ISPF

Innovation & Science Promotion Foundation

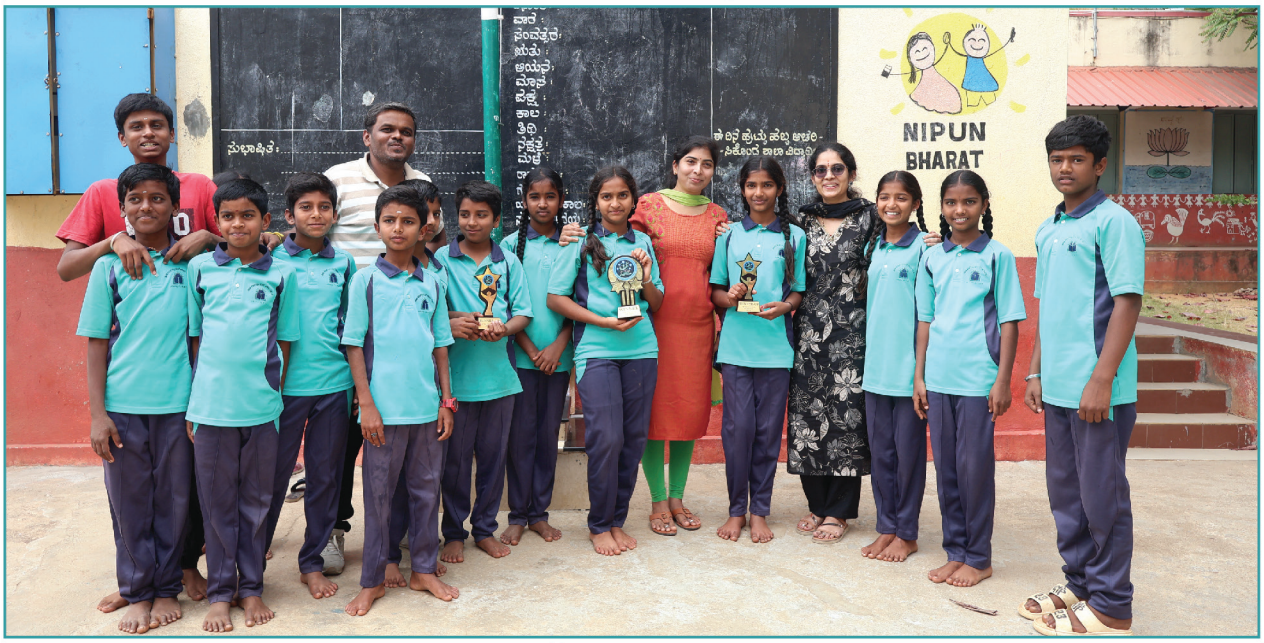
Annual Report 2025-26

Hands-on science and STEM learning in government schools across nine cities

Innovation and Science Promotion Foundation






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Foreword

A note from the Managing Trustee

In 2025-26, ISPF's work reached a scale we had not reached before. With Siemens, Project Jigyaasa ran in government schools across nine cities in seven states. In Bengaluru, Chennai, Gurugram and Noida alone, it reached 13,303 children.

The programme also grew in depth. Children in STEM (science, technology, engineering and mathematics) clubs mapped the ecology of their neighbourhoods, studied the night sky, learned to code and to design in professional engineering software, and built working solutions to problems in their own schools and homes. In Bengaluru, Chennai and Gurugram, assessments that tracked children's competencies from the previous year showed improvement across most areas, with the strongest gains in observation and reasoning.

With the support of Altius, we also piloted an approach to identifying high-potential learners through hands-on activities. The written test showed no measurable overall gain, even though our facilitators observed children explaining and extending concepts with real insight. We report this openly, because it has taught us how talent identification must be designed: with clear roles for teachers, assessment in local languages, and timing away from examinations.

I thank Siemens and Altius for their partnership, the Siemens employees who gave their time as volunteers, and the teachers, school leaders and field teams whose commitment made this year possible.

Ravi Rangan
Managing Trustee, Innovation and Science Promotion Foundation

The Year at a Glance

Reach and activity of ISPF's work in 2025-26

Project Jigyaasa ran in nine cities across seven states this year, alongside a pilot to identify high-potential learners.

9
cities across seven states

100+
government schools in Project Jigyaasa

13,303
children reached in Bengaluru, Chennai, Gurugram and Noida alone

4,000+
children built solutions in school innovation challenges

770+
children competed at city hackathons

4,000+
children received career guidance

1,600+
learners in 43 STEM clubs in Bengaluru, Chennai, Gurugram and Noida

230+
volunteer and mentor engagements with children

16
3D printers installed in Mumbai, Navi Mