



**Publishing Your Engineering Education Research in *JEE*:
Lessons Learned from Studying the Peer Review Process**
Facilitated by Stephanie Cutler and Kacey Beddoes

Disclaimer!

This workshop and its facilitators are **NOT** associated with or sponsored by the *Journal of Engineering Education*



Workshop Objectives

By the end of this workshop, participants will be able to:

- Describe considerations for publishing in engineering education journals, specifically the *Journal of Engineering Education (JEE)*
- Explain review considerations used in the peer review process for engineering education journals, specifically *JEE*

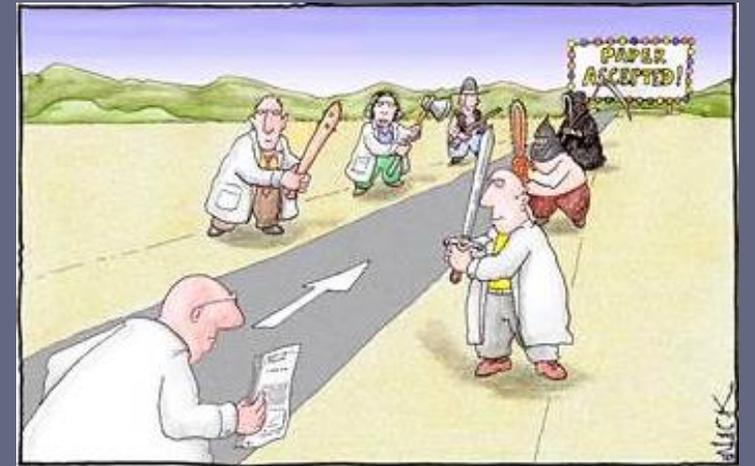
Workshop Overview

- Introduction
- Thinking about YOUR perceptions about publishing Engineering Education Research (EER)
- Lessons Learned from *Journal of Engineering Education (JEE)* Reviewers and Editors
- Discussion of connections between Lessons Learned from reviewers & editors and initial perceptions of publishing
- Individual reflections on key take-aways for moving forward
- Concluding remarks

Introduction to foundational study for this workshop: *Advancing Engineering Education Research through Peer Review Analysis*

NSF Awards #1762436 & 1929728

The purpose of this study is to identify *research norms and values* shaping the field of engineering education research through the peer review processes.



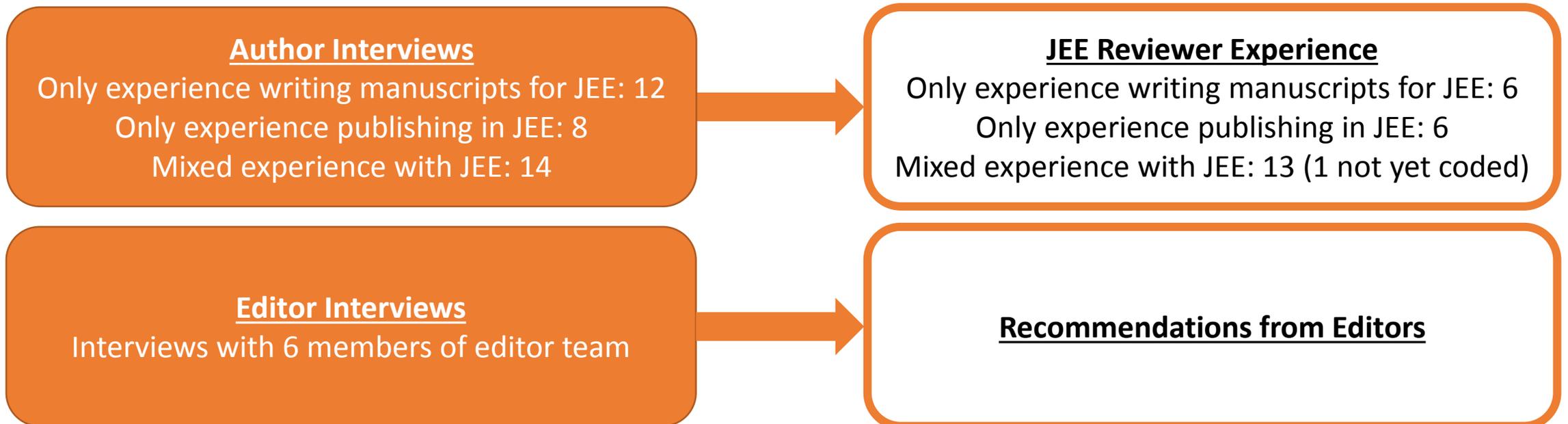
Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

Introduction to foundational study for this workshop: *Advancing Engineering Education Research through Peer Review Analysis*

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Research Question 1: What are the topical, methodological, and epistemological norms that exist in engineering education research and how are they enacted through peer review processes?

