

TEACHING TOOLBOX

Year of Dialogue:

Scholarship
in 60 Seconds
By Jack R. Lohmann



THE JEE EDITOR OUTLINES SUBMISSIONS CRITERIA FOR THE RESEARCH JOURNAL.

Do you have a minute? I'd like to share an idea I have for a paper in JEE." As editor of the Journal of Engineering Education (JEE), I am frequently approached with this request. These brief discussions are one of the more interesting and significant aspects of being an editor. I get to hear about a variety of intriguing educational ideas and at the same time help prospective authors determine if their ideas are a good fit for JEE. They also have become more important since the journal refined its mission four years ago to focus on scholarly research in engineering education and published its review criteria. Papers are now expected to exhibit a level of rigor consistent with the principles and practices of rigorous research and especially those applicable to the learning sciences. Seldom do I hear an idea that topically is not a good fit for the journal. If a paper is not a good fit, it is generally because there is a mismatch between the focus of the paper and the mission and review criteria of the journal.

“JEE seeks to catalyze a global community of scholars and practitioners dedicated to advancing rigorous scholarship in engineering education.”

When I listen to an idea about a paper, I generally have three questions in mind.

What are the research questions? Conversations that emphasize an innovation being developed or how something is being taught rather than questions or propositions being investigated or how students are learning suggest the manuscript is probably more appropriate for a journal focused on curriculum

development and not JEE. Clear research questions or propositions are critical: They sharpen the focus of the research and highlight potential limitations; they guide the choice of research methods; and they make apparent the expertise needed to carry out the work.

How is the study designed? Designing a research study involves many considerations, but fundamentally it involves as much attention to addressing the research questions as it does to important tangential factors. A thoughtfully designed and carefully executed research study focuses on producing valid and reliable results while also mitigating against biases and confounding effects.

Who is involved? Engineering education is an interdisciplinary field that connects engineering and education, and as such, it requires research expertise relevant to the questions being addressed. A recent evaluation of papers published in JEE showed that submissions by authors with appropriate technical and

methodological expertise clearly received more favorable reviews and timely publication than those that did not.

The diversity of ideas I hear is considerable; however, the conversations share one element in common: many engineering educators are interested in employing more rigorous research principles and practices in their educational efforts. And for them there is good news. There are many individuals and organizations seeking to build the infrastructure needed to support and sustain them in their efforts, such as: the National Academy of Engineering's Center for the Advancement of Scholarship in Engineering Education and the center's electronic portal, Annals of Research in Engineering Education; the National Science Foundation's Engineering Education Research Colloquies and the Rigorous Research in Engineering Education workshops; ASEE's support of the activities of the Year of Dialogue: Advancing the Scholarship of Engineering Education; and, of course, JEE through its five-year strategic plan, which we initiated last year.

JEE seeks to be more than a place to publish papers. Our vision is to catalyze a global community of scholars and practitioners dedicated to advancing rigorous scholarship in engineering education, and we are implementing several initiatives to help shape and promote such scholarship. We are broadening our global collaborations with other journals and learning-science communities; publishing special issues and papers with topics critical to advancing scholarship in the community; enhancing the disciplinary and demographic diversity of our authors, reviewers, editors and advisory board members; assuring timely, thoughtful and rigorous reviews; and initiating an international conference on engineering education research (the first will be held in Hawaii in June).

The journal's associate editors and I welcome hearing about your ideas for papers in JEE. And we also welcome the opportunity to collaborate, in whatever capacity, with others interested in advancing rigorous scholarship in engineering education.

Jack R. Lohmann is vice provost for institutional development and professor of industrial and systems engineering at the Georgia Institute of Technology. He also serves as the editor of the Journal of Engineering Education. More information about the journal and its strategic plan may be found on the JEE Web page at www.asee.org.