



Department of Research on K-12 Statistics Education

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A new department for the Journal of Statistics Education focused on research related to the teaching, learning, and assessment of statistics in the K-12 setting is introduced and a call for papers is made.

A New Department for JSE and a Call for Papers

The release and widespread adoption of the Common Core State Standards for Mathematics (CCSSM) have dramatically increased the expectations for teaching statistics in grades 6 through 12 ([Common Core State Standards Initiative, 2010](#)). The inclusion of statistics in the K-12 setting has been an ongoing effort of the statistics education community dating back to the work of Fred Mosteller and the creation of the Joint Committee on Curriculum in Statistics between the National Council of Teachers of Mathematics (NCTM) and the American Statistical Association (ASA), as well as many others in the 20th century.

As the authors of the GAISE framework point out, “Statistics...is a relatively new subject for many teachers, who have not had an opportunity to develop sound knowledge of the principles and concepts underlying the practices of data analysis that they are now called upon to teach” ([Franklin, et al., 2007, p. 5](#)). In light of the increased expectations related to statistics, the Conference Board of the Mathematical Sciences identified the statistical preparation of teachers as an area of concern in their recent draft of the *Mathematics Education of Teachers 2* (MET2) document ([Conference Board of the Mathematical Sciences, 2012](#)).

This new department related to the teaching, learning, and assessment of statistics will feature research studies focused on K-12 students and teachers. This department intends to inform the statistics and mathematics education communities of interrelated issues associated with preparing teachers to teach statistics and developing students’ understanding and dispositions toward statistics.

Aims & Types of Manuscripts

The Department of Research on K-12 Statistics Education welcomes papers that advance our understanding of K-12 students' understanding of statistics, how to better teach statistics at the K-12 level, and methods to prepare teachers to teach statistics.

This department is primarily interested in receiving research papers. Research papers may be empirical studies or conceptual/theoretical articles. *Empirical studies* might contribute to a theory of learning or a design of educational materials, or address the effectiveness of a particular intervention for teaching or learning statistics. Empirical studies use appropriate, well-documented research methods and data analyses (whether qualitative or quantitative) that support sound conclusions. An investigation of whether alternative methods of teaching lead to better results than another such method without a connection to theory and/or previous research would not generally be acceptable. Papers should include a discussion of the broad impact of the research. Quantitative measurements of student outcomes should be aligned with the theoretical foundations of the study and evidence given as to their reliability and validity. Student performance on a final exam or end of course grade would not generally pass these tests.

Conceptual studies provide a new perspective on a problem, technology, or body of work. Manuscripts should provide evidence that the study is based on and situated in prior work, include a discussion of the broader impact of the study, use sound argumentation and reasoning, and, if appropriate, provide empirical examples to illustrate. Conceptual studies might, for example, develop a critical context for evaluating education materials, summarize recent innovations in the research literature that are under-appreciated or poorly understood, or point out critical gaps in the research literature and propose approaches for filling these gaps.

Launching the Department

Beginning with the July 2013 issue of JSE, Tim Jacobbe and Richard Scheaffer will "kick off" the new department with a paper that will provide a brief history of how statistics made its way into the K-12 curriculum. The Research on K-12 Statistics Education department aims to highlight research that is being done with teachers and students in order to enact the vision presented in the GAISE framework, CCSSM, MET2, and many international movements to make statistics an important component of the education all students receive in school. This department will not be focused on issues related to teaching, learning, and assessing statistics at the college or AP Statistics level. It will also not be focused on presenting activities to be used in the teaching and learning of statistics. This department will feature research related to teaching, learning, and assessing statistics in the K-12 setting. We encourage members of the mathematics and statistics education community conducting work in this area to submit manuscripts for review. Articles submitted for this new department will go through the same peer review process as other submissions to JSE.

References

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Franklin, C., Kader, G., Mewborn, D., Moreno, J., Peck, R., Perry, M., & Scheaffer, R. (2007). *Guidelines for assessment and instruction in statistics education* (GAISE) report. Alexandria, VA: American Statistical Association. Retrieved from <http://www.amstat.org/education/gaise/>.

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