

REEN Webinar 26 July 2023: From concept to completion...

Chat and accompanying resources

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Video recording

https://drive.google.com/file/d/1lz6Gr51CPYSke5EjtraDXbDVu9Is23g6/view?usp=drive_link

Zoom Chat

Only substantive comments included, threaded, all anonymised

Timestamp	Question or comment and responses
3:57	<p>Good morning all, I am not sure if I can still attend this meeting. I received the invite, but I do not have a paper or abstract ready. I recently registered my DENG, and are still working on my proposal. but I would like to write an article for conference or journal</p> <p>Response: You are welcome! we hope the workshop can provide helpful information for anyone new to engineering education research and preparing to write an article</p>
28:24	<p>What do "results" look like in a paper in education research vs engineering research?</p> <p>Response 1: That is a great question. We will talk about this a little bit later today but let's revisit this question again at the end.</p> <p>Response 2: In a phenomenographic study I did of lecturing, the "results" were qualitatively distinct ways of experiencing lecturing, from "lecturing as soliloquy" to "lecturing as enacting research" https://www.tandfonline.com/doi/full/10.1080/07294360.2021.1872055</p>
30:34	<p>Do we need statistics results in paper or theory can view the results of engineering education paper?</p> <p>Response: Some researchers in Engineering Education Research (EER) do use quantitative data and then the results may look like with statistical analysis. However many EER papers use qualitative data which is generally analysed and interpreted in relation to literature or a theory and can be presented in a more</p>

	descriptive way - providing quotes or descriptions as evidence for the claims that you are making.
39:28	What are some examples of limitations you might acknowledge? Perhaps there are self-selection biases of the participants, idiosyncrasies of the context, etc.
46:58	We have a colleague who says “Your first job is to cyberstalking the journal / conference you want to publish in” Response: maybe 'create your textual network' is a different way of saying cyberstalking....
47:42	REEN is a great go-to for resources. Here you can find a listing of journals publishing engineering education research https://www.reen.co/ee-journals https://reen.co/publications/
50:06	Conferences: AAEE: https://aaee.net.au/ WEEF: https://www.weefgedc2023.org/ , https://www.ifees.net/weef/ ASEE: https://www.asee.org/events/Conferences-and-Meetings SEFI: https://www.sefi.be/activities/events/annual-conference/ REES: https://reen.co/events/rees/
50:48	I can recommend also an online tool to help you find additional relevant literature if you input one article publication. It also helps me organise the literature I read according to themes. great for beginners: https://researchrabbitapp.com/
51:49	connected papers https://www.google.com/search?client=firefox-b-d&q=connected+papers
54:40	sorry was daydreaming of cookies
55:59	Is it correct to say that it is more useful to think of education research as gathering “evidence” rather than “proof” as in the case of technical research?
56:21	Is it common to have a systematic literature review(SLR) in engineering education research or is SLR more for medical research? Response 1: Borrego, M., Foster, M. J., & Froyd, J. E. (2014). Systematic literature reviews in engineering education and other developing interdisciplinary fields. <i>Journal of Engineering Education</i> , 103(1), 45-76. Response 2: There are lots of different reviews Grant, M. J., & Booth, A. (2009). A typology of reviews: an analysis of 14 review types and associated methodologies. <i>Health information & libraries journal</i> , 26(2), 91-108. Response 3: When writing the literature section of a paper, there is no need for this section to be construed as a SLR. Think of this opening section as a narrative review that highlights the relevance of your research question and the significance of your research Response 4: Systematic literature reviews can become huge studies in their own right Response 5: https://onlinelibrary.wiley.com/doi/full/10.1002/jee.20549 : Phillips, M., Reed, J. B., Zwicky, D., & Van Epps, A. S. (2023). A scoping review of engineering education systematic reviews. <i>Journal of Engineering Education</i> , 1–20.

