

## The Saas Bhi Bahu Thi concept as applicable to review and refereeing

I feel that the time lag for review of scientific articles in *Current Science* is frustrating and not in the best interests of good science in India. At least for the categories of scientific correspondence and research communication, and also for funding small projects (below 10 lakhs, with one SRF with Rs 2 lakh contingency per year and one small equipment below Rs 1.5 lakhs), a fast-track process needs to be initiated by science journals of repute in India and by science funding agencies. The former concept has been initiated in many international journals and one can see papers with the caption 'Fast track' on the right top corner. In India, both the former and the latter processes (which according to me will benefit thousands of enthusiastic young scientists) have not taken-off. Senior scientists tend to forget 'where they started in their younger days' as

young scientists eager to publish papers to make a good career. Though I am close to retirement now, I never forget this aspect. When I get papers and projects for review, the first 20 days, I too keep them aside. However, soon I feel 'guilty'. The thought which comes to my mind is 'does this paper or project come from one of those enthusiastic young men/women with brilliant ideas, great concepts, who are all fired up to do good science, but are frustrated by the time lag'. I would like to see Indian science grow, and grow fast. The first way is to have two levels of funding (a) >30 lakhs, (b) <12 lakhs with separate committees. The first level (>30 lakh projects) will have a committee of distinguished senior professors and eminent scientists (in the age group of 55–65). The second level will fund projects ranging from 15 to 30 lakhs with distinguished scientists young

professors (45–55) with good record of papers in the panel of judges.

The second way to take Indian science on the fast track is to have a special category for short communication, scientific correspondence and small projects (below Rs 12 lakhs). This will require a special committee of scientists who are themselves actively involved in scientific research, actively competing for big funds (in the age group of 45–50). They should have the intuitive ability to recognize a brilliant idea or concept, and sanction projects, within three months of the proposal being sent.

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## Indian students in Germany

A visiting researcher from India will be surprised by the large number of Chinese students in German universities and research institutes, and the relative absence of Indian students. This situation is different from the United States, where there are a large number of Indian students. It also appears that many Chinese students return to their country after completing their studies, thereby propelling growth in the nation's science and technology. Some quantitative data<sup>1</sup> on these numbers compiled by the DAAD (German Academic Exchange Service) for a few countries is shown in Table 1. India occupies the 18th rank among foreign students in Germany.

It is clear that Indian students are missing out on the opportunity to study and do research in one of the world's largest economies. German universities are strong

in research. Additionally, they have a great emphasis on experimental work and industrial interaction, which is different from some Anglo-Saxon countries that are more focussed on engineering science. Many German engineering professors have spent substantial time working in the industry.

Several sources of funding are available for PhD programmes in Germany at universities, research laboratories and Max Planck institutes. In particular, the well-funded Max Planck institutes offer many interdisciplinary programmes which are typically not offered by other universities, but are valuable for research students. Also, these institutes are well equipped for experimental research, which is an area where more training and emphasis is needed in India.

It is interesting to note that many Japanese students studied in Germany during the late 19th and early 20th centuries. The emphasis on precision manufacturing and a close relationship between science, engineering and industry was probably learnt by the Japanese from the Germans, and paved the way for the modernization of Japan. It appears that the Chinese are replicating the Japanese model, while India is following the service industry and software-driven model

of the Anglo-Saxon countries. However, for inclusive growth and employment of large segments of the population, there is a strong need for an emphasis on engineering and science for manufacturing and industry.

The PhD programmes in Germany can generally be completed without taking any courses and in a short period of three years. Much of the research work can be done in English. It is, however, advantageous to know some German. German language courses are freely available and generally paid for by the university or institute for anyone desiring to take them. Indian students should catch up with the Chinese and Russians in making use of the available research programmes in Germany.

**Table 1.** Selected countries of origin of foreign students in Germany in 2006

Rank	Country	No. of students (% of total)
1	China	27,390 (11)
5	Russia	11,953 (9)
14	South Korea	5096 (2.1)
17	Iran	4069 (1.6)
18	India	3988 (1.6)

1. Weltoffen, W., *Facts and Figures on the International Nature of Studies and Research in Germany*, edited by German Academic Exchange Service, Bielefeld, 2007; [http://www.wissenschaft-weltoffen.de/publikation/index\\_html?lang=en](http://www.wissenschaft-weltoffen.de/publikation/index_html?lang=en)

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