

INSPIRE-MANAK

Cultivating a Culture of Innovation Among Youth

As the Indian economy is rapidly shifting towards technology-driven industries, nurturing proficiency in Science, Technology, Engineering, and Mathematics (STEM) is essential. Research underscores that in a person's life, the roots of curiosity towards science are planted in early childhood, and needs nurturing as formal education advances. As India endeavours to prepare its future workforce, investing in STEM education in the middle-school level emerges as a critical strategy. This not only cultivates critical thinking and problem-solving abilities but also nurtures creativity and innovation.

In the year 2008, recognising the innovative potential of young minds, the Department of Science and Technology (DST), Govt. of India, launched the INSPIRE programme (Innovation in Science Pursuit for Inspired Research) under the umbrella scheme titled "Scheme for Early Attraction of Talents for Science" (SEATS) programme. The INSPIRE Awards scheme was the first component of INSPIRE programme and aimed to motivate students in the age group of 10-15 years and studying in classes 6 to 10 to become future innovators and critical thinkers.

In 2016, INSPIRE Awards scheme was revamped as INSPIRE-MANAK (Million Minds Augmenting National Aspiration and Knowledge) and aligned with "Start-up India" initiative. INSPIRE-MANAK is jointly executed by the DST and National Innovation Foundation - India (NIF), an autonomous institution of DST.

Objectives

- Fostering a culture of



innovation and creative thinking among school students.

- Attracting young students to study science and pursue research career thereby building the critical human resource and expanding the R & D base of the country.
- Addressing the societal needs through science and technology based ideas/innovations of students.

Method of Execution

1. **Scouting Ideas:** The scheme aims to scout one million original ideas/innovations rooted in science and societal applications from school children aged 10-15 years. These ideas are sourced from students studying in classes 6 to 10 in recognised schools, regardless of their affiliation (government or private, aided or unaided).

2. **Monetary Support:** Each selected student receives monetary support of Rs. 10,000/- through Direct Benefit Transfer (DBT) for prototype development.

3. **Shortlisting and Selection:** Ideas are shortlisted

based on their originality and potential societal impact. Among these, one lakh ideas are identified for monetary support and selection at district, state, and/or national levels.

4. **Value Addition:** A few thousand ideas are selected for further value addition, providing innovators with opportunities to compete and advance based on the inherent merit of their ideas.

5. **Exhibitions and Competitions:** District, state, and national level exhibitions and projects competitions are organised, providing students with the opportunity to showcase their prototypes, interact with peers, and learn from each other's experiences.

6. **Mentoring and Incubation:** Selected students at the national level receive mentoring support from reputed technological institutions such as IITs and NITs. Additionally, 60 ideas/innovations are selected for incubation support, including patenting, value addition, and product development, linking them with other schemes of DST/NIF.

7. **Recognition and Opportunities:** The top 60 winners are provided with the opportunity to participate in the Festival of Innovation and Entrepreneurship (FINE) at Rashtrapati Bhavan and other national and international platforms, fostering their growth as innovation leaders.

Notable Achievements of INSPIRE-MANAK

- **Bonus Points for Admission at IIT, New Delhi:** Students who receive a gold, silver, bronze, or consolation award at the National Level Exhibition and Project Competition (NLEPC) earn an additional 3.5 points for

INTERVIEW

Dr. Arvind C. Ranade
Director, National Innovation
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What social impact does the INSPIRE-MANAK scheme have?

The INSPIRE-MANAK scheme significantly contributes to fostering innovative and creative thinking among students from an early age. It's important to note that INSPIRE-MANAK serves as more than just an award; it's a platform for felicitation and recognition. The ideas submitted through INSPIRE-MANAK reflect the proactive approach of today's youth in identifying societal challenges and proposing innovative solutions, providing valuable guidance for researchers. For instance, the development of a mobile garbage collection device, inspired by the challenges of the Swachh Bharat Abhiyan, illustrates how these ideas address pressing social issues in India and pave the way for impactful solutions.

What are some significant milestones and achievements of the INSPIRE-MANAK scheme?

