

# Statistics Education Research Journal

# Volume 9 Number 1 May 2010

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#### STATISTICS EDUCATION RESEARCH JOURNAL

The *Statistics Education Research Journal (SERJ)* is a peer-reviewed electronic journal of the International Association for Statistical Education (IASE) and the International Statistical Institute (ISI). *SERJ* is published twice a year and is free.

*SERJ* aims to advance research-based knowledge that can help to improve the teaching, learning, and understanding of statistics or probability at all educational levels and in both formal (classroom-based) and informal (out-of-classroom) contexts. Such research may examine, for example, cognitive, motivational, attitudinal, curricular, teaching-related, technology-related, organizational, or societal factors and processes that are related to the development and understanding of stochastic knowledge. In addition, research may focus on how people use or apply statistical and probabilistic information and ideas, broadly viewed.

The *Journal* encourages the submission of quality papers related to the above goals, such as reports of original research (both quantitative and qualitative), integrative and critical reviews of research literature, analyses of research-based theoretical and methodological models, and other types of papers described in full in the Guidelines for Authors. All papers are reviewed internally by an Associate Editor or Editor, and are blind-reviewed by at least two external referees. Contributions in English are recommended. Contributions in French and Spanish will also be considered. A submitted paper must not have been published before or be under consideration for publication elsewhere.

Further information and guidelines for authors are available at: http://www.stat.auckland.ac.nz/serj

#### Submissions

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## **EDITORIAL**

Welcome to the first issue of SERJ for 2010, which is my first issue as a co-editor. In this issue, Francesca Chiesi and Caterini Primi report on an informative application of structural equations modeling (SEM) that explores the interaction between cognitive and non-cognitive factors and its effect on the achievement of learning outcomes by psychology students taking introductory statistics. Tim Jacobbe and Robert Horton build on previous research on teacher knowledge for teaching statistics and report results from a study of elementary teachers' understanding of graphical displays, along with recommendations for teacher preparation and professional development to increase deeper graphical fluency and comprehension among elementary teachers. The third article, by Aisling Leavy, also addresses teacher preparation, but from the perspective of a different topic: informal inferential reasoning. Leavy builds on the previous literature presented in an earlier special issue of SERJ on informal inference, gathering artifacts from a Lesson Study approach to gain insights into student teachers' development of informal inference as they themselves co-designed lessons to develop informal inference among primary school students. I have enjoyed all three articles and find that each one offers insights into teaching statistics, while, as always, opening doors to more questions that need to be explored.

I have enjoyed the start of my tenure as a co-editor for *SERJ*. I cannot think of a better position to be in for keeping abreast of the growing field of statistics education. I attended SRTL-6 last summer in Brisbane, Australia and worked with colleagues from around the world to develop our thinking and understanding about what constitutes informal inferential reasoning and thinking in statistics. I will attend ICOTS-8 in Ljubljana, Slovenia this summer where I hope to meet many of you and catch up on the latest developments. And there continues to be an exciting development of graduate programs in statistics education research in the United States headed up by Joan Garfield and Dennis Pearl. Hopefully, we will see updates on these and other developments within statistics education in the pages of future *SERJ* issues.

I know that the timeliness of reviews has been an issue in the past. I have received 15 manuscripts to date as co-editor, which is in line with the rate of submissions for previous years. I have been impressed by the quality of reviews provided by those who graciously volunteer their time to provide feedback, and the management of reviews by Associate Editors for *SERJ* has equally impressed me. I appreciate the time and effort as all of this makes my job as a co-editor a little easier. And it does take time and effort that has to be found within busy academic lives. Nonetheless, I have made a commitment to shorten the turnaround time on the review of manuscripts. Toward this end, I aim to have a new manuscript assigned to an Associate Editor within two weeks of its receipt, and to hopefully keep the time from submission to decision to no more than 3 months. There will always be exceptions, but the editorial board has managed to meet that target so far. There are still outstanding reviews from prior to the start of my term, and we will continue to work towards completing those reviews.

Keep in mind that my co-editor, Peter Petocz, is putting together a special issue of *SERJ* for November on "Qualitative Issues in Statistics Education Research." I am looking forward to the high quality articles Peter is assembling for this special issue.

ROBERT DELMAS

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