Research Question 2: What are the norms and values held by the field's "gate keepers"?



What are your initial thoughts about publishing engineering education research?

Take 1 minute to write down your initial thoughts about what comes to mind when *you think about publishing engineering education research.*

Take 2 minutes to discuss your initial thoughts with a neighbor

Menti – Who do you think about as your audience when publishing engineering education research?

Menti - Where (what journals/conferences) do you use to publish engineering education research? Please use acronyms (if known).

Individually, create a post-it for each criterion you use/you think reviewers use when reviewing an engineering education research article.



At your table, compare and contrast the criteria listed on the post-its.

- How much overlap is there in the criteria listed at your table?
- What are some of the more unique responses that were listed?
- What (if any) gaps are there in the criteria listed on your post-its?

From our (preliminary) research, the most common criteria used by reviewers are...

- **Argument and Alignment (19 of 24 participants who have reviewed for JEE specifically mentioned)**

“**the argument has to be completely in alignment**, so that means the theory needs to match up with the research questions, and the methods need to make perfect sense, and the results need to follow from all of that stuff and not overstep their bounds.”

“I look for papers that kind of clearly describe why the area of work is needed, so kind of **identifying the gap in the research that they're addressing**. Then, research questions align with that.”
- **Methodology (18 of 24 participants who have reviewed for JEE directly mentioned)**

“I look for evidence of quality, whether that’s reducing your risk of type I error or whether or not it’s your discussion of how you’ve qualitatively analyzed data and it’s not just two sentences but I can deeply **understand how you’ve approached the data and how you’re making sense of it** in a way that aligns back to the questions and to your framework and then to where you’re going.”
- **Added Value (10 of 24 participants who have reviewed for JEE directly mentioned)**

“I’ll definitely want to understand what’s the contribution like, “**Why are you doing this in the first place?** What is it you hope to find out? What do you know about this already that would help? So you don’t need to start from scratch. Show me this existence of space and connect to it.”

From our (preliminary) research, the most common criteria cited by editor for why papers are rejected...

- **Agree with reviewers about Alignment, Methods, and Contributions**

“The kinds of claims that are being made **don’t fit** with the evidence that they presented.”

“If your methods aren’t strong, your conclusions are weak. **Your methods are the guts of your article.**”

“In terms of moving the field forward, I feel like I want to know when I read the paper where the gap is in the literature. **What is the piece that this paper is contributing that others haven’t done?**...Or if it has been done, what is unique about the way in which you are doing it here so that **I’m learning something from reading this?**”

- **Grounded in literature and/or theory**

“**they’re not grounded in anything**, like what’s your theory? What’s your framework? What’s your methodology? What’s the quality framework you’re using? And I’m pretty open about those things, but you have to have something. It doesn’t have to be perfect. **But with nothing, then I don’t know how it relates to the rest of our field.**”

- **Communicating so the audience understands**

“the more complex their paper is or their research project it, the harder it is to describe it to others. And **if you don’t describe it well to others, then it’s more likely to be rejected.**”

At your table, compare and contrast the criteria listed on the post-its.

- How do the criteria you created align with the criteria from our research?
- What criteria (if any) do you think differentiate engineering education as field? Which ones are unique to engineering education?
- What do you see as the challenges to publishing your engineering education research?

From our research, what editors want future authors to know about JEE...

- **When doing something new, the responsibility is on the author to make sure it is written in a way that the reader (and reviewer) can understand it**

“If you’re going to try something new, **you have to do a lot more work to explain what it is**, why it matters, what makes it truthful, reliable, meaningful, valuable, all of those things.”
- **The field (and journal) are changing and evolving**

“the main one [thing that the participants wants authors to know] is that **it’s changing and evolving**. And whatever you’ve heard about it, there’s **an opportunity for it to change**.”
- **JEE isn’t the only venue for publishing your work**

“JEE is not the only journal and it’s not designed to be **all things to all people**. It’s not the only place in the field

What are your new thoughts about publishing engineering education research?

- Take a few minutes to reflect on what you learned during this workshop.
- Make notes on what you want to remember as you move forward disseminating your research in the field of engineering education

We're still developing as a field, so talk to your peers about the peer review process.