



Encouraging young minds

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Highlights

- When the Fields medals were awarded earlier this year, the Indian media was quick to highlight that Akshay Venkatesh, one of the four medal winners, is of Indian descent.
- While this is correct per se, we need to also think about how little our education system has to do with Prof. Venkatesh's achievements, and whether, given the present state of affairs, an Indian education can produce Fields medallists.
- Although Prof. Venkatesh was born in Delhi, his family moved to Australia when he was a child. The Indian education system hardly played any role in moulding the child prodigy and this was also rather the case with Manjul Bhargava (Fields medal 2014).
- Subhash Khot, who won the Rolf Nevanlinna Prize in 2014, had more of an Indian education — a bachelor's degree in computer science at IIT Bombay.

Why not from India?

- The question, therefore, is, why has our education system not produced any Fields medallists, especially when there is no dearth of talent.
- The answer lies in the opportunities and training that these talents receive — or fail to receive rather the lack of these.
- One of the programmes in India devoted to training students of mathematics and identifying and nurturing talent is the Mathematics Training and Talent Search, which was started 25 years ago, in 1993.
- There are also programmes that train students to compete in the Mathematics Olympiad; Mr. Khot is a two-time International Olympiad silver medallist.
- Yet the number of students being trained in these programmes is still small.
- With 36.6 million students enrolled in higher education and 36.4% joining the science and humanities streams (All India Survey on Higher Education data), it is safe to assume that there is a considerable gap between the requirement and the availability of training and nurture.

Case Of France

- France, a country with a population close to 6.5 crore, has about 3,000-4,000 scientists.
- It also boasts of 12 Fields medallists.
- This is comparable to the U.S., which has much more in terms of resources.
- Of course, one cannot simply create such schools out of thin air.
- They must be nested in a balanced network of universities, teacher education systems, and most importantly, a solid base in school education.
- One may dismiss this argument claiming that such honours are not what India needs now.

- However, while top prizes are not themselves a solution to all problems that beset education in India, they remain a characteristic of a healthy educational ecosystem.
- Only such an ecosystem can create enough space for young minds to explore abstract mathematical and scientific ideas freely and in turn challenge the boundaries of existing knowledge.

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