

31 Open Research: What's More?

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To highlight the benefits of open research, everyone should understand what “research” means. Before discussing the relevance of a certain way to communicate scientific achievements, everyone needs to know that the meaning of the word “research” is both sharing and improving knowledge. The figure of a researcher is not fully understood: at least in Italy, the amount of people who do not know what a researcher does during his/her working day is (unfortunately) huge. Prior to carrying out new experiments or prior to writing a new drama essay, the researcher needs to read. Read what? In order to improve the actual knowledge regarding a specific field, i.e., medicine, chemistry, arts, etc., the researcher should be updated about the existing “literature” in that field. The literature is full of a plethora of documents that help researchers worldwide make their research activities useful, perhaps without performing studies that have been already carried out by someone else. At the end, if valuable, the research will be published and, depending on its relevance and ambition, it will be published as a book, an article or video, etc. All these documents are stored in many databases. An author can decide to publish her/his findings in so-called “open access” sources: this means that everybody can access the results of scholarly research. Why should a journal need to be defined as “open”? Because, nowadays, most of the published documents are not open. Consequently, this means that if someone wants to read that paper, that person needs to pay for it. In the past, I have asked myself “why would my father, who is a retired railway worker, be interested about the synthesis of a new compound?” This question can be simply answered: he wants to improve his knowledge. However, an author that is interested in publishing open access documents usually encounters the article processing charge, while most of the journals which are not open access allow the authors to publish free of charge (but the readers pay). Even if the cost associated to publish on open access platforms might discourage researchers, the benefits of open research affect both the research community and society.

From a reader’s point of view: no payment is needed, which means that all the researchers that cannot usually access a specific journal, are now able to read all the documents if the research is open. There are many financially-restricted universities which cannot afford the payment to access a needed source. This issue limits the work of the researchers of that institution. Open research represents a clear step forward for them.

From the author's point of view: by choosing an open access platform, the visibility of a published research article will increase. This has been reported by several studies that have demonstrated how open access content attracts more attention than non-open access content. The visibility is strictly correlated with the possibility of increasing the importance of that research article and subsequently to benefit the author's career. In fact, one of the important parameters that is used to evaluate the importance of a paper is the amount of citations: if everyone can read a paper, the paper will have a higher possibility of being cited. Studies have shown that open access articles are viewed more often than articles that are only available to subscribers and are cited more often.

From a collaborative point of view: the opening of publications and data enables researchers to perform collaborative research worldwide. The Human Genome Project (1990–2003), an international research program aimed to complete the mapping and understanding of all the genes of human beings, represents a clear evidence of the benefits of open research. The access to publications and data allowed this project to be a much more powerful resource for research, education and innovation.

From an educational point of view: all the open access works can often be re-used to educate students. For instance, by creating brand-new derivative documents that are capable of impassioning students, by catching their attention and enhancing their understanding. The benefits of open research strongly affect teachers: these open platforms allow them to always use more accurate examples to explain concepts.

From the public engagement point of view: do you remember my father, and his necessity to read about research findings? Without open research, he would not have been informed about the impact of the Fukushima nuclear accident on the humans and nature. The impact of making research items freely accessible from the moment of publication can be astonishing, particularly for research in which there is a strong public interest.

Open research is establishing itself as a fundamental tool for many purposes: from academia to public engagement, everyone can access the new findings, improving their knowledge and participation.

