board. A Call for Nominations is published later in this issue as well as on the IASE website under 'Publications'.

Fourth, we continue updating the guidelines for authors and other SERJ documentation. We expect the revised guidelines to be available in July 2005 and encourage prospective authors to examine these materials and follow them in future submissions. We take this opportunity to express our gratitude to Chris Reading, SERJ's Assistant Editor, for the many hours she puts in, and the care she takes, in producing SERJ to a high professional standard.

Finally, now that plans are well underway for ICOTS7 in 2006 and for many other conferences where research papers in statistics education are presented, we would like to remind prospective authors to be attentive to "prior publication" or "duplicate publication" policies which different journals apply. Like many journals, SERJ's policy is that papers already published, i.e., available for wide public consumption via the Internet or other electronic or printed means, cannot be accepted for consideration by SERJ. In the case of submissions based on papers previously published in conference proceedings, whether in print or electronically, we expect that submitted papers will be *substantially different or expanded*. This usually does not present a problem as many conferences typically pose a limit on word/page count, so what is published is limited in scope from the outset. The upshot is that authors have to strategize in advance what selected portions they submit for publication in conference proceedings and what additional materials, results, analyses, and discussions will be added and be exclusive to manuscripts submitted for journal consideration and review. As will be explained in our revised guidelines, authors will be expected to declare upon submission if a paper or a portion of it was previously published in any form. Authors are encouraged to consult the editors in advance if doubts exist as to what constitutes prior publication, in order to maximize the match of author intentions and journal expectations, and make sure authors find a suitable outlet for their research work.

In closing, we reiterate our conviction that the Journal is supposed to serve a diverse and expanding community of practitioners and researchers interested in statistics education and learning in diverse fields and contexts. We thus encourage all readers of SERJ to send us comments and suggestions regarding the journal, its scope, papers it publishes, and ideas for future plans.

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