

Journal of Engineering Education: Special Issue Call for Papers
Systematic Reviews and Meta-Analyses in Engineering Education

Special Issue Guest Editors

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1 Overview

Systematic reviews and meta-analyses are methodological approaches for explicating the landscape of literature in a particular area of research (Gough et al., 2017; Lipsey & Wilson, 2001; Petticrew & Roberts, 2006). Considering the exponential rates at which research studies are being published in various outlets and the (often) contradictory findings, researchers and practitioners consistently grapple with the state of evidence in their field or area of research. Systematic reviews and meta-analyses are used to synthesize and present results from empirical research by combining and analyzing data from various studies. The overall findings from these studies are presented as well as moderating factors that reveal different conditions under which an intervention works (or not) and for whom (Adesope et al., 2017; Cooper et al., 2009; Nesbit & Adesope, 2006). Borrego et al. (2014) describe several benefits of systematic reviews in engineering education including their potential for synthesizing prior work in an objective manner, producing comprehensive findings that can better inform practice, and identifying important new directions. According to Power (2021), the benefit of systematic reviews and meta-analyses lies in the scientific approach for collecting and analyzing data.

The editors of this special issue in the *Journal of Engineering Education* are interested in receiving state-of-the-art systematic review and meta-analysis manuscripts that investigate fundamental issues in engineering education using the Preferred Reporting Items for Systematic Reviews and Meta-analysis Protocols (PRISMA-P; Preferred Reporting Items for Systematic Reviews and Meta-analysis [PRISMA], 2015). The manuscript must describe a robust methodological approach including explicit selection criteria, a list of databases searched and when the searches occurred, keyword and Boolean combinations, and the use of contemporary analytical approaches to handle statistical dependencies (e.g., robust variance estimation). We will consider thorough scoping reviews if they are systematic and make substantial contributions

to the literature. The submitted manuscripts must make substantial theoretical, empirical and practical contributions to the field of engineering education.

In addition, one of the important purposes of this special issue is to provide directions for engineering education researchers to undertake novel research instead of re-inventing the wheel. Thus, we encourage submissions that explicate future directions of research in the field based on findings from the reviews. The objective of the reviews should be to develop theory, identify research gaps and provide agendas for further enquiry.

2 Submission Information

Pre-registration deadline: December 1, 2021

Submission opens: December 1, 2021

Submission deadline: June 1, 2022

First round of reviews and decisions transmitted: September 1, 2022

Revisions returned by December 1, 2022

Second round of reviews and decisions: February 1, 2023

Second round revisions returned by March 31, 2023

Anticipated publication: Mid-2023

Pre-registration will be completed through Open Science Framework (OSF) registries (Center for Open Science, 2021) and submitted to the Lead Guest Editor, Olusola Adesope, via email. Feedback will be provided to the authors on the pre-registered document. Manuscripts for the special issue will be submitted through the journal's online system, ScholarOne (<https://mc.manuscriptcentral.com/jee>). Manuscripts will undergo a review process similar to regularly submitted papers, applying the *JEE* review criteria for research reviews (*Journal of Engineering Education*, 2021). Questions pertaining to the special issue should be directed to the Lead Guest Editor, Olusola Adesope.

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