Open access working papers not good enough

Scientific articles published in peer-reviewed journals receive four times as many citations as working papers in openly accessible archives.

Researchers may be tempted to release their ideas and working papers through open access archives, so other scientists can see what they are doing and perhaps provide input – or even recommend a financial sponsor.

But a new Danish study shows that if they really want their work read and used by other scientists, researchers have only one viable route: they must publish their research in the best possible journal.

The study was recently published at a conference of the International Society for Scientometrics & Informetrics (ISSI).

The researchers – Anita Elleby, who holds a master’s degree in library and information sciences and works at the Royal Danish Defence College, and Peter Ingwersen, professor of information retrieval at the Royal School of Information and Library Science – analysed citation frequencies for working papers in an online open access archive and for articles on the same subject after they had been published in a peer-reviewed scientific journal.

Four times higher citation rate

The study showed that the peer-reviewed article, by more or less the same authors, was cited about four times as frequently as the working paper in an open access archive.

“It’s important to document whether articles are cited and if they are cited by people at the same research institute or by people elsewhere,” says Elleby. “Researchers’ work is measured, and they are paid by the number of times their research is cited. I was curious and wanted to find out whether all that research was actually used.”

For five years Elleby analysed citations of ten working papers and compared them with ten scientific articles by more of less the same researchers on more or less the same subjects. Together with Ingwersen, she analysed citations registered in the Web of Science and Google Scholar databases.

Including open access working papers in citations analysis is rare – which is why the new study of a comparatively small material was peer reviewed before being published at the ISSI conference.

Gathered data before open access changed

The two researchers gathered their data in the period up to and including 2008 – when the world of open access was completely different from what it is today.

Researchers no longer publish only working papers in open access archives – but also real scientific papers.
in free online journals. In addition, many more open access archives have opened on the Internet and they enjoy far more respect than in 2008.

Because of these developments in open access, Elleby says she would not have designed the study in the same way today as she did almost ten years ago.

“That’s how it is with bibliometrics,” she says. “You can’t say anything about what the world is like now, as there’s always a delay. It takes perhaps two or three years before the citations of an article peak, so when the figures are in and the analysis is done the situation is not what it was when the article was published.”

Working papers have another role

The researchers analysed articles in history, political science, religion, anthropology and the natural sciences. But Elleby believes that researchers in all science subjects prefer to cite peer-reviewed articles rather than open-access working papers.

“Working papers have another role,” says Elleby. “They illustrate what a researcher is doing, they show which subjects are of interest, and they can lead to researchers being invited to present their research at conferences.”

Read the article in Danish at videnskab.dk [8]

Researchers prefer to cite finished papers in a peer-reviewed scientific journal than to delve into working papers in online open-access archives. (Photo: Colourbox) [9]

Fact box

Carrying out a research project takes a long time. You need to:
• Find a subject to study
• Design the study – determine the method you will use in your study
• Carry out the study
• Write an article explaining your methods and results
• Put the latest knowledge in perspective
• Find a journal that will publish your article
• Wait until the article is published

The process can take years.

When you are analysing citations, you must study articles that were published some years ago, otherwise you cannot get reliable figures for the number of scientists who have been interested enough in the work to cite it. In this way, the material in the study is even older.

Do open access working papers attract more citations compared to printed journal articles from the same research unit? [13]

Thomas Hoffmann [14]
Michael de Laine