

OPEN ACCESS PUBLISHING AND MEDICAL PHYSICS

THE FUTURE OF ELECTRONIC PUBLICATION, MOBILE PLATFORMS, & SOCIAL MEDIA

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OUTLINE

- *Meaning of Innovations*
 - 2000 Open Access
 - 2013 Mobile Platforms; Social Media
- *What is the JACMP?*
- *Who Founded it?*
- *Where is it now?*
- *Where does it want to go?*
 - *Mobile Platforms?*
 - *Social Media?*
 - *An Innovative Review Model?*
 - *Continuing Education?*
- *Conclusion*

MEANING OF INNOVATIONS

- **2000 Open Access**
- *Increase the velocity of information*
- *Review, edit and publish faster*
- *Eliminate print*
- *Remove barriers for access*
- *Reduce costs*
- *Ownership of copyright?*
 - *Publisher?*
 - *Society?*
 - *Author?*

- **2013 – Mobile Platforms; Social Media**
- *As big a revolution as 2000? – No, but it is almost as big!*
- *Mobile Platforms*
 - *Personalize the research*
 - *Organize the research*
 - *Prioritize the research*
 - *Speed up the research*
- *Social Media*
 - *Democratize reviews*
 - *Fairer publication pathway*
 - *Increase publication quality*
 - *Increase the value of publications in continuing education, PQI and MOC*

**WHAT IS THE
JACMP AND
WHAT IS IT'S
SIGNIFICANCE?**

- *The JACMP is AAPM's clinical medical physics academic journal*
- *JACMP was the first open-access academic radiology journal – the inaugural issue was published in February of 2000*
- *The first open-access medical journal: Journal of Medical Internet Research (August, 1999)*
- *JACMP has employed a “True Gold” open-access model from inception:*
 - *Free to submit*
 - *Free to publish*
 - *Free to access*
 - *Author retains the copyright*
- *Over 800 articles have been published*

THE COST OF PUBLISHING

JOURNAL PRICES VARY WITH INFLUENCE AND BUSINESS MODEL.

Price of prestige

Open-access prices correlate weakly with the average influence of a journal's articles.

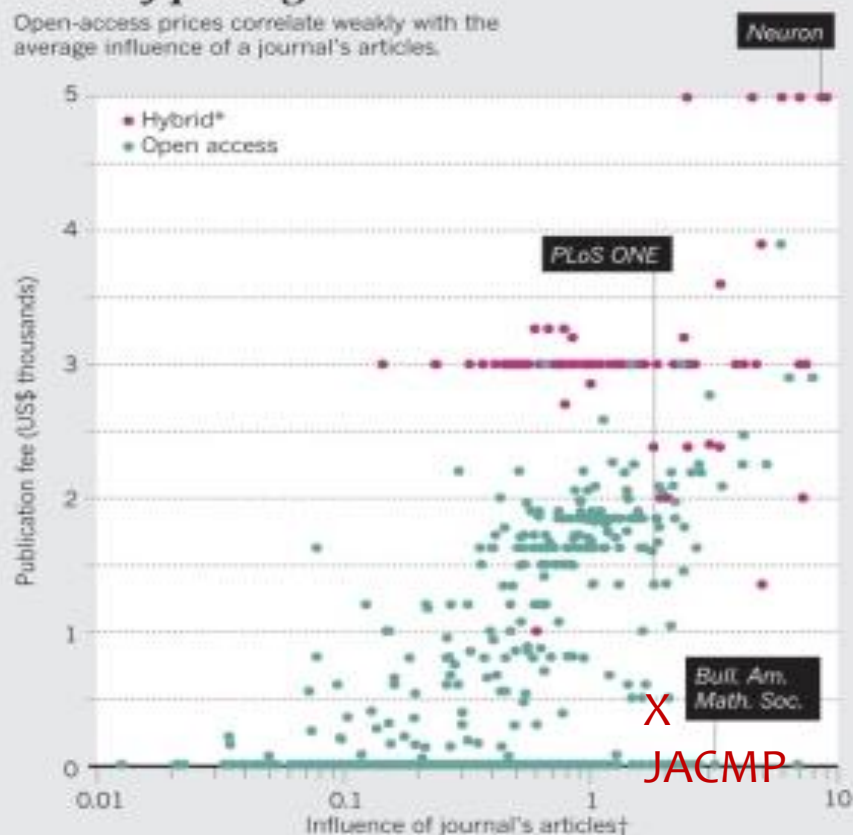


Chart omits open-access journals yet to receive an Article Influence score.

*Subscription journals that give option of open-access publishing. †Relative score, in which 1 = global average.

The Article Influence score measures the relative importance of a journal, based on the average influence of an article in that journal over 5 years after publication, and normalized so that the global mean influence is 1. Like the impact factor, Article Influence is based on citation counts, but gives heavier weight to citations from papers in journals that are themselves highly cited. See www.eigenfactor.org/openaccess for more.

How costs break down

An economic model shows how switching from subscription to open access changes the costs of publishing.



Data from J. Houghton et al. Economic implications of alternative scholarly publishing models (Joint Information Systems Committee, 2009), available at go.nature.com/uptape.

WHAT IS THE CURRENT OPERATIONAL MODEL OF THE JACMP?

