



# Open access in South Africa: A coherent strategy is needed

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If you asked an idealist to describe the scientific endeavour, the phrase ‘seeking the objective truth’ might come to mind. But how is this truth obtained? The sharing and translating of knowledge is perhaps the key ingredient, along with a dash of persistence and luck. As budding researchers, this notion excites us – the thought that our ideas can cut across the globe, serving a greater purpose of helping others along their path of truth seeking.

One of us (MH) left Canada after graduating to work with the South African Department of Planning, Monitoring and Evaluation. The work involved a literature review and replying to requests for evidence summaries that flowed into the department. However, there was immediately a barrier to overcome that we have never encountered within our bubble of Canadian academia. This barrier – both a literal and virtual wall – most often presented itself as a paywall; colleagues in the department simply could not access a significant amount of published scientific research without having to pay exorbitant fees for access.

Hailing from Canada means our home university affords us the privilege of institutional access to more publications and data than we would ever use. Encountering paywalls for the first time, brought up the question of how it was possible to function in a research unit without this ability to tap into the shared scientific body of knowledge. How can research units, let alone a branch of the South African government, be expected to deliver quality, evidence-informed deliverables in a timely and feasible manner if the very evidence it relies on is inaccessible? The more we questioned, the clearer it was to us that this was not an isolated challenge.

A recent survey of the capacity for evidence synthesis in Africa amongst 176 researchers, government officials and NGO workers indicated that a lack of access to research literature and data was one of the greatest hindrances to their work – second only to lack of funding.<sup>1</sup>

As of 2015, only 48% of the scholarly outputs from South Africa were openly accessible.<sup>2</sup> The challenges of openly sharing scientific publications are not new. The largest abstract and citation database of peer-reviewed literature, Scopus, listed only 6.8% of articles as openly accessible in 2009.<sup>3</sup> This research climate may contribute to the fact that in the South African government, the use of research outputs as a main source of evidence is tepid, at best. In a recent survey, only 6 of 54 senior officials in the government indicated that they rely on research, while the majority (38) responded that they rely on their networks.<sup>4</sup> While inability to access publications was not included in this survey, it would be reasonable to hypothesise the role it plays.<sup>5</sup> Although tacit knowledge from strong networks can be useful, research data and publications remain imperative for evidence-informed decision-making.<sup>6</sup> In situations where institutional subscriptions are not feasible, open access provides another paradigm to facilitate evidenced-informed decision-making.<sup>7,8</sup>

The case for open access is perhaps best understood in the context of health care. In the era of evidence-based medicine,<sup>9</sup> the public has an underlying assumption that physicians and frontline health-care workers are updated with high-quality health information so as to provide the best care possible. Prior to June 2017, this assumption would have been partially inaccurate in South Africa as health-care workers did not have access to the Cochrane Library, the gold-standard source for health-care reviews.<sup>10</sup>

Beginning in the early 1990s, the push for open access has gained traction in the mainstream research community, albeit at a slow pace.<sup>3</sup> This lag is why the call for immediate open access for all articles published in the European Union (EU) by 2020 was welcomed as a firm step forward.<sup>11</sup> As the EU moves forward with open access policies, it will be crucial for African countries, especially South Africa, to take a strong stance in support of open access, not only to protect their research interests, but also to maintain the goal of increasing the global sharing of scientific knowledge.<sup>12,13</sup>

With these efforts, South Africa may also benefit from tailored open access policies that better meet the needs of their knowledge users and producers. There are two pathways to open access that the EU will rely on: green (self-archiving) and gold (publishing in open access journals).<sup>11,14</sup> However, both green and gold open access pose some challenges for researchers in South Africa. Gold open access usually shifts the costs from subscribers to researchers through an article-processing fee, which may be too high for authors/institutions, whereas green open access typically requires the institutional infrastructure to host a repository of articles that can be accessed via online searches.<sup>13,15</sup>

The reinvigorated open access movement in the EU presents a critical point for South African research communities. If open access is not addressed on a national level, South Africa may lose out on contributing to and accessing this growing platform. One model to look towards is the Scientific Electronic Library Online (SciELO)-SA, South Africa’s largest existing open-access database.<sup>16</sup> SciELO is funded by the South African Department of Science and Technology and could be built upon to form the backbone of a future national open access strategy.

Knowledge is not useful if it cannot be shared, accessed and built upon. Decision-makers in the government, researchers in a university or health-care workers all share the need for accessible scientific literature. As nations push forward with national open access policies, South Africa must act coherently to develop open access policies which allow the country to access this growing market while addressing the challenges that come with the current paradigm of open access publishing.

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