Over the past eight years, the INSPIRE-MANAK scheme has made remarkable strides in reaching even the most remote areas of the country, ensuring widespread participation and igniting a fervour for science and innovation among young students. The scheme has witnessed a substantial increase in participation, growing from 1,44,165 students in selected geographies during FY 2016-17 to an impressive 8,54,553 students across all states and Union Territories in FY 2023-24. Furthermore, the scheme has nurtured a culture of innovation, leading to a notable surge in patent filings-218 patents have been filed by NIF in the names of young innovators over the past eight years.

admission to the Indraprastha Institute of Information Technology (IIIT), New Delhi.

• **Pradhan Mantri Rashtriya Bal Puraskar:** Ayush Ranjan, a young innovator from Sikkim, emerged victorious at the 7th NLEPC of INSPIRE MANAK held at IIT, Delhi, in February 2019. His remarkable achievements led to him being honoured with the Pradhan Mantri Rashtriya Bal Puraskar 2021.

• **International Recognition for INSPIRE-MANAK Winners:** Winners from the INSPIRE-MANAK NLEPCs showcased

their innovations at the annual ASEAN- India Grassroots Innovation Forums. Notably, Pranjal Srivastava secured the top prize at the 2nd ASEAN India Grassroots Innovation Forum 2019, while Aanchal Aggarwal won the 3rd prize at the 4th ASEAN India Grassroots Innovation Forum for her idea "Parkinson Lathi".

Future Roadmap

The journey of innovation in India, particularly at the grassroots level, has been remarkable. Over the past eight

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INSPIRE-MANAK 10th National Level Exhibition and Project Competition (October 2023)



Prof. Abhay Karandikar, Secretary, DST, observing an innovation of a student

Patents Granted So Far

Sr. No.	Innovator Name	Innovation Title	State/UT	Patent No.
1	Arfath Hafizulla Shaikh	A CNC Printer	Goa	459639
2	Pawar Ashaben Sitarambhai	A Mechanised Sewage Cleaning Apparatus	Gujarat	510036
3	Kiran Kumari	Alarming System for Bridges and Method Thereof	Jharkhand	498590
4	Madhu Manjunath Naik	Fuel Free Boat	Karnataka	384849
5	Anushri N	An Eco-Friendly Agricultural Tool	Karnataka	517608
6	Pukhrambam Dayananda Singh	A Stick for The Blind	Manipur	507452
7	Pragnya Paramita Nayak	Smart Reading Table and Its Method of Operation	Odisha	481352
8	Akanksha Samal	Biodegradable Polyester and Its Method Thereof	Odisha	405548
9	Pritesh Deb	Water Dispenser for Handicapped Person	Odisha	425742
10	Ayush Ranjan	System And Method For Secure Online Garbage Bill Payment	Sikkim	519965
11	Marripelli Abhishek	Grain/ Paddy Filling Machine	Telangana	453966
12	Pranjal Srivastava	A Thermo Electric Stove Generator	Uttar Pradesh	475855
13	Sikanto Mandal	Mobile Garbage Collecting Device	Uttar Pradesh	520049
14	Neeraj Kumar	Automatic Water Tank	Uttarakhand	496027
15	Dharmendra Singh	A Sand Filtration Machine	Uttarakhand	466647
16	Shailendra Singh Devra	A Floor Cleaning Apparatus With Automatic Liquid Dispenser	Rajasthan	525638

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years, the Department of Science and Technology (DST) and the National Innovation Foundation (NIF) have diligently worked towards recognising, nurturing, and celebrating creativity and innovation at all levels. Moving forward, the INSPIRE-MANAK scheme is committed to:

- Enrolling ideas/ innovations from the remotest corners of the country.
- Enhancing the quality of ideas through innovative learning techniques.
- Engaging teachers in identifying young creative geniuses early in their lives.
- Incorporating technological tools to streamline the evaluation and incubation processes.

The future direction of the scheme emphasises inclusivity, with a focus on untapped domains and idea-to-product

conversion. INSPIRE-MANAK aims to contribute meaningfully to society, the environment, and the nation by fostering innovation and nurturing talent. It aspires to be the catalyst for change, success, and innovation, harnessing the curiosity and persistence of children to address society's unmet challenges.

As INSPIRE- MANAK continues to evolve, it remains steadfast in its mission to promote innovation and talent across India. With each passing year, it unfolds new stories of change and success, driven by the boundless creativity and enthusiasm of our youth. INSPIRE-MANAK stands as a beacon of hope, paving the way for a brighter and more innovative future for the nation.

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