

National Mathematics Day in India: Challenges, Delivery and Roadmap

by Manjil Saikia - Friday, December 22, 2017

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In 2012, the then Indian Prime Minister Dr. Manmohan Singh declared it to be the [National Year of Mathematics](#) and every year December 22nd, the birthday of the Indian mathematical genius [S. Ramanujan](#) to be celebrated as [National Mathematics Day](#) in India. It has been now 5 years since the first National Mathematics Day, and it is now a good time to reflect upon what has been achieved and what remains to be achieved. It is true that the genius of Ramanujan transcends normal academic barriers and even without a day to honour him, his legacy has been cemented in the fabric of mathematics at the world stage. Then, what purpose does a day devoted to mathematics serve in India?

The rationale behind such a day earmarked in India, apart from being the birthday of the foremost mathematical genius of India is hard to find out from any government agency. A casual search online, returns just news articles and no government agency website about what the day entails. Contrast this to the [National Science Day](#), that is celebrated every year in India by the government agency, [Department of Science and Technology](#) is a mediocre success considering the size of the country. But National Mathematics Day can in no way be compared to the National Science Day, which every year on 28th February is widely celebrated by many national and state agencies with various programmes for students as well as the general public.

It is sad that a day marked in honour of such a great man has been put to waste. Our duty should not just remain in writing a news item every year on 22nd December and wait another year for the cycle to repeat. One of the foremost government agencies dealing with solely mathematics in India is the [National Board for Higher Mathematics](#), which to the best of my knowledge has no pan India celebration of this day. But, what would such a celebration mean for India is a question which begs to be answered. It is common knowledge that mathematics is the most feared subject in school as well as in higher education. There should be a policy search in all levels about how to remedy this situation. Students should be shown that mathematics if thought of as a logical subject would be much easier than the normal trend of rote memorization that many schools encourage in it's students. The government has so far done abysmally low in this front, and a day earmarked for mathematics every year gives it an ample chance to remedy this lapse. Perhaps, in a few years some agency will take this issue up.

Mathematics, often called to be the queen of all sciences is essential in every sphere of activity nowadays. With the advent of big data, cyber security and social networks; it's importance has steadily increased. India, if it is not to be left behind in latest technological innovations must give due importance to mathematics. A nodal centre for the cultivation of mathematics throughout India, is sadly missing. Specialized centres exist with very limited intake and it is often hard for a student from say, Assam or Kashmir to really function at the level of institutes like IMSc, TIFR or CMI. This is not due to a lack of talent, but more due to lack of opportunities that exists in far flung areas of India. Roadshows, public lectures and multimedia movies could be made by the government as well as institutes of repute and distributed across the nation on why mathematics is important and why it is not as bad as it is made out to

be. This would really be a first step and with proper followup it is should be successful.

There exists many different government policies on education, and if a sub-policy specifically on mathematics education is made; then it could do wonders for the students. The rationale behind this suggestion, is because there is no other subject apart from mathematics in which students face so much difficulty. There is a debate about what education should contain, and various gimmicks put forward in recent times about one issue or the other. But, a thorough search shows how hollow many education policies in India are at the moment. A silver lining in this are the NCERT textbooks, which in my opinion are quite standard, but slightly less rigorous than what they should be. The mathematics curriculum could be revised in a few years, starting from schools and gradually going to the top.

The representation of mathematicians in India is also quite low compared to biologists, which seems at the first sight very strange; because mathematicians can survive with just pencil and paper whereas other sciences would need sophisticated equipment to conduct research. A first step to increase the number of mathematicians would be to set up institutes like the CSIR labs, and have it distributed throughout India. The situation now is that, there is a high concentration of institutes in the south of India, particularly in Chennai and Bangalore. A special centre made in the hills of Shillong or Mussoorie would be a welcome respite for people who would want to do research in the tranquility of nature. Such concepts exist in many European nations and it works wonderfully.

But, it would be unwise to just mention problems, and not say anything about the advancement of mathematics in India. There is a great Indian school of mathematics at TIFR, which has continued to produce good results since its inception. The Indian Statistical Institutes are also a force to reckon with in many areas of applied mathematics. But, the traditional university departments which were doing tremendous work in pre-independence India has now dwindled. A roadmap for the next few years should be one agenda of the government in the coming year or so, and a neglect of this day by so many government agencies is a shame. If every central university can celebrate days in honour of various political figures as has been the recent mandate from UGC, then why not mathematics?

(The views expressed in this article are the author's.)

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