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Engineering Education Research: Writing For Publication

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ENGINEERING EDUCATION RESEARCH: WRITING FOR PUBLICATION (WORKSHOP)

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ABSTRACT

In this interactive workshop, facilitated by a team of editors from the *European Journal of Engineering Education (EJEE)*, the *Journal of Engineering Education (JEE)*, and *IEEE Transactions on Education*, participants had the opportunity to network with other scholars in the field, and learn about the journal publication process and how best to navigate it.

It served as an informal opportunity for scholars at all stages of their publication journey to share their experiences, both positive and negative, directly with each other and journal editors. Participants co-created a document of shared insights about writing for publication, the key outcomes of which are presented in this paper.

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1 BACKGROUND AND RATIONALE

The process of getting an article published in an academic journal can be difficult to navigate. Authors typically wonder what editors and reviewers seek, how to focus their manuscripts, and how to expand conference papers to a level acceptable for journal publication.

Understanding academic journals and finding the appropriate journal for one's contribution to the field of Engineering Education Research can improve the academic publishing experience for all. Given that these are skills which we can and need to develop as researchers, this workshop aimed to provide an overview of the academic publishing process to make this process transparent and attainable. Discussion helped stimulate reflection and hone key writing skills, whilst providing everyone with the opportunity to share their experiences helped foster a supportive community.

2 WORKSHOP DESIGN

This interactive session aimed to support authors (new and experienced) in developing knowledge and understanding of academic journals and effective manuscript writing practices to facilitate publication. Whether a student, Early Career Researcher, or established researcher, participants in this workshop found a space to discuss experiences and challenges, as well as generate strategies for future submissions.

The workshop began with introductions from the facilitators, enabling participants to "see the humans behind the journals".

2.1 Workshop outline

We followed the agenda outlined below.

- Welcome and Introductions – Getting to know each other (facilitators and participants).
- Think-Pair-Share/Quickfire Discussion – What is the best aspect of authoring? What would you like to know as a new author? What is the most daunting aspect of authoring?
 - Collating "what you would like to know" and "what is most daunting" to seed discussion in the next activity
- Group Discussion with each group facilitated by an editor - Strategies for authoring (focused by the outcomes of the initial group discussion regarding daunting aspects of authoring)
 - Break-out groups collaborate on an online shared document to collate and distill workshop discussions and insights
- Synthesis – Discussion of results from each group.
- Wrap Up and Top Tips from the Editorial Teams.

Through these dialogues, participants co-created an enhanced understanding of strategies for success in academic publishing. Key takeaways from the workshop included expanded networks from having worked with a variety of scholars and journal teams, and the co-created document with workshop insights, summarised below.

3 RESULTS OF THE WORKSHOP

The initial discussions around what authors would like to know and what they find most daunting resulted in the following themes being identified within the room.

What would you like to discuss?

- Transitioning into the engineering education field
- Managing different or conflicting advice from different reviewers
- When you don't understand the reviewer comments - what do you do?

What is most daunting?

- Long timeframe for feedback from reviewers
- Changing discipline - learning new language, ways of writing, disciplinary norms.
- How to select the "right" journal in which to publish
- Do you really have to read 15 books on each concept to be able to publish - when is enough, enough?
- Avoiding predatory journals

These points were then discussed in small groups within the room, and four key areas emerged from the feedback: writing, choosing a journal, the submission process, and the review process. Discussions focused on strategies for authors. Key outcomes of these for each area are presented below, written as advice to you, the reader.

3.1 Writing

It is important to find and own your own writing process, this process will not be the same for everyone.

It is easier to write a manuscript with a journal already in mind (see next section) so that you can prepare your scoping and structure so that it aligns with the journal requirements.

To get started, structure your argument outside of the journal format using, for example, a whiteboard, slide presentation, or mind map. This can help you focus in on what you really want your manuscript to say and how to structure the narrative of the manuscript so that there is a logical flow for the reader. Another idea is to create your journal paper on a page (e.g., create a bullet point as a guide for writing each paragraph in more detail) and iterate between that outline and the broader work (for example by using the Mumford method).

It is also important to remember that you do not need to present “all the ideas” in one manuscript; consider what piece you can add to the conversation.

3.2 Choosing the journal

Choosing a journal to submit your work to can be daunting (this was agreed upon by all at the workshop), some guiding questions to ask yourself are:

- a) What conversation do you want to join? What conversations in the field do you want to shape?
- b) Papers that are exciting to you - where were they published?

