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Science literature festivals boost scientific temper

If scientists and literary figures come together, we can expedite our mission of developing scientific temper

Scientific temper is a buzzword in the scientific community, and policymakers often use it to highlight one of the specialties of our Constitution and nation. Even before our Constitution came into existence, we had a rich tradition of following scientific principles in our daily life; be it in our architecture, health care, agriculture and music. Of course, this knowledge is kept in the hands of a few elite sections of society.

After independence, our policymakers realised that scientific knowledge and new scientific advances from the western world should be adopted. Accordingly, they “envisioned world-class institutions in the country and the fruits of which we are harvesting today through research and innovation. But even today, science is managed by the scientific and academic community. The science spoken by these elite communities is not digestible to the ordinary person, even though they are reaping the benefits in their daily life.

Myths and superstitions that affect human development are prevalent even in this ‘Amrit Kal’ when we are marching towards a global leader. Many educated people have an aversion to taking vaccines or believing in evolution. Only when all our citizens are scientifically literate, can our country progress in every aspect of human development. This is a challenging task in a country with diverse cultures and traditions. Many science popularisation programmes have been carried out in the country under the aegis of great institutions like Vigyan Prasar, CSIR-NIScPR (earlier CSIR-NISCAIR) and others. But still, achieving 100 per cent scientific temper seems to be a dream, the problem is that these institutions have their own limitations in reaching every nook and corner of the country.

Moreover, most of the science popularisation programmes are led by scientists who are from a science background. There are hardly any scientific institutions in the public sector where people from literature or fine arts backgrounds are recruited as scientists. This is one of the major drawbacks of our science communication activities. We need more science communication institutions having human resources trained in science, literature and fine arts, in different regions of the country. Based on the local cultural differences, we need to design different science communication strategies to develop scientific temper in the society.

It is here literature comes to the rescue. Every literate person will read story books, novels, fiction and poems at some point in life, even if they don't read scientific books or journals. Literature is one area that we have missed in our science popularisation activities. Even children who are not interested in science in the classroom would like to read sci-fiction books like the Star Trek series and similar.

Many ordinary people without any scientific background, have shown interest in reading biographies of scientists

WE NEED TO DESIGN MATERIALS THAT WOULD DIGEST EVERY CHILD, STORY BOOKS, COMIC BOOKS, NOVELS, FICTION, POEMS, ETC, THAT HAVE SCIENCE COMPONENTS IN DIFFERENT LANGUAGES. THIS WILL MAKE EVEN STUDENTS NOT INTERESTED IN SCIENCE LEARN SCIENTIFIC CONCEPTS INDIRECTLY

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like “Wings of Fire” by our former President Dr APJ Abdul Kalam. Similarly, there are many takers for the sci-fiction books written by Fred Hoyle, Gregory Benford, Carl Sagan, Isaac Asimov, Robert A Heinlein, Arthur C Clarke, Michael Crichton and others.

Even in our classroom, instead of textbooks, if science-based popular science books or literary works are included, we can generate interest in students. Studies have shown that creating connections with literary works will help engage students in science classes.

Students reported that they were immediately able to see and emotionally engage with the narrative. They might start to appreciate science for its creative potential. Students’ self-assurance in science improves when they see the relevance of scientific concepts to interests they already have. It encourages kids to broaden their horizons and think beyond the box when it comes to their science coursework.

Integrating readings about accountability in science is one way to help students grasp the material. They gain self-assurance as they learn that science encompasses more than one narrow field. Students with a passion for science will find that the sessions push them to develop their critical thinking skills and open their minds to new ideas. They have also inspired many kids to pursue learning on their own time. Innovative ideas and technological advances in science and technology have been reflected by numerous well-known and representative literary works. The important interactions between science and the cultural sphere (with architecture, religion, the philosophy of the Enlightenment, or literature)

throughout history demonstrate that science is a fundamental component of culture.

Jonathan Swift, in his work Gulliver’s Travels (1726), depicts an island, Laputa, which is held up magnetically in the air, and inhabited by men who are totally dedicated to mathematics and music. Similarly, Jules Verne, in his novel The Mysterious Island (1874) explains the notion of man’s controlling nature thanks to science and technology.

Science also influences the work of Arthur Conan Doyle. The investigation methods used by his literary creation, the detective Sherlock Holmes, are based on the positivist scientific methods taught to the author as a medical student. In recent times books by Prof. Yuval Noah Harari – Sapiens & Homo Deus -- were the best-sellers lucidly, which explain science, even though the author is not a scientist per se. He recently came out with another book Sapiens: A Graphic History, a radical graphical adaptation of his best-selling book Sapiens, targeting children and the layman.

Realising the importance of literature in science communication, the government has included ‘Vigyanka’ (Science literature festival) as one of the main events at the mega science event, India International Science Festival (IISF), which has been celebrated since 2015. The ‘Vigyanka’ event will bring scientists, literary and fine arts personnel to a common platform. The event was first conceived by Dr Nakul Parashar, Director, Vigyan Prasar, on the lines of Jaipur Lit Festival for the first time and with the help of his colleagues Kapil Tripathi and Maanbardhan Kanth launched it in IISF 2019 at Kolkata.

This initiated a new becoming in taking science communication and science education to the next level. Our science students should be taught to read novels, poems, biographies, etc., to improve their creative skills. The beauty of storytelling and poems is that even an illiterate person who listens to them will enjoy and understand scientific concepts.

In this world of trans-disciplinary learning, policymakers should open the doors of scientific institutions to people from a literature background. A good literary work, be it a novel or fiction, or poem, is a mirror of society. It can reflect problems the community faces, virtues of good values and teach people to dream higher. It can even help us document certain traditional knowledge that prevailed during the period. These values are essential for effectively bringing science to the masses. Even today, our policymakers give impetus to scientist-centric science communication. This should change to a collective teamwork of scientists, literary and fine arts persons. We must envision a nation where scientific temper is imparted to every citizen. For this, we must train our young minds, our school-going children.

We need to design materials that would digest every child, story books, comic books, novels, fiction, poems, etc, that have science components in different languages. This will make even students not interested in science learn scientific concepts indirectly. If scientists and literary figures come together, we can expedite our mission of developing scientific temper in every part of the country and make India a scientific superpower in the Amrit Kaal.