

June 11, 2020

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Dear Wendi Arant Kaspar,

Thank you for your work as editor of *College & Research Libraries*. With a rich history, a gold open access publishing model, and indexing in several databases, *C&RL* is a premier venue for Library and Information Science scholarship. We, the undersigned, believe that the change proposed below will help ensure that *C&RL* maintains high standards of rigorous methods while guarding against publication bias, p-hacking, and hypothesizing after results are known.

With this letter, we are proposing the adoption of a registered reports submission track. Registered reports enable research methods to be peer reviewed before data collection. As explained by the Center for Open Science:

This format is designed to reward best practices in adhering to the hypothetico-deductive model of the scientific method. It eliminates a variety of questionable research practices [QRPs], including low statistical power, selective reporting of results, and publication bias, while allowing complete flexibility to report serendipitous findings.

(Registered Reports, n.d.)

When a registered report meets journal expectations authors are given a conditional acceptance (also known as in-principle acceptance) and assured that the journal will publish the completed study if they adhere to the registered methods.

Registered reports are considered one method for preventing questionable research practices (QRPs), which are practices that “can spuriously increase the likelihood of finding evidence in support of a hypothesis” (John, 2012, p. 524). Fidler and Wilcox (2018) describe QRPs as practices that “inflate the rate of false positives in the literature.” The high prevalence of QRPs is considered a cause of the replication crisis (Fidler & Wilcox, 2018). As explained by Bishop (2019), “more journals are adopting the ‘registered report’ format, in which editors evaluate the experimental question and study design before results are collected — a strategy that thwarts publication bias, P-hacking and HARKing.” Registered reports improve efforts for distinguishing between confirmatory and exploratory research. Four QRPs are listed below with more context.

- **HARKing** is presenting a *post hoc* hypothesis as though it were an *a priori* hypothesis

- **Bias Against the Null/Publication Bias** is when authors self-select to not submit or journals refuse to publish null or negative findings. This leads to the file drawer problem and "by chance" research being published.
- **p-hacking** is performing multiple analyses on data in order to find patterns that present as statistically significant though the studies may not have been designed to look at those variable relationships.
- **Underpowered Studies** are studies with low statistical power which may lead to erroneous conclusions and/or false positives.

There are resources available via the Center for Open Science (<https://cos.io/rr/>) to help C&RL proactively ensure the process is as non-disruptive as possible for editors, reviewers, and authors, if it adopts a registered reports submission track. These include:

- [Fact sheet for editors](#)
- [Template guide to authors and reviewers](#)
- [Templates of reviewer invitation letters and author decision letters](#)
- [Implementation checklist](#)
- Webinars: for [Editors](#) and for [Early Career Researchers](#)

Helpfully, the existing [C&RL guidance for reviewers](#) already includes two points that speak to the ethos of a registered reports submission track:

- Is the method used appropriate to the subject?
- Does the evidence presented support the hypothesis?

In terms of changes to the peer review workflow, the Center for Open Science has outlined a process and uses the language Stage 1 and Stage 2. Stage 1 represents the intended hypothesis and methods and Stage 2 represents the post-study write-up. In anticipation for what the technical implementation in OJS/PKP would entail, it's helpful that there are already existing models in which OJS journals have enabled registered reports. One example is *Biolinguistics*. The cited resource provides detailed logistical information regarding how submitted manuscripts are triaged for both Stage 1 and Stage 2 (Info on Registered Reports, 2020). A summary is below.

Stage 1:

Study introduction, methods, anticipated timeline, data sharing intentions, analysis plan, and registration plan for an approved repository (e.g., Open Science Framework Registry).

Reviewer role at this stage is to review:

- research question importance
- hypothesis/es rationale
- rigor and feasibility of methods

Stage 2:

Study is complete, and the manuscript is ready for review.

Reviewer role at this stage is to review:

- whether the Stage 1 submitted rationale and hypothesis/es matches the Stage 2
- whether the data collection tested the proposed hypothesis/es
- whether the Stage 1 submitted methods were precisely followed
- if anything new is presented in either the methods or analysis plan that was not introduced in Stage 1. If yes, the authors need to justify this choice and explain that it was methodologically sound
- whether the conclusions appropriately reflect the findings/results.

In terms of communicating a new registered reports option with ACRL members and other potential *C&RL* authors, the submission track could be clearly articulated in the author instructions as has been done with many of the 243 other journals already incorporating registered reports. Helping matters, librarians who have long supported systematic reviews as a consultant or co-author are likely already familiar with the registered reports model since it's used by both *Cochrane Reviews* and *Campbell Reviews*. In at least one *C&RL* article, authors noted that their study was preregistered-- Arendt et al's (2019) "Same question, different world: Replicating an Open Access Research Impact Study," in which the research question and study methods were preregistered (osf.io/2ae99) in the Open Science Framework Registry. Had *C&RL* already adopted the registered reports submission track, this is one example of a study that could have been peer reviewed prior to data collection.

Lastly, in addition to helping prevent QRPs, *C&RL*'s TOP (Transparency and Openness Promotion) Factor would be positively affected. Under the heading of Publication Bias, level 3 represents the journal's acceptance of registered reports as a submission option (TOP Factor Rubric, 2000). Announced on May 5, 2020, Web of Science will be adding TOP Factors to their Master Journal List making the TOP Factor more discoverable for scholars seeking journals to submit their work (TOP Factor to Appear, 2020).

We hope you will consider our request, and we look forward to discussing this proposal. We believe that implementing a registered reports submission track would help strengthen the literature published in *C&RL* and advance the practice of replicable and reproducible research in librarianship.

Sincerely,

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