

India's unique Solar Mission

Another big day for India, as ISRO successfully launched its ambitious solar mission, Aditya-L1, marking another historic achievement following the recent success of the Chandrayaan-3 lunar expedition. This mission represents the PSLV's "longest flight," lasting approximately 63 minutes. Aditya-L1 is a significant endeavour as it is the first space-based observatory designed to study the universe. The spacecraft will journey a million and a half kilometres from Earth to reach its destination: a halo orbit around Lagrangian point L1, the closest point to the Sun. The mission is a complex endeavour with several distinct phases. It commences with the spacecraft being positioned in a low-earth orbit, followed by a subsequent transition to a more elongated elliptical orbit. The entirety of this mission, from launch to reaching L1, is estimated to span about four months, including experimentation work.

Several experiments planned for studying the sun's atmosphere and radiation on the Aditya-L1 mission are groundbreaking and unprecedented. The mission will transmit over 1440 photographs daily to Earth for further analysis. It encompasses a range of objectives, including capturing images of the solar corona, photosphere, and chromospheres, studying magnetic fields, and analysing solar wind particles. Importantly, all of these experiments are facilitated by seven payloads developed entirely within India. Executing such comprehensive experiments and analyses is an extraordinary feat, requiring the highest levels of expertise. The whole duration of this mission will once again demonstrate ISRO's excellence in launch precision, satellite positioning, and the execution of complex procedures.

The successful missions of Chandrayaan-3 and Aditya L-1 have firmly established ISRO as a premier space agency worldwide. These accomplishments will further bolster international confidence in ISRO's capabilities, positioning India as the preferred choice for space missions. ISRO's cost-effective approach to space exploration, coupled with its remarkable achievements, ensures a busy launch calendar. Conducting two successful missions in quick succession is a strategic move, placing ISRO in the global spotlight. These missions underscore India's dominance in space technology and scientific research. Notably, launching satellites within tight budgets is a remarkable achievement in an industry with multi-billion-dollar costs, and ISRO excels in this regard. The revenue generated from commercial satellite launches holds significant economic importance and will support ISRO's future technological advancements and exploration missions. Despite being one of the youngest space agencies, ISRO's achievements rival those of organisations with decades of experience.

India has already experienced record-high temperatures, and the global trend of rising temperatures is a reality that affects regions worldwide. This mission and others like it contribute to our knowledge of the complex interactions between the Sun, Earth's atmosphere, and climate systems. Indeed, the study of the Sun's atmosphere and radiation through missions like Aditya-L1 holds significant importance in the context of addressing Earth's warming and climate change. Global warming is a pressing concern, with rising temperatures having far-reaching consequences for our environment and climate patterns. The data and images collected by Aditya-L1 will provide valuable insights into the Sun's behaviour, which plays a crucial role in influencing Earth's climate. By analysing this information and collaborating with leading research institutes, scientists can gain a deeper understanding of the solar impact on our planet's climate. This knowledge is essential for policymakers, scientists, and communities to develop strategies to mitigate the effects of global warming and work towards a sustainable and climate-resilient future.

ISRO's contributions extend beyond space exploration; they also showcase India's potential in education, research, and innovative solutions to global challenges. While Indian universities may not rank among the top hundred globally, the nation's strong foundation in the basic sciences and research capabilities are evident. ISRO has played a crucial role in attracting global attention to India's educational and research endeavours, offering solutions to prevalent global challenges. ISRO has started expanding its explorations. All we can say once again is, well done, ISRO!

Spike in dengue cases

Recently, there has been a significant increase in dengue cases in Jammu and Kashmir, with significant new cases reported every day from various districts. Jammu district is leading the affected persons list. Authorities have already raised concerns about the increasing number of dengue cases and advised citizens to take preventive measures. Emphasising once again the importance of ensuring there is no stagnant water in and around homes, as dengue mosquitoes breed in stagnant water. A list of basic precautions, like keeping water-filled containers and tanks covered and emptying coolers at least twice a week, has been issued.