	<p>Response 6: SLRs seem to be the new black in a lot of fields now, but SLRs are very much horses for courses</p>
57:17	<p>How is the trust measured ? How do you know that the findings are genuine?</p> <p>Response: Walther, J., Sochacka, N. W., & Kellam, N. N. (2013). Quality in interpretive engineering education research: Reflections on an example study. <i>Journal of engineering education</i>, 102(4), 626-659.</p> <p>Response 2: Daniel, S., Mann, L., & Mazzolini, A. (2017). Defending interpretivist knowledge claims in engineering education research. 28th Annual Conference of the Australasian Association for Engineering Education (AAEE 2017) (pp. 889–897). https://search.informit.org/doi/10.3316/informit.392496297589445</p>
57:47	<p>How much literature is sufficient? Is there a minimum number of papers to review that you can recommend?</p> <p>Response: There is no standard number of references to be included in a paper, but I don't remember seeing articles published in the major venues (JEE, AJEE, EJEE) with (at least) less than 30 sources. Conference publications which have a lower word limit would function well with 10-15 sources, and some conferences indicate a maximum number of sources.</p>
58:54	<p>I have seen two ways of writing the paper, 1. One way is sequentially, Introduction, Lit. review, methodology, findings and conclusion and the other way is they write the findings first followed with other sections. Which approach is right? People argue that writing findings first helps to position the paper</p> <p>Response 1: I think starting with the findings is unconventional, but it can work.</p> <p>Response 2: ah, so you mean where to start writing, not how to structure the paper in its final form?</p> <p>Response 3: Some interpretivist papers can be a journey of discovery - how do I know what I think until I read what I write?</p> <p>Response 4: some people argue that a big part of the research is in the writing</p> <p>Response 5: For the intro: think more in terms of contribution rather than findings. include findings in a minimal way meant to highlight the contribution</p> <p>Response 6: This paper articulates well what makes a contribution: Leidner, D. E. (2020). What's in a Contribution?. <i>Journal of the Association for Information Systems</i>, 21(1), 2.</p> <p>OP: I am talking about while I am drafting it</p> <p>Response 7: yes in that context, starting with the findings can help you to work out what you have found, and then work back to work out what you need to include in the lit review</p>
1:01:31	<p>Some papers on positionality: Hampton, C., Reeping, D., & Ozkan, D. S. (2021). Positionality statements in engineering education research: A look at the hand that guides the methodological tools. <i>Studies in Engineering Education</i>, 1(2).</p>

	<p>Secules, S., McCall, C., Mejia, J. A., Beebe, C., Masters, A. S., L. Sánchez-Peña, M., & Svyantek, M. (2021). Positionality practices and dimensions of impact on equity research: A collaborative inquiry and call to the community. <i>Journal of Engineering Education</i>, 110(1), 19-43.</p>
1:09:39	<p>I am glad that you mentioned ethical approval. As an advice: try to contact your ethical review board to get clearance to conduct a study based on your teaching. some of the points they may raise might help you also think about and articulate the limitations of your study (for example, when it comes to the double role of teacher-researcher, or the main characteristics of the participants)</p> <p>Response 1: we have a very strict IREC. we once did a paper jointly with Poland, and our institution required not only our ethics approval but also he one from Poland</p> <p>Response 2: yes I've had a similar experience, does make international collaborations more challenging to undertake</p> <p>Response to R2: That's great to hear. Comparative studies may raise reviewer comments regarding uniformity of data collection processes and similarity in terms of settings. In this case, the ERB can be really helpful to ensure some uniformity, through some of the expectations they have before giving clearance to the study</p>
1:11:03	<p>My first supervisor for my Masters many years back told me to always have a little black book with me, so when any bright idea come to mind, write it down, even in middle of night</p>
1:13:13	<p>Can you please suggest some sources, where we can get the ethical clearance for our work?</p> <p>Response 1: I think that will be institution dependent. My university has an internal ethics approval process, aligned to Australia's framework for human research</p>
1:14:18	<p>Is it common to write engineering education papers in the first person?</p> <p>i think it's often done, to not mask the researcher's role in interpreting andmaking sense of the data</p> <p>yes. as the majority of engineering education research being published is co-authored, you will find the first person plural quite commonly used. "we surveyed", "we interviewed" "we analysed" "we argue that"</p>
1:25:15	<p>This really shows how important and valuable the literature can be in unlocking many other aspects of the study</p>
1:26:53	<p>Abstract cannot include everything . Organisers limit it to one page</p> <p>Response 1: Absolutely - an abstract is very short but there are key elements that the reviewers will be looking for. Luckily, in education research, the abstracts are quite a bit longer than technical papers - REES for example uses extended abstracts which enables and encourages authors to include detail in the key features of the study</p> <p>Response 2: It does take practice and experience to selectively choose the right information for an abstract - perhaps read some abstracts to see how other authors do this.</p>

