

## Managing the Transitional Impact of Open Access Journals

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### Abstract

*The explosion of open access (OA) journals in recent years has not only impacted on how libraries manage contents and budgets, but also the choice of journals for academic researcher submission of their article for publication. A study conducted at the University of Hong Kong indicated that academic researchers have a gradual tendency in shifting some of their publications toward OA journals, and interestingly the shifts are discipline specific. While OA does offer an alternative to the unsustainable pricing of serials and supports a core value of ensuring openness to knowledge, the perceived value toward the impact of OA journals are still lacking consensus among stakeholders.*

*The aims of this study are to better understand from the perspective of academic researchers in 4 broad disciplines—Health Science, Life Science, Physical Science and Social Science, their preferences in paper submission. Data on actual article submission trends at HKU will be analyzed together with qualitative feedback from researchers to examine the trend and incentive in shifting toward OA publishing in different disciplines. Researcher's attitude will be understood within the context of the university's open policy and research assessment, as well as the current OA landscape to inform the scholarly communication trend going forward.*

**Keywords:** open access (OA), scholarly communication, open access publishing, research assessment, OA policies, University of Hong Kong

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## **Background**

The explosion of open access (OA) journals in recent years has not only impacted on how libraries manage contents and budgets, but also the choice of journals for author submissions of their article for publication. Indeed the change in academic researcher behavior prompted by the gravitation toward sharing of research contents in scholarly communication networks and broader choice of OA journals have resulted in a positive growth of open access articles. Noticing the existence of such a trend, it is hoped that by examining the migration of publications from traditional journals to OA journals in our own university, we could learn about the latest patterns of academic publication. We embarked on a study of the academic researchers' publishing behavior at the University of Hong Kong (HKU: is a medium size university with approximately 1600 academic researchers, 16200 undergraduate and 2800 graduate students)<sup>1</sup> and retrieved from records the papers published by them in the last 10 years. Our findings indicated that academic researchers have a progressive tendency in shifting part of their publications towards OA journals, and interestingly the shifts are discipline specific. While OA does offer an alternative to the unsustainable pricing of serials and supports a core value of ensuring openness to knowledge, the perceived attitudes toward the impact of OA journals are still lacking consensus among stakeholders.

## **The Open Access Landscape**

Fundamental changes have taken place in the scholarly communication ecosystem in the way research is disseminated and published. Firstly, OA is a prerequisite of open communication that is free from barriers of cost and copyright. Secondly, open access review system, such as the *Open Journal Systems*, has greatly expanded free access to research and encourage greater transparency and discussions for open-scholarship. These changes have been also driven by the international research communities. In Europe, UK and USA, higher education funding bodies believe that research outputs arising from public funding should be widely and freely accessible as the available channels for dissemination allow. The US president's Office of Science and Technology announced in February 2013 that government funded research to be made

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<sup>1</sup> About HKU. <http://www.hku.hk/about/> (Statistics provided by Management Information Unit, HKU)

free within 12 months of publication<sup>2</sup>. The European Commission mandates all research supported by funding from Horizon 2020 to be made open access from 2014<sup>3</sup>. The UK Research Council (RCUK) in its implementation of the policy on OA, set a target in 2013-14 to achieve 100% open access by 2018-19<sup>4</sup>. Research organizations led by the Max-Planck Society announced a new initiative, *OA2020*, at the 12<sup>th</sup> Berlin Open Access Conference in late 2015 to expedite OA transformation of scholarly journals<sup>5</sup>. Currently, the market penetration of OA articles published in journals with an immediate OA model accounted for about 17% of global scholarly articles in 2014 compared to 14% in 2012, according to an RIN report on *Monitoring the Transition to Open Access*, 2015<sup>6</sup>.

It is universally recognized that researchers thrive in an open environment. Kate Murphy argues for everyone's right to access freely scientific advancement and its benefits in advancing science<sup>7</sup>. In late 2009, the Vice-Chancellor of HKU signed the Berlin Declaration on Open Access. In spite of advocating open access via green OA, faculty researchers are most concerned whether the journals in which they publish demonstrate the level of impact expected by the universities to assess their research favorably for promotions and tenure. The aims of this study are to better understand from the perspective of academic researchers in both STM (science-technical-medical) and non-STM fields, their preferences in paper submission and their concerns about research credits and career advancement for the migration of their publications from traditional journals to OA. Data on actual article publication trends at HKU will be analyzed together with qualitative feedback from academic researchers to examine the trend and incentive in shifting toward OA publishing in different disciplines.