With these questions answered you can think about the framing and audience of different journals. It is important to understand the scope and remit of journals differs and you should keep this in mind when choosing a journal for your work. For example, EJEE is looking for usefulness and scholarliness, whereas JEE focuses on scholarliness. You can also begin to look for special issues that your work aligns with and information on upcoming special issues will be available on journal webpages.

3.3 Submitting your work

Write a cover letter to the Editor. If you are a new researcher, declare this in your letter to the editor when submitting work. For our field, you should also:

- a) Make sure you have a theoretical framework.
- b) Make sure to write what your methodology is and that it is aligned with your research aims.
- c) Write clearly and concisely.

3.4 Dealing with reviewer comments

There are a range of decisions that you may receive following submission of your manuscript. In general, these are: Reject, Major Revision, Minor Revision and Accept.

In all cases, you will receive feedback. Understand that this is an opportunity, the more feedback you receive and integrate, the better the final result.

Also keep in mind that rejections are common. This doesn't mean that it is a pleasant experience for anyone, but please be assured that it is not only you. You will be provided with feedback from the editorial team and reviewer comments if the manuscript was sent for review.

If you receive a decision of either Major or Minor Revision, you will be provided with feedback from the editorial team as well as reviewer comments. You will be provided with a deadline for submitting your revised manuscript. A misconception that was uncovered during the workshop is thinking that the author of a manuscript must make all the changes suggested by the reviewers. This is not necessarily the case and whilst incorporating reviewer advice should enhance the clarity and quality of the manuscript, there may be times when an author has a justified reason for not implementing a

suggestion made by a reviewer. Whilst this is perfectly acceptable practice, it is important that you provide your rationale in your response to the reviewers in a polite manner “Thank you for the point, we considered ... but because (e.g., length and scope) ...”.

Like authors, the reviewers are human; we all bring our unique perspectives to the work we do. Therefore, it is entirely possible for you to receive conflicting reviewer feedback. Although guidance should be provided by the Associate Editor in this case, there may be times when discussing the feedback with senior colleagues is useful in helping you to determine how to best address the feedback. Editors are typically happy to discuss potential ways to address wide ranging feedback so please do remember that you can contact them for guidance.

If a reviewer recommends something that is already in your manuscript, this may mean that they do not understand what you have written and so it may need explaining or rewording. Keep in mind that if reviewers are struggling to understand something, readers will probably be in the same situation, and so more clarity is probably needed.

We editors hope that you will never receive “mean” feedback, as we strive for our journals to provide advice that is professional and constructive. That said, it is easy to read any level of criticism harshly. Emotions are heightened when feedback is provided on work we are passionate about. Remember, firstly that reviewers are volunteers who are typically doing their best to help you strengthen your message, and secondly that it helps to take a break and reflect on the feedback when you return. One piece of advice is to take a two stage approach to enable you to process reviewer comments; open and read the reviewer comments, then put them aside for a week before opening them again. Again, you may want to discuss the comments with a trusted colleague to gain additional perspectives.

4 SIGNIFICANCE FOR ENGINEERING EDUCATION

This workshop was offered to help demystify the publication process for prospective authors and to broaden the pool of potential contributors, making engineering education research more accessible for the increasingly diverse community engaged in this field. In turn, by hearing from this broader pool of contributors, the editorial teams from leading journals gained insights into the perspectives and experiences of new authors embarking on their academic journeys, as well as hearing perspectives from more established authors. The key points they identified during the workshop are:

1. Read a lot and notice good writing.

Read papers from the journal you are considering submitting your work to. Read your own work carefully, checking for coherence throughout the manuscript.

2. Understand the process.

Reviewers make a *recommendation*; editors make the decisions. Reviewers make *suggestions* for the development of the manuscript; these are not orders. Make a table

with responses to the reviewer comments to upload with the revised manuscript, be grateful for the good advice and explain politely, where applicable, why you chose not to follow a suggestion.

3. Become a reviewer.

Picking the right reviewers is important and leads to a better experience for both reviewers and authors. Having a larger pool of reviewers helps this process and becoming a reviewer is also useful for developing your understanding of the publication process, especially for new authors. Becoming a reviewer provides you with an opportunity to see the process from the reviewer's perspective.

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