1:27:52	The engineering education research community is super friendly. the focus on building each other up simply shines through. you can feel this when attending EER conferences
1:28:50	Can personal experiences (as in the abstract) be used as part of “trustworthy evidence”, especially for conference presentations compared to journal papers? Response: There are research methods that enable you to use personal experiences as evidence. You can look up auto ethnography

Papers referenced in the talk / Zoom chat

- **Papers the facilitators used in preparing the talk**
 - Borrego, M. (2007). Conceptual difficulties experienced by trained engineers learning educational research methods. *Journal of Engineering Education*, 96(2), 91-102.
 - Trigwell, K., Martin, E., Benjamin, J., & Prosser, M. (2000). Scholarship of teaching: A model. *Higher education research & development*, 19(2), 155-168.
 - Case, J. (2015). Knowledge for teaching, knowledge about teaching: exploring the links between education research, scholarship of teaching and learning (SOTL) and scholarly teaching. *Journal of Education*, (61), 53-72.
- **Literature reviews, Systematic literature reviews, scoping reviews**
 - Borrego, M., Foster, M. J., & Froyd, J. E. (2014). Systematic literature reviews in engineering education and other developing interdisciplinary fields. *Journal of Engineering Education*, 103(1), 45-76.
 - Grant, M. J., & Booth, A. (2009). A typology of reviews: an analysis of 14 review types and associated methodologies. *Health information & libraries journal*, 26(2), 91-108.
 - Phillips, M., Reed, J. B., Zwicky, D., & Van Epps, A. S. (2023). A scoping review of engineering education systematic reviews. *Journal of Engineering Education*, 1– 20. <https://onlinelibrary.wiley.com/doi/full/10.1002/jee.20549>
- **Trustworthiness and quality**
 - Walther, J., Sochacka, N. W., & Kellam, N. N. (2013). Quality in interpretive engineering education research: Reflections on an example study. *Journal of engineering education*, 102(4), 626-659.
 - Daniel, S., Mann, L., & Mazzolini, A. (2017). Defending interpretivist knowledge claims in engineering education research. 28th Annual Conference of the Australasian Association for Engineering Education (AAEE 2017) (pp. 889–897). <https://search.informit.org/doi/10.3316/informit.392496297589445>
- **What makes a contribution?**
 - Leidner, D. E. (2020). What's in a Contribution? *Journal of the Association for Information Systems*, 21(1), 2.
- **Positionality**
 - Hampton, C., Reeping, D., & Ozkan, D. S. (2021). Positionality statements in engineering education research: A look at the hand that guides the methodological tools. *Studies in Engineering Education*, 1(2).
 - Secules, S., McCall, C., Mejia, J. A., Beebe, C., Masters, A. S., L. Sánchez-Peña, M., & Svyantek, M. (2021). Positionality practices and dimensions of impact on equity research: A collaborative inquiry and call to the community. *Journal of Engineering Education*, 110(1), 19-43.

Additional papers and resources which may be useful

<https://eer.engin.umich.edu/research/research-guidance/>
<https://sotl-south-journal.net/index.php/sotls/article/view/279>
<https://ajee.utm.my/index.php/ajee/article/view/9>