- JACMP Editors:
 - 1 Editor-in-Chief
 - Associate Editors in Radiation Oncology Physics, Imaging Physics and other topics
 - 1 JACMP publishes about 150 articles from approximately 600 submissions per year
 - ~ 5000 registered users and we register ~ 20,000 visits from ~ 11,000 unique IP addresses each month. We estimate the JACMP has about 10,000 regular users
- JACMP Peer Review is Double-Blind
- Typically there are 180 days or less from submission until final disposition of the manuscript
- Submissions are about 30% from the United States, 15% from Canada and 55% from the rest of the world
- JACMP is published on the Public Knowledge Project Open Journal Systems platform
- The JACMP utilizes Canadian copyeditors, layout editors and proofreaders

WHERE IS THE JACMP GOING?

– MOBILE PLATFORMS

- Applications (apps) developed for iPad, Android, Kindle tablets & smartphones
- The app should allow users to download the specific articles based on search categories
- Each specific issue should have the same characteristics of an electronic book:
 - It should have a Title cover which depicts any good graph or other work of our last year's best paper awardees work
 - Each paper in that issue could be like a bookmark in a .pdf file or an electronic book providing easy access to the user
 - Between papers – advertisements
 - The back page again will have an advertisement; this will open a new stream of revenue

**DOES THE
JACMP REALLY
NEED MOBILE
PLATFORMS
FOR
RESEARCH?**

YES!!

- *Many new generation researchers are doing most of their literature reviews on iPad or similar devices*
- *The organization, processing, search and composition tools for mobile platforms approach those of a laptop*
- *The mobile devices are much more convenient to take to the office, library or wherever research is done*
- *If the application is developed properly, the publication will find increasing acceptance among the new generation of scholars, worldwide*

WHERE IS THE JACMP GOING?

– SOCIAL MEDIA

- Social networks are used by 90% of US internet users
- Social media is the “genetic makeup” of the dissemination of scholarly knowledge
- The review process continues long after the article is published (letters to the editor)
- The days of employing two blinded (or at least sight impaired) peer-reviewers to determine its fate are probably numbered
- A wider audience wants to weigh in on the value of articles and for these comments to be published along with the article
- This audience also wants the articles to be “free”: Free to discuss and evaluate, free to repost, and free to use for academic purposes, such as training, continuing education and maintenance of certification

**DOES THE
JACMP
REALLY NEED
TO PAY
ATTENTION
TO SOCIAL
MEDIA?**

YES!!

- *What are the social media options for an open-access journal?*
 - *Blogging*
 - *Wikis*
 - *Facebook*
 - *Custom platforms*
- *What are the benefits of social media for an open-access journal?*
 - *Reveal the true acceptance and value of an article by the scientific and clinical community*
 - *Subject the article to wider critical evaluation*
 - *Build the value of an article for awards, use in continuing education, and promotion of the careers of the authors*

**AN
INNOVATIVE
REVIEW
MODEL – A
THOUGHT
EXERCISE**

- *Why not include the social network in the entire publication process?!?*
- 1. *Post the de-identified article for universal comment*
- 2. *Allow six weeks for comments from anyone.*
- 3. *Perhaps award continuing education credits for a substantial review (at the Editor's discretion)*
- 4. *Allow six weeks for a revision with answers to reviewers*
- 5. *Post the article (along with say 60 others) for a universal Likert Scale score with the reviewers names being private*
- 6. *Publish the top 25 articles and reveal the authors' names*
- 7. *Continue open dialogue about the article*
- 8. *Solicit questions about content in the article for continuing education review*
- 9. *Award continuing education credits for correct answers to questions about articles*
- 10. *Provide special awards for top-rated articles*

CONTINUING EDUCATION – MAINTENANCE OF CERTIFICATION

- *Education leaders are rethinking the entire process of how people learn*
 - *The lecture is one of the least efficient methods of learning*
 - *Testing is both inefficient and often unfair*
 - *Mentorship is more efficient*
 - *Peer interaction is even more efficient*
- *The social media innovations we are seeing have the potential to greatly benefit the continuing education process and disrupt current models*
- *Social media platforms may be used to evaluate academic articles, clinical projects, educational materials, professional innovations and score quality measures*
- *Social media platforms could be used to facilitate maintenance of certification*
- *We need templates to make this work, but they could be made to work in Facebook, a dedicated Blog or a Wiki*

CONCLUSION

- The community is in charge – where it says we should go we go
 - The Editor's first responsibility is to the community
 - The community wants a bigger place in the publication and continuing education process
 - Ignoring the new generation of scholars and failing to recognize the challenges and benefits of mobile platforms and social media tools will likely harm the community
 - The future of publishing is a more open and more democratic culture
- The million dollar business model idea:
 - Open access
 - Societies develop long range plans to build custom social media infrastructure to support the entire career pathway of the professional (review processes, CME, PQI, MOC, etc.)
 - Provide subscription access to the social media (society driven) for professionals and vendors/advertisers
 - Use crowd funding (e.g. individual directed portion of dues) to build specific key social media infrastructure
 - Membership required in order to benefit (CME, MOC, edit, review, comment, etc.)
 - Special opportunities for vendors