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Understanding users' adoption to open peer review model, a novel publication model

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Role

As a mixed method researcher, I worked under the guidance of Por. Peiling Wang and a research team at University of Wisconsin,Milwaukee

Team

Collaborated with team in University of Wisconsin, Milwaukee

Duration

August 2015 - August 2016

Skills and Tools

Tools: R, Excel, MaxQDA

Skills: Exploratory data analysis, Statistical Analysis, Interviews

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Objective

In recent years, it has been found that the traditional peer review process has been proved to be faulty and has led to debatable interpretable interpretations such found in the Bohanonn's Experiment. This has called for an innovative and transparent review process known as Open peer review. The aim of this study is to **ensure quality assurance** by making **public the identities of both the author and reviewer of the manuscript.**

The purpose of our research investigated to what extent do users are aware of OPR, and their willingness to participate in the publication model. The research also investigated factors and attitudes involving users' participation in OPR as an author/reviewer.

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Process and Findings

The research was carried out in two different phases:

Qualitative Phase: We interviewed researchers at the Oak Research Laboratory and at the University of Tennessee, Knoxville. The findings of this study showed researchers were familiar with the process of Open Access however weren't familiar with Open Peer Review. The researchers welcomed the concept of OPR, however were a bit daunted about providing feedback to fellow researchers. Some major concerns expressed by the scientists include backfire/bias if the process is completely open.

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Process and Findings

Quantitative Phase:

We considered **two open peer review journals: PeerJ and F1000** while understanding scientific to extent scientific communities embraced the concept of Open Peer Review. After deeper brainstorming with the team, we decided to scrape data from PeerJ. We later cleaned and performed statistical analysis to understand scientists' participation to the publishing model. Some of measures we considered to quantify their participation include: how many reviewers signed their names, how many authors allowed public access to full-public review histories.

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Challenges

- We considered a small sample size in our qualitative research from primarily from disciplines related to physics and biological sciences which is not representative of the entire scientific community. It is possible the findings may differ with the inclusion of researchers from other disciplines in the research study.
- The quantitative research is based on scraping historic peer review data, and it challenging to determine accurately the reviewers' and authors' acceptance to this innovative publishing model.

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Summary

- One of the prime outcomes of this research include coming of a mechanism to keep a check on the publishing process is by including more transparency to the system.
- By providing reviewers and authors an option to sign their names would add more credence to the system driving a path towards a fairer process of scientific communication.

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More info about this project:

The entire research trajectory can be read in these papers:
https://ieeexplore.ieee.org/abstract/document/7991608
https://www.ideals.illinois.edu/bitstream/handle/2142/89432/Wang315.pdf?sequence=1&isAllowed=y
https://content.sciendo.com/view/journals/jdis/1/4/article-p60.xml

To learn more about open peer review research:
https://asapbio.org/category/guest-posts