

Enhancing the efficacy of the ‘DBT and DST Open Access Policy’

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We need to take serious cognizance of the document titled ‘DBT and DST Open Access Policy’ released jointly by DST and DBT on 12 December 2014.

The focus of the document is on ensuring that knowledge created through the use of public funds is available to the public. This document stipulates that papers resulting from funds received from DST or DBT from the fiscal year 2012–13 onwards are required to be deposited in institutional repositories or in designated central repositories (dbt.sciencecentral.in and dst.sciencecentral.in). It stipulates that institutes receiving core funding from DST or DBT must set up institutional repositories. Most of this document discusses modalities, etc. for the repositories, but it makes two interesting statements that we should discuss. One is a view about an outcome of such open access, viz. ‘providing free online access by depositing them in an institutional repository is the most effective way of ensuring that the research it funds can be accessed, read and built upon’. The other statement makes a judgment call on the use of journal impact factors (IF). The document states ‘The DBT and DST affirms the principle that the intrinsic merit of the work, and not the title of the journal in which an author’s work is published, should be considered in making future funding decisions. The DBT and DST do not recommend the use of journal impact factors either as a surrogate measure of the quality of individual research articles, to assess an individual scientist’s contributions, or in hiring, promotion, or funding decisions’. I shall discuss these two statements in some detail.

I wish to first discuss what is said about the IF of journals. The use of IF as a ‘weight factor’ for the list of publications of a researcher is a current trend, and is now being contested by many (see, for example, refs (1–3)). As the Editor-in-Chief of INSA, Lakhotia³ has lamented the vicious circle that low IF journals get trapped into. Chaddah¹ has, on the other hand, brought out a negative consequence that the desire to publish in high IF journals has on the ability of a young researcher to claim path-breaking research. He argues that ‘by putting a

premium on publications in such journals we are asking our young researchers to be more compliant to the thinking of the reviewers and editors of that journal. This causes our scientists to refer to specific papers and support specific ideas, to dilute their conclusions and make them more in line with those suggested by the referees, etc. It lowers the level of our research output by dilution at the publication stage.’ The failure of ISRO to claim priority for the discovery of water on the Moon by its Moon impact probe, and becoming only supportive to the same claim by NASA’s Moon Mineralogy Mapper, can be attributed to their desire to have a publication in a high IF journal^{4,5}. The need to stop worrying about IF of journals must be accepted if Indian research has to have path-breaking claims. I am emphasizing the word ‘claims’ because we appear to lack the courage to sometimes be wrong. A path-breaking paper must initially be a claim and, even if published in a high IF journal, remain a claim until it is supported by post-publication reviews.

I also wish to emphasize that the IF calculation is biased against path-breaking papers since it revolves around quick citations. Path-breaking papers, especially from emerging bylines, are received with initial disbelief and start receiving citations only after post-publication reviews; they do not contribute to raising the IF of the journal.

The second statement is about the role a repository can play in ensuring that our research output is accessed, read, followed-up, and accepted or rejected. This is a role that is the *raison d’etre* of any preprint archive, and I have long argued that we should have a national preprint archive that actually covers all subjects in which research is done in Indian universities⁶. The DST–DBT document does discuss uploading papers in the disciplines of science, technology and medicine (STM) and also in arts, humanities and social sciences.

I now discuss the intentions behind setting up electronic repositories.

- The UGC considers that an open access repository of electronic thesis and dissertations ensures psychologi-

cal pressure that discourages intentional plagiarism. The possibility of detection by software checks and the threat of subsequent penalties would make students (and supervising faculty) more careful. This being a dominating purpose of open access is reinforced by the MHRD announcement of ‘Gurutsav 2014’, in which an essay writing competition was organized on 1 September 2014. The announcement stated clearly that ‘Provisionally selected essays will be open to public to comment on plagiarism’. One purpose of open access repositories is thus to discourage plagiarism.

- The document of DBT and DST states clearly that ‘Since all funds disbursed by the DBT and DST are public funds, it is important that the information and knowledge generated through the use of these funds are made publicly available as soon as possible’. The second purpose of the open access repository is thus to voluntarily provide information that may be sought under RTI. It also states that free on-line access ‘is the most effective way of ensuring that the research it funds can be accessed, read and built upon’. I wish to stress that free on-line access could passively ensure that it is accessed and read, or actively ensure visibility. No proactive steps for ensuring visibility are discussed in the document; not even the building of mailing lists that are subject- or keyword-specific.

Both these purposes are about increasing the accessibility (as distinct from visibility) of papers. I wish to discuss the broader purpose of the repository arXiv.org, which is popular amongst physicists and is dominated by preprints rather than by published or accepted papers. A large number of physicists believe that putting manuscripts on the arXiv may even be more important than putting them in a journal because ‘Ultimately, priority is determined by when the paper is uploaded on the arXiv’. As proof of this belief is a correction that a highly respected Indian group had to publish to acknowledge the priority of three papers that

were uploaded in the period falling between the dates when the original and revised versions of their manuscript were received by the publishers⁷. So, internationally, repositories graduated some years ago from enabling free dissemination of research results to enabling claims of priority. The arXiv is acknowledged to have had, in this sense, a positive effect in favour of physicists from the developing countries.

The DBT and DST Open Access Policy has created two central repositories <http://dst.sciencecentral.in/> and <http://dbt.sciencecentral.in/>, and will create many institutional repositories.

Both these sites display a link for more information on publishers' policies on self-archiving pre-print and post-print research papers. The linked site is <http://www.sherpa.ac.uk/romeo/>

It provides detailed information on preprint archiving policies for almost all journals. The possibility to use a preprint repository to establish and claim priority is obvious. It is not clear why there is no emphasis on using the two central repositories for uploading preprints and claiming priority. As mentioned earlier⁶, we should cover all subjects in which research is done in Indian universities. The DBT & DST Open Access Policy document (p. 3) does refer to 'Arts, Humanities and Social Sciences' in addition to its continuous reference to 'Science, Technology and Medicine'.

It is imperative that academics seriously discuss this document to ensure that it does serve all purposes that a national preprint and reprint repository can and should. It must help our research scholars gain visibility and claim priority

with preprints. In addition to mandating those whom it funds, it should also permit voluntary uploading by other Indian researchers who consider uploading on the repository helpful.

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