

21 The Impact of Traditional vs Open Access on Scientific Publications

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Over the last years, the amount of data and knowledge generated by the scientific community has sharply increased, requiring novel methods to more efficiently communicate and propagate the discoveries. In this line, open access research has broken barriers and brought several benefits compared to the traditional and subscription-based system, including: enhanced interdisciplinary conversation and wider collaboration between research groups, faster impact on the scientific community, greater visibility and transparency, and engagement of the non-scientific public.

Establishing reliable collaborations between research groups is an important step in achieving successful solutions. The dialogue between interdisciplinary researchers enables a broader overview about a certain issue with a higher number of possible approaches to test and validate hypotheses to solve it. Furthermore, open access research is usually cited earlier than content requiring subscription, which is an important altmetric in academia, and may faster stimulate the establishment of new collaborations that create networks on a global scale.

Most low- and middle-income countries have limited access of subscription-based publications, which prevents the fast dissemination of such advances in these populations. Open access to the most recent developments has helped these countries not only in dealing with practical priorities in diverse areas, such as public health, technology, and agriculture, but also provides a crucial starting point for developing their own research capacity. In fact, this is also extremely important for accelerating social and economic development in these regions.

Once a novel scientific content is available by open access, it can be promptly covered in the news and discussed in social media channels, thereby stimulating a widespread engagement. It also leads to an easier communication between the scientific and non-scientific public as well as a greater transparency on how the scientific budget has been used to bring solutions for issues and development that impact on the society in the short- and long-term. Moreover, patients and relatives' involvement in the research of certain health issues and in awareness events has become more noticeable. Open access has enabled those outside of research to directly benefit from new discoveries.

With the growing movement of integration induced by globalization, scientific research is also moving forward at an accelerated pace towards development for the society. Open access has become an important tool that offers greater equality and equity in the availability of scientific content worldwide.



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