

Where are the tools for scientific writing?

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Writing a scientific research paper is tough at the best of times regardless of funding conditions and political intervention. As such, a scientist will turn to any tool they might find to help with this generally arduous task. Writing in the *International Journal of Business Innovation and Research*, a Brazilian team has surveyed common tools and determined which tools have what useful features. Their summary points to the possibility of designing a new system for helping in the writing of scientific papers that has the pros of the best tools and none of the cons of the worst.

For Ralf Landim Reith, José Dutra de Oliveira Neto and Anderson de Andrade Santos of the University of São Paulo, as with most academic researchers, the scientific Endeavour is a "publish or perish" environment. Researchers must maintain records of their hypotheses, experiments, results and their theories and interpretations. And periodically, they must pull this information together into a cogent, coherent and cohesive form that can be disseminated via conference poster, lecture and ultimately published paper. The ultimate aim to record the progress of their research endeavors so that they might be peer-reviewed and otherwise validated against other findings in their field.

There is also, of course, the business side of science. "The importance of scientific articles in the dissemination of research findings and results is unquestionable," the team says. "Besides disseminating the findings, [scientific papers](#) play a key role in the distribution of funding and scholarships for research projects, where the number of publications is

used as a quality index by various funding agencies."

The team has investigated the benefits and limitations of software in terms of brainstorming, organization of ideas, database of examples, schematic structure models, automatic identification of structure, automatic review of structure, indication of rhetorical strategies and the basis of writing standards. The tools include the likes of "Abstract Helper", "AntMover", "AMADEUS", and "SciPo-Pharmacy", indeed, most available tools are for abstracting rather than paper structure. Those that were useful for organizing and brainstorming date back to the 1990s and are sometimes incompatible with modern personal computers and not necessarily widely used. Nevertheless, all the types of software assessed has had a place in the scientific writing process and features of even the most archaic and mundane might be useful in the modern context of the web, social media, digital journals and such.

The team points out that there is currently an almost complete lack of support for scientific [writing](#), particularly in highly specialized areas such as production engineering. The study points to a significant gap in the "market" representing a need that might be fulfilled by a software company or the community itself with the requisite skills to create open source tools.

More information: Reith, R.L., de Oliveira Neto, J.D. and de Andrade Santos, A. (2017) 'Support tools to assist scientific writing: assessment of key features to construct a system for production engineering', *Int. J. Business Innovation and Research*, Vol. 12, No. 3, pp.353-362.

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