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<sup>2</sup> Holdren, J. P. (2013). Increasing Access to the Results of Federally Funded Scientific Research. Memorandum for the Heads of Executive Departments and Agencies. [http://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp\\_public\\_access\\_memo\\_2013.pdf](http://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf)

<sup>3</sup> European Commission (2013). Regulation (EU) No 1291/2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020). [http://ec.europa.eu/research/participants/data/ref/h2020/legal\\_basis/fp/h2020-eu-establact\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/legal_basis/fp/h2020-eu-establact_en.pdf)

<sup>4</sup> Burgess, R. (2015). Review of the implementation of the RCUK Policy on open access. RCUK. <http://www.rcuk.ac.uk/media/news/openaccess/>

<sup>5</sup> OA2020. <http://oa2020.org/about>

<sup>6</sup> Research Information Network (2015). Monitoring the transition to open access. Universities UK. <http://www.researchinfonet.org/wp-content/uploads/2015/09/Full-report-FINAL-AS-PUBLISHED.pdf>

<sup>7</sup> Murphy, K. (2016). Should All Research Papers Be Free? The New York Times. <http://www.nytimes.com/2016/03/13/opinion/sunday/should-all-research-papers-befree.html>

## **Article Submission Trend at HKU**

Our study analyzes 10 year span of publishing at HKU, the trend in shifting toward OA journals from 2006 up to end of 2015 can be easily noted. The growth of OA papers has been progressive in the last 10 years (2006-15), a cumulative increase of 496% since 2006, compared to an overall growth of publication output of only 48%. As of 2015, 16% of the HKU published articles were in OA journals (exclude OA articles in hybrid journals). As far as various disciplines are concerned, we follow the subdivision by SCOPUS and conveniently divide them into four broad subject clusters. Our statistics indicate that the percentage of OA papers in the Health Sciences rose from 11% to 26% and Life Sciences from 1% to 27% in this period. However, for the OA papers in the Physical Sciences and Social Sciences were only increased slightly from 2% to 5%, and 1% to 3% respectively in the same period.

Findings from the HKU study show that publishing in OA journals in both Social Sciences and Physical Sciences lag behind the Medical Science and Life Sciences. In order to understand the reason for the slow migration of publications in the Physical Sciences and Social Sciences to OA, it is important to explore the advantages of researchers doing so and their issues of concerns in OA.

For an academic researcher, a research output serves many purposes, which include the establishment of ownership of ideas, demonstrating outcomes to funding agency, claiming credits and recognitions for career advancement, and communicating results to peers and the general public. Among them, the motivation for gaining personal benefits prevails. In such situation, the creditability of the publication venue becomes critical and the choice of journal is always linked to the group of readers that could understand and recognize the work, and, eventually, be able to make reference to the paper and bring credits to the authors. Since academic publications are very often written with specific readers in mind, the contents in the paper would not be easily comprehensible by the broad readership as projected by OA journals. The accessibility of OA journals from the point of view of the general public is, to a certain extent, conceptual. Furthermore, OA journals in certain fields have not attained high impact factor that help researchers make a name through citations and lead to career advancement. Academics at HKU, like their global peers, regardless of disciplines generally prefer publishing in high status or prestige journals with established citation practices and rigorous peer review, as these factors are typically favored by the institution in rewarding promotions, tenure and research funding. Researchers in the Physical Sciences and Social Sciences perceive the concept of

open access not their primary concern, which partially explains their slower migration to OA journals than the health and life sciences.

This study is useful to understand researchers' attitude behind their decision in the venue to submit their research work. The criteria for the selection of publication venue and the connection between publications and career advancement in academic institutions will be further discussed. From the perspective of HKU academics, one of the major factors that influence researchers' decision on the venue of their research work is the quality of the research work. Our findings demonstrate the shifting attitudes of researchers in the four major disciplines and the degree of their acceptance toward OA publishing over a ten year period. Due to the flux in journal publishing models, there is inevitably some uncertainty among researchers where all the OA policies and mandates will lead.