New evidence of the power of open access

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New findings settle one of the arguments about Open Access (OA) research publications: Are they more likely to be cited because they were made OA, or were they made OA because they were more likely to be cited?

The study, which will be published in PLoS ONE on the first day of Open Access Week (18 October), was carried out by a bi-national team of researchers from the University of Southampton's School of Electronics and Computer Science (ECS) in the UK and l'Université du Québec à Montréal in Canada.

The results show that the OA citation impact advantage is just as great when OA is mandatory (i.e., the author's institution or funder requires the author to make all research publications OA) as it is when OA is optional (i.e., the author self-selects whether and what to make OA).

"It is now well-known that those research findings that are made accessible free for all on the Web are more likely to be used and cited than research findings that are accessible only to paid subscribers," said Professor Stevan Harnad at ECS, part of the team who carried out the study. "But we need to ask whether research is more likely to be used and cited because it has been made OA? Or is it made OA because it is more likely to be used and cited?"

According to the "self-selection bias" hypothesis, the greater impact of OA articles is just an artifact of a bias on the part of authors toward selectively making their better -- hence more useable and citeable articles - OA. If the OA impact advantage is just a self-selection bias, then it is far less urgent and important to make all research OA.

The team tested this by analysing all articles that were made OA at the four first institutions in the world to make OA mandatory -- University of Southampton School of Electronics and Computer Science, the first, in 2003, and CERN, University of Minho, and Queensland University of Technology, in 2004 - and comparing their citation impact with control articles, in the very same journals and years, from unmandated institutions, that were made OA by author self-selection or not made OA at all. The OA impact advantage turned out to be just as great, regardless of whether the OA was self-selected or required.

The study also found that the percentage of an institution's yearly research output that is made OA self-selectively varies between 5% and 25%, whereas the percentage when OA is mandated jumps to 60% and climbs toward 100% within a few years of mandate adoption.

The conclusion of the study is hence not only that the OA impact advantage is real, and caused by the greater accessibility of OA articles, but that OA mandates are also the way to make all research benefit from the greater likelihood of being used and cited that OA provides.

Commenting on these new findings, Professor Dame Wendy Hall, a committed advocate of OA said: "This is further convincing evidence that we can all increase the impact of our research by ensuring - through Open Access - that it is available to everyone. If we are to begin to solve some of the really pressing issues facing the planet at the moment we need to be able to draw on all the research insights from many different disciplines and from all the world's research institutions."

More information: Gargouri Y, Hajjem C, Larivie`re V, Gingras Y, Carr L, et al. (2010) Self-Selected or Mandated, Open Access Increases Citation Impact for Higher Quality Research. PLoS ONE 5(10): e13636. doi:10.1371/journal.pone.0013636

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