Another player in citation database: Are we subscribing?

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Abstract

Digital Science’s Dimensions has been officially launched in January 2018. At a first glance, this is an exciting development, bringing new competition to the existing field, which is dominated by Clarivate’s Web of Science and Elsevier’s Scopus. Since Dimensions is a freemium, features such as full text and citation analytics require a subscription. Prior to subscription, library typically conducts trials and thorough evaluation, measuring the value that Dimensions brings to the institution, comparing it to existing products, calculating the cost of switching, examining its features and contents, and even considering the future of the product and the company.

This paper, however, suggests that a broader, more holistic approach is needed, beyond the typical database evaluation. It is important to place citation database as one of the components of research workflow infrastructure and measure its implication to the entire workflow. Within the university, all stakeholders of research workflow infrastructure need to communicate and be aware of the various infrastructure that is available.

In the end, different institution might have a different technological approach in managing their research infrastructure. An integrated research infrastructure, a modular, an open, or even an outsourced infrastructure; the approach has to suit the need of the institution and provides the best support to the researchers.

Keywords: citation databases, research infrastructure, citation analytics
Background and context

Since its establishment in the year 2000, Singapore Management University (SMU) has grown into a university focused on Management, Social Sciences, Technology, and their intersection. Those areas broadly represent the research areas within SMU.

Back in 2014, the Office of Research & Tech Transfer (Office of Research) collaborated with the Library and IT Department to work on an ‘integrated system’ that could integrate, as much as possible, the management of complete research lifecycle on a single platform. The idea of an integrated system was captivating and seemed to be most efficient since SMU is growing its research portfolio and the positive trend of R&D budget in Singapore.

![Figure 1. Singapore Research, Innovation, and Enterprise Budget 1995-2020](https://www.nrf.gov.sg/rie2020)


After the rigor of tender and evaluation, the Converis system from Clarivate Analytics was selected and used as a platform to manage researchers’ publication and generate researchers’ CV. Other features and functionalities were not implemented, due to various reasons. During the implementation period, Converis ownership changed a couple of times – it was acquired by Thomson Reuters (Dec 2013) and eventually became part of Clarivate Analytics (2016).

Since there is not a single platform that integrates the entire (or most of) research cycle, the University still utilizes various platforms to manage the research administrative activities. The ownership of the platforms is distributed between Library, Office of Research, and Office of Provost, with the IT Department supporting all of the platforms.
New: Dimensions from Digital Science.

In early 2018, Digital Science announced the launch of Dimensions (Library Learning Space, 2018), a platform that connects researcher to millions of open and paid articles and at the same time provides research output information such as patent, policy, and research analytic tool that calculates citation ratios.

Library, being the main stakeholder for discovery and access, took a closer look at Dimensions. It offers, at a first glance, citation analytics platform that is very similar to Web of Science + InCites and Scopus + Scival. Dimensions also offers other interesting features such as funding landscape information and Altmetric, but the integration of some components of the research cycle seems to be the major appeal. Dimensions became a perfect case where various stakeholders need to chime in their evaluation and feedback. The Office of Research that manages research grant would be interested to evaluate the funded grant and patent information. The Office of Provost, which is in charge of research productivity assessment, would have a say in the research analytics tool. And Library, that has expertise in content and institutional subscriptions would be able to offer objective comparison amongst similar products.

In a very simplified way, we listed down a few comparison points:

1. Citation database
   Currently, the Library has an existing subscription to long-standing citation databases: Clarivate Analytics’ Web of Science and Elsevier’s Scopus. With more arguments that support open citations (Shotton, D., 2018), citation data becomes more open and accessible. CrossRef and Google Scholar are accessible for free although they may have different functionalities from Web of Science and Scopus. Other publishers and aggregators have also enabled citation linking whenever available. Springer has Bookmetrix that provides citation information (and analytics) for their ebooks.

   From this point of view, the needs for another citation database is very low.
2. Article discovery and access
Dimensions indexes more than 50 million full text for discovery and provides seamless reading experience with their ReadCube PDF reader (Digital Science, 2018). With a paid license, Dimensions could integrate library subscribed journals into the Dimensions discovery. On top of that, Dimensions includes 14 million open access articles and articles from public sources like PubMed or arXiv.

The discovery and reading experience in Dimensions was quite seamless and hassle-free. Dimensions seems to give a much better user experience as compared to other citation databases, which still use Abstract & Indexing schemes with limited full text.

3. Research analytics suites
Dimension offers more variations for the research output analytics. On top of citation metrics, it also analyzes grants, funders, and patents.
As for content and data sources that feed the research analytics, Dimensions is inclusive, stating that it is not their role to decide what research outputs are relevant for the community (Digital Science, 2018). However, Schonfeld (2018) cautioned that ‘what reads to some as more inclusive can be seen by others as less rigorous selection’, which is exactly one of the reasons why metrics coming out from Google Scholar is still questionable.

What is still needed is a more thorough feedback from other stakeholders, especially on research analytics.

Moving Forward
The various platforms that support research cycle in SMU are still in the modular state. Although they may not be seamlessly integrated, there are still workarounds to connect the platforms. Inter-operability and compatibility are common issues across various platforms. However, this approach allows the institution to switch to other platforms in a relatively easy way.

We attempted an integrated approach with Converis, and it was successful to a certain degree, allowing the institution to manage the researchers’ publication and researchers’ CV in a single platform. If the integration reached a broader level, we probably would be able to see a citation database feeding the data into the researchers’ publication, which could, in turn, populate researchers’ CV and allow institutional repositories to ingest and disseminate the info. Together with funded grant info, this could give the senior management a streamlined tool to assess research productivity. However, an integrated system does come with a risk of lock-in, and limitations in an exit strategy.

Another approach is going to open source infrastructure and platform. Although the open source platforms might seem free-of-charge, they might still incur cost – sometimes quite a high cost - in term of customization, deployment, and maintenance. Long-term sustainability could also be an issue for open source platforms. The library has been utilizing Zotero open-source citation software for the past year. For this case, the open source software works for us since Library already possessed the required expertise to support it.

Whether we go for integrated, modular, open or even an outsourced approach, each has its own merit for the institution. By the end of the day, the most important matter is that all stakeholders in the research lifecycle administration have a common understanding of how the entire research process is interlinked. This common understanding shall help the stakeholders in making a holistic and informed decision, and avoid a fragmented decision.
Disclaimer: The opinions expressed in this article are the author’s own and do not reflect the view of the Singapore Management University or the Singapore Management University Libraries.

References


