

Ethical values and scientific research

Science is the search for truth. In fact, scientific endeavours, that lead to half-truths and fallacies, are worse than not doing any science at all. Such endeavours are international and cannot have separate standards. The first and foremost objective of a scientist should be to promote integrity, objectivity and ethical values in the pursuit of science. Further, scientific results are inherently provisional and errors arising from human fallibility also occur in science; the most responsible scientist can make an honest mistake. When these are discovered, they should be acknowledged and one who makes such an acknowledgement promptly and openly is rarely condemned. However, mistakes made through negligent work are treated harshly. Haste, carelessness, inattention and selective suppression of inconvenient data can lead to work that does not meet the standards in science. Narlikar¹ has recounted the circumstances behind Eddington's claim in an unethical way to suppress experimental data, this was exposed in a book by Waller². The selective hiding of or avoiding inconvenient data is not unusual and

is the most dominant form of unethical practice among many scientists³. Stealing data or ideas, then fabricating results and publishing in a journal is becoming a habit among those who want short-term gains.

Plagiarism and fabrication of results are among the most common and clearly recognized forms of deviant behaviour spreading like cancer⁴. Those who cut corners for any reason, place their institute reputation, the work of their colleagues and the reputation of their university/institute at high risk. They do substandard work or may be tempted to publish virtually the same results, with change of titles, at two different places in certain journals to compile a long list of publications. Some senior scientists⁵ self-glorify their work to acquire fame in order to get positions even after retirement. It is suggested that institutes, universities and other agencies should adopt policies that limit the number of papers to say the best 5–6, when an individual is to be evaluated for promotion, appointments or awards. This procedure automatically makes the large bibliography redundant. More important

awards are often seen to be conferred on those who occupy administrative positions; such scientists/science managers who have left bench science years ago, even after retirement get emeritus positions. On the other hand, a retired but active scientist who can still be useful to guide research and publish papers is generally neglected⁶.

1. Narlikar, J. V., *Times of India*, 1 January 2005.
2. Waller, J., *Fabulous Science*, Oxford University Press, Oxford, 2002.
3. Rajappa, S., *Curr. Sci.*, 2005, **88**, 1023–1024.
4. Balaram, P., *Curr. Sci.*, 2005, **88**, 1353–1354.
5. Subhash Chandra, K. C., *Curr. Sci.*, 2005, **88**, 1713.
6. Gupta, Y. K., *Curr. Sci.*, 2006, **90**, 9.

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Identity is developed and not searched

I strongly feel that the theme detailed in the Guest Editorial by Dipankar Chatterji¹, is totally out of place and does not serve any academic purpose whatsoever. It is nothing but a description of a scholar adjudged by good examination results, but a total failure in pursuing research work. Invariably, students securing good marks in our prevailing examination system either go for jobs of their choice or come back to university departments for pursuing research for Ph D degree. Primarily, it is the reputation of professors as teachers and researchers in universities that attracts research students. In India, there is hardly any aptitude test for students to carry out research work and invariably students securing high percentage of marks are selected for pursuing research. Most of these students get their Ph D degrees, with papers published in reputed foreign and Indian journals. Students carrying out research work could be categorized on the basis of their understanding, involvement and intrinsic thought-process. It is a system where students are exposed

to research methodology under supervision of professors in Indian universities and various national institutes. Primarily, it is an inductive process that provides various basic tools for pursuing in-depth research. Finally, it turns out to be a question of intrinsic aptitude of individuals that emerges for accomplishing leading work. We find students doing well and coming out with good results published in international and national journals. Accomplishing good research, earning international reputation and winning awards has hardly any correlation with the high percentage of marks in our examination system. It is a question of using the available tools for shaping and building an individual thought-process on the topic of research. The degree of contribution of professors guiding research in Indian academic institutions varies significantly. However, it is not all frustrating and depends primarily on the motivation and intrinsic aptitude of individual research students. It is the narrow mindedness of students, who satisfy themselves by high-

lighting petty considerations and spoil their academic career.

It is obvious that the case of Vikram Dixit (undoubtedly a fictitious name) elaborated and discussed in two pages¹ is one such case and should not have been discussed. There are many Vikrams in the country and the prevailing academic system cannot help the situation by providing them aptitude-based jobs. An appropriate survey would quickly show that most parents and guardians aspire that their wards get the most rewarding jobs. In our country at the present time, jobs have nothing to do with the talent and intrinsic aptitude of individuals. Therefore, there are a large number of such cases in the country. Many of them move ahead in leading a meaningful life.

1. Chatterji, D., *Curr. Sci.*, 2006, **90**, 141–142.

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