The responsibility for addressing this recurring issue falls mainly on the various municipalities. When the same pattern of events repeats year after year, it indicates a systemic problem that needs attention. It seems that authorities are not taking ownership of their responsibilities regarding this. While strict municipal laws are in place for violations, there appears to be a lack of enforcement. Given the ongoing development activities in almost all districts, constant digging and open sites with stagnant rainwater have become common problems. Despite citizens' complaints, there seems to be a lack of action to address these issues. Immediate steps, such as fogging, are necessary to contain the dengue outbreak. Simultaneously, awareness campaigns should continue to educate the public about the disease. Addressing this issue requires a multi-pronged approach. Concerned citizens, local community leaders, and advocacy groups should pressurise municipal authorities to take immediate and sustained action. This can include demanding transparency, accountability, and regular updates on the steps taken to prevent dengue outbreaks. Hospitals should also be prepared with emergency teams to handle a sudden increase in dengue cases. Citizens need to be informed about the disease and the precautions they should take, as a sudden decrease in platelet count can be life-threatening. Overall, this will require a concerted effort from all stakeholders to combat this problem. Allowing the situation to escalate and then reacting hastily is not an effective approach.

Tribute to a great Teacher

I D Soni

His life

Servapalli Dr. S. Radhakrishnan, a great servant of humanity, an awakener of East and West, a great thinker, a lover of peace, a great man and above all a great teacher was born on 5th September, 1888 at a small place Tiruttani in Chittoor District of Madras Presidency forty miles in the north of modern Tamil Nadu (Chennai) in an average respectable family. His father Servapalli Veera Swami and Smt. Sitamma were pious human beings. His ancestors had migrated 150 years ago from the Andhra fishing village of Servapalli about 200 miles in the north and the name of his village "Servapalli" became his surname.

His wife Smt. Sivakama was not an educated lady. His personal life is a good role model for others to be emulated. He was teetotaler and loved solitude, music and books. He was tall and dark, largely muscular, eyes bright and aquiline nose, his hair turned grey and white soon. Due to the retirement of his father and grinding poverty, he gave private tuition and incurred debts to support his brothers and mother but did not beg at the cost of his integrity.

His achievements

5th September is observed as Teacher's Day to pay warm and hearty tribute to that great hero - a great soul. His ideals, particularly, about true education are worth considering, worth implementing in the whole system of education. This truly great man of India, has emphasised that this, verily, is true knowledge, the service of humanity. This is true knowledge, the service of eternal values of life, the service of God, the service of the poor and lowly.

Philosophy of Radhakrishnan

(i) Guard our scholars :-

Mere intellectual learning, mere pedantry does not take us to God. Life eternal cannot be realized by knowing the meanings of texts, not by brain power, not by the study of many books; but we can learn the truth only by understanding a churning of our mind, understanding a laceration of our whole nature. It is not easy but it is possible for everyone to attain it. If some people have attained it, they are the heralds for the rest of humanity. They are the elder brothers, so to say who tell us "what is possible for me is possible for you. I am not made differently. The same God who dwells in me dwells in you too." So it is that many metaphysicians and thinkers have searched for a vision of true greatness, a vision of good men, saints, etc. If their stories are listened to by young children, if they patiently go through their tales of woes overcome by attainment of joy, unconsciously the mind is moulded. We will see that an impression is made. All influence is not deliberate, not conscious. It is more often unconscious than conscious. By surrounding people, surrounding young children with examples of true saintliness and great goodness, we unconsciously permeate their minds, perfume them, colour their minds with a desire for attaining similar positions, similar achievements. The child is an imitative being, first and foremost. Whatever we say it will do. If we put before it the ideals of great character, not of military victory, not industrial power, not intellectual eminence, but true saintliness, people who have suffered for humanity, who have laid down their lives that other people may live, if that kind of idea is put before them, I have no doubt that the idea will have some kind of influence on the young people's minds. It is, therefore, necessary that in every school and in every home a little space must be left for the individual to be alone with himself, to examine himself. It is necessary for him to listen to the stories of the great saints and the sages of this world. That will make a tremendous impression on the minds of young people.

