

## Importance of good teachers and leaders of research

P. K. Gautam<sup>1</sup> has focused on the need of good teachers for improving our scientific attitudes and capabilities in research. He has attributed the lack of creativity, innovation, inability to articulate, lack of clear thinking and decline in verbal and written skills to our education system. I agree with his viewpoint, but I differ with the remedies suggested by him. We cannot apply the defence force strategies and techniques to improve our education system. Grooming of intellectuals and teachers requires a different environment.

It is unfortunate that the Indian government has given a low priority to education at all levels, i.e. primary, secondary and higher education. Hence the teaching profession does not attract talented students. It is almost the last choice these days after engineering, medicine, business and information technology. The situation has gone from bad to worse during the last decade. Being in the teaching profession for the last 38 years, I am fully conversant with the weaknesses of the Indian education system. Some of the ills identified and remedies suggested are as follows:

(i) The medium of instruction for primary school education should be the mother tongue of the student. Primary teachers-training programmes should be conducted at the state level.

(ii) Secondary school education has assumed a pivotal role in India and the students have to pay a heavy price for entry into any professional course. There should be just one entrance test at the national level like in European countries. Teacher-training programmes at the secondary level should be conducted by National Council of Educational Research and Training (NCERT), New Delhi by designing package programmes for each professional stream. Project work has to be introduced to improve analytical thinking and written skills among students and teachers.

(iii) There is no training programme for teachers at different levels in university education. Academic staff colleges started by UGC on the pattern of defence colleges, have failed to serve the purpose. The teachers are only interested to get a certificate of attendance for promotion under the Career Advancement Scheme of UGC. No rigorous training is imparted in teaching methodology or research techniques. UGC must abolish these colleges and introduce assessment of teachers by the students as found in Europe and USA.

(iv) University teachers must have free access to the research facilities available in both state and national

level institutes, as already started under UGC-DAE joint venture/collaboration. Indian Academy of Sciences, Bangalore has also taken some bold initiatives.

(v) Last but not the least, rotation of headship in universities allowed by UGC must be either stopped or reviewed. It has created more problems rather than solving these. The concept of grass-root democracy is good, but it has failed to provide leadership qualities in education and research in the Indian university system.

Unfortunately, we Indians believe in *status quo*. Unless some revolutionary changes are introduced as a damage-control measure, our education system will fail to produce world-class intellectuals or leaders.

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1. Gautam, P. K., *Curr. Sci.*, 2001, **80**, 483; and references quoted therein.

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## The Bradman class, spiritualism and scientists

The editorial (*Curr. Sci.*, 2001, **80**, 717–718) is a welcome change from science to cricket, but one fails to appreciate the theme propounded in it to project Bradman as a measure for the scientists. It is illogical to do so because their contributions are of a totally different nature. Bradman undoubtedly is great in his game and would have got a Nobel Prize, had there been one for sports and games. But his contributions to cricket, which is a time-bound phenomenon and at best academic, cannot match the scientific contributions of Newton, Fara-

day, Pauling, Woodward, etc. to the society and to the world, in utility and application – and to science in general – and which has permanence. Secondly, Bradman's skill as a batsman was competitive, depending on the competence of the bowlers and fielders of the rival teams. On the other hand, the competence of scientists is absolute and not relative, in spite of the fact that achievements in science have become dependent on group activity. Thirdly, if Bradman's batting average of more than ninety runs in tests is not likely to be

bettered in the future, it is because the game of cricket has become so professional, involving money and so tight-scheduled throughout the year that even the best of the top players get tired mentally and physically, and are not able to give their best uniformly in all the tests. Sachin Tendulkar and Brian Lara are apt examples for this.

One factor which must have been common in Bradman and the scientists and which must have inspired them to do the 'sadhana' to attain excellence, is spiritualism. This incidentally the edito-