(ii) True Guru :-

After all, the guru is one who removes our spiritual blindness. Otherwise, he is not a guru; he is one who merely talks. He may pick-up something and then say he is a pandit. It is not that. The Upanishads tell us that a Brahmin should give up his pride in scholarship, his pride of learning, and become like a little child a little child which is unfranchised, which is completely emancipated from any kind of pride, prejudice, or provinciality in religion or in any other matter. The little child does not believe in caste, in its own religion; but we people indoctrinate the child, give him false ideas and make him behave as if he belongs to a superior category. A true guru is he who gives the right ideals to young children. The sense of equality is necessary postulate of the reality of the Supreme.

(iii) Tradition by which India lives :-

Tradition, by which this country lives, is not a memory of words. It is an abiding in spirit. It is an illumination of the soul. That is what our tradition has been, perpetually recreating itself

as new challenges occur. It is a living tradition. There are three great ideals which constitute our great tradition. They are 'Abhya', 'Ahimsa', 'Asanga' non-attachment. Abhya is a thing for which human beings try. Hegel, a great German Philosopher, trying to characterise different countries with which he was familiar, said, "Persia stands for Light; Greece for grace; Rome for Empire; India for dream". India dreams for a higher life, for a fuller life, for a richer life, a nobler life. Perfection has been the ideal of all people in this country. They are not satisfied with things as they are.

How best can we grasp that reality? What are the methods which are open to us? We need educational institutions wherein there is utter devotion, by surrendering to the Supreme, by singing his praises, and glorifying His name and going about doing everything in this world in the Name of the Divine, we will be able to get at that ultimate reality. "Bhakti" - devotion - that which calls upon us to surrender ourselves. That is the way in which we can grasp the reality, the easiest way in which we can grasp it.

There are so many methods by which it can be grasped. The easiest is the method of devotion. When once we have a grasp of that reality, immediately we will have humility. We will not have spiritual pride. We will feel that we have encountered in our ultimate moments of insight, in something which cannot be expressed in words or phrases. Let us work together. Let us all go together in this pathway towards the attainment of the ultimate reality.

Abhya is one of the things on which all our prophets laid the stress. Not merely our prophets, other prophets also. "Be not afraid", Said Jesus. "Be not afraid", Krishna says to Arjuna. So to get rid of fear is the ultimate thing.

Ahimsa follows naturally. If we feel that the whole world is enlivened by the supreme reality, that there is not one individual in this world who has not got his roots in reality, whether he is conscious of it or not, if we are able to realise that, we will feel it is not our right to impose any kind of suffering on anybody. In the Dhammapada it is said: Victory breeds hatred; the conquered live in sorrow." There is no point in our trying to inflict pain on other people. The question of friend and foe does not arise when we are at the top level.

Our differences need not give rise to discords. They need not produce conflicts, estrangement, misunderstanding - these things may be there but they have to be got over. Ahimsa is not merely a thing which concerns peace and war. It deals with our everyday life. Ahimsa in that sense of the term is non-violence in our daily life, in our daily behaviour.

All men are brothers, all women are sisters. Are we practising brother-hood? Are we true to it in our daily life? I must say that we admit God in theory, deny Him in life. We utter praise of God, we visit temples, we go to churches, we chant hymns but we do not practise religion.

Asanga, nonattachment is another ideal of Dr. Radha Krishnan. We are here and pass away. We are tenants. No individual is immortal. No nation is immortal. All things are subject to the law of time and if we are to work in this world, we have to work in a spirit of utter detachment. We have to undertake things, not because we hope to succeed, but because those things are right. Work here and do our best not caring for the cost and consequences. We have been called upon to do something for this world and for this life. Make life better, make it nobler and make it richer, doesn't matter if in the process we have to lay down our life. Whatever be the cost, whatever be the sacrifice we are called upon to do, the right thing is asanga - non-attachment.

Our efforts are dispersed, our aims are trivial, we are unable to hold ourselves together, to possess ourselves, be peaceful and restful. Why? Because we are not living truly human lives; we are not able to sit still, to be alone. It is not possible for us. We have caught ourselves up in that kind of tendency.

Abhya, ahimsa, asanga - these are the great ideals which have come down to us. Let us stick to them.

(The author is President Home for the Aged & Infirm, Ambphalla, Jammu)

Preserving the essence of classrooms in a Digital Age

Sapna Sangra

Our education system is rapidly transforming, and we are embracing the change without being conscious of the impact it may have on our society in the years to come. The use of technology for mass reach has been around for a long time, and there is no denying the positive role it has played in improving the quality of the content delivered. In the early 80s, India developed a satellite and it was named as the Indian National Satellite (INSAT). The University Grants Commission's (UGC) INSAT programs, for example, were on the scene way back in the early 90s that glued us to television back then. It aimed to provide holistic education to all sections of society and delivered content that varied greatly in nature. Awakening, educating, and stimulating the interest of the masses in the development of society were perhaps at the heart of these scheduled transmissions. The technological interventions in our educational system have grown manifold since then. But is it justified to allow technology to completely prevail upon us? Shouldn't we be seeking a middle path? Can classrooms be replaced by online platforms? Is Artificial Intelligence capable of replacing human tutors? These are some of the questions that a progressive society like ours should be asking.

The first and foremost question is: How do we perceive our classrooms? Are our classrooms just the physical spaces where students cover the course contents with the help of their teachers, write exams and move on to the next grade? To me, these classrooms go way beyond the physical spaces, and we must resist them being replaced by technology altogether. I often wonder what would I have been had it not been for the classroom discussions that shaped my ideas and helped me evolve into the person that I am today.

Ask anyone with a formal degree which stage of learning influenced them the most; I am sure the answer would be school. The reason is precise; school not because of the years spent there but because of the depth of engagement. When a teacher enters the classroom, she brings with herself an institution. Rather, a good teacher is an institution in itself. The real conditioning of minds takes place in the classrooms. Most often the discussions are free flowing and go well beyond the prescribed syllabi. Syllabus often gives the direction to the discussions. Students are encouraged to express, ask questions, and bring in examples, helping them evolve in the process. They learn to critically engage, agree and disagree. These physical engagements, the face to face interaction instills in students a sense of camaraderie, a sense of belonging to the institution and to their peers. To be able to reach the institution and the class in time instills in one a sense of responsibility and discipline. The expected behaviors, the normative pattern students are expected to follow generate the idea of the Social that cuts across the caste, class, regional and religious lines.

Scientific temper and research are paramount to any progressive society, and they have a close connection with classroom conditioning. It's time we realize that research does not happen in isolation. Good researchers emanate from good classrooms which rest on the shoulders of the teachers who push their students to bring in the ideas and express them without fear. Academic stimulations in the classrooms generate ideas to ask questions that impact us all and when we seek answers to these questions, we generate a body of knowledge that is applied to the betterment of our society and that is the purpose of all human knowledge.

The day we decide to replace these classrooms fully with technology driven platforms, where a teacher is replaced by AI, we will be generating slaves and not thinking minds capable of leading the world. It's time we give due credit to our teachers and recognize them for their contribution not just to our society but to the world at large. The world leaders, the pilots, the scientists, the doctors and the engineers - they are not born but nurtured in the classrooms. It's time we maintain the sanctity of our educational institutions and allow our teachers to prevail rather than be replaced by technology.

(The writer teaches Sociology at the University of Jammu)

Nurturing innovation among children through INSPIRE

Monika Dogra

The INSPIRE Awards-MANAK initiative seeks to elicit science and technology-based concepts and innovations from middle and high school students nationwide. Under the acronym MANAK, which stands for "Million Minds Augmenting National Aspiration and Knowledge," this student-driven endeavor aims to cultivate an atmosphere of inventive thinking, geared towards addressing societal needs through scientific and technological means.

At the heart of this endeavor lies the "Innovation in Science Pursuit of Inspired Research" (INSPIRE) program, the foremost initiative in the country dedicated to nurturing innovation among schoolchildren, thus aligning with the overarching notion of a million minds enriching the nation's aspirations and knowledge. A collaborative initiative between the Government of India's Department of Science and Technology (DST) and the National Innovation Foundation (NIF), INSPIRE beckons students aged 10 to 15, spanning grades 6 to 10, to present their science and technology-rooted ideas to their respective schools by the stipulated deadline for participation.

The INSPIRE program sets its sights on accumulating a remarkable one million unique ideas and innovations rooted in science, all carrying potential societal applications. This ambitious endeavor holds the purpose of fostering a pervasive culture of creativity and innovative ideation within students. Recognizing that innovation is not only pivotal to sustaining competitive advantages but also to the evolution of institutions, industries, and nations on the global stage, the drive for innovation, spanning products, processes, and services, directly enhances the quality of life. Thus, maintaining an edge in both pioneering research and groundbreaking innovation becomes imperative.

Embracing this significance, the Government of India earmarked the period from 2010 to 2020 as the

"Decade of Innovation," underscoring the pivotal role that innovation assumes within governance. Creativity inherently resides within children, with each possessing a unique degree of this innate trait. While its manifestation might vary, the fundamental essence remains constant. Fostering the originality, creativity, and innovative spirit of our youth holds intrinsic value, particularly as they ascend to positions of leadership within our society. This investment ensures an inventive, comprehensive, and innovative trajectory for the nation's future.

Enabling inclusive development within society mandates that children are offered opportunities that kindle a resistance to complacency while instilling a penchant for pioneering problem-solving methodologies. Among a nation's most invaluable assets are imaginative, enterprising, and creative children. Equipping them with "Hamdardi" (empathy), "Tekhleeqi Salahiyet" (creativity), and "Ishtiraqi" (collaboration) primes them to become commendable citizens not solely of India but also of the global community.

In line with these principles, the Department of Science and Technology (DST) and the National Innovation Foundation (NIF) are embarking on a reinvigorated implementation of the INSPIRE Award-MANAK initiative, harmonizing it with the strategic roadmap of the "Start-up India" program championed by the Prime Minister of India. This collective undertaking presents an opportunity for all states and the Union Territory of Jammu and Kashmir to accelerate their efforts, utilizing the time until September 2023, in order to catch up with the leading states in the 2023-2024 edition of the INSPIRE Awards-MANAK.

This scheme is being implemented in the following steps:

* Awareness and competency among district, state, and school-level officials nationwide were heightened through regional workshops, utilization of audio-visual

aids, and distribution of informative literature. Organizing internal idea competitions in schools, and online nominations of two to three best original ideas in any Indian language by the respective Principal/Headmaster via the E-MIAS (E-Management of INSPIRE Awards MANAK Scheme) portal. The schools must register on the E-MIAS portal.

* The National Innovation Foundation (NIF) will select the foremost 100,000 (one lakh) ideas/innovations with the capability to cater to societal requirements through science and technology. The INSPIRE Award, carrying an INR 10,000 grant, will be seamlessly disbursed to the bank accounts of the chosen students via the Direct Benefit Transfer (DBT) mechanism, enabling their participation in the District Level Exhibition and Project Competitions (DLEPC).

* District and State Governments organise the DLEPC, and the top 10,000 ideas/innovations are chosen out of 100,000 for State Level Exhibition and Project Competitions (SLEPC).

* Following the State Level Exhibition and Project Competitions (SLEPC), a refined selection process identifies the premier 1,000 ideas/innovations from the initial 10,000 entries, propelling them forward to the prestigious National Level Exhibition and Project Competition (NLEPC). In this crucial phase, the National Innovation Foundation (NIF) takes on the role of providing indispensable mentorship to students, fostering the development of prototypes through collaboration with esteemed academic and technological institutions nationwide. It is pertinent to note that the evaluation criteria encompass the uniqueness, societal relevance, environmental sustainability, user-friendliness, and comparative advantage in relation to prevailing, analogous technologies. Now, at the NLEPC,

1,000 of the best ideas/innovations were displayed, and the top 60 innovations out of 1,000 will be shortlisted for national awards and future direction.

In the fiscal year 2021-22, an inclusive cohort of 52,720 students hailing from various corners of the nation earned their way into the prestigious INSPIRE Awards-MANAK. Notably, the award sum of INR 10,000 has been seamlessly disbursed to their designated bank accounts via the Public Financial Management System.

In the Union Territory of Jammu and Kashmir, a pool of approximately 1000 students with 1000 distinct ideas, presented as projects or models, entered the arena of the DLEPC for the INSPIRE Awards-MANAK 2021-22, hailing exclusively from the Kashmir Division. Following rigorous evaluation, this number was meticulously whittled down to a select 95 students, each with a unique idea, who then progressed to compete at the SLEPC stage of the INSPIRE Awards-MANAK 2021-22. Out of this group, the cream of the crop - 11 students emerged as finalists for the NLEPC. Meanwhile, the Jammu Division contributed six compelling ideas to the NLEPC roster. In total, the Union Territory of Jammu and Kashmir will be represented by 17 aspiring students in the forthcoming 10th NLEPC, scheduled to convene in New Delhi coming November 2023.

The SLEPC phase was orchestrated by the Department of Education in Science and Mathematics, SCERT, Jammu and Kashmir. This event unfolded on January 2, 2023, within the Kashmir Division at the Bemina Srinagar complex. Subsequently, on January 3, 2023, a parallel exhibition took place in the Jammu Division. Noteworthy dignitaries graced the Kashmir Division event, including Dr. Tasaduq Hussain Mir, Director School Education, Kashmir, who held the mantle of chief guest. Accompanying him were Fayaz Ahmad Fayaz, JD Center Office, SCERT, J&K, in the role of a special guest, and MohdSha-

reefDeedhar, Joint Director, SCERT-KD, who presided over the inaugural ceremony. Similarly, the Jammu Division proceedings were inaugurated by Dr. Ravi Shanker Sharma, Director School Education, Jammu, alongside Iftikhar Hussain Chauhan, Director Finance, School Education Department, J&K.

Indisputably, the New Education Policy (NEP) of 2020 sets forth the intention to nurture creativity and critical thinking among children, with the ultimate aim of fostering innovation and sound decision-making skills. This particular facet of the NEP aligns seamlessly with the ethos of the INSPIRE Awards-MANAK. Hence, an ongoing focus on nurturing innovation among school students remains paramount, given the pivotal role that science and technology-based ideas and innovations can play in steering individuals out of crises and propelling the nation towards self-sufficiency.

In this vein, the State Council of Educational Research and Training (SCERT) in Jammu and Kashmir has forged a partnership with the Department of Science and Technology (DST) and the National Innovation Foundation (NIF). This collaboration is dedicated to harnessing the moment and urging our students to channel their creative energies, thereby fostering a prolific outpouring of innovative ideas. As the Nodal Officer for the Kashmir Division of the INSPIRE Awards-MANAK, I extend a heartfelt encouragement to parents, educators, and institutions not yet partaking in this initiative. Joining the movement to actively engage students in contributing their ideas and innovations through their schools is a significant stride towards realizing the tenets of the NEP-2020. Moreover, it stands as an embodiment of our nation's economic interests at large, and specifically resonates with the aspirations of the Union Territory of Jammu and Kashmir.

(The author is Academic Officer, SCERT Jammu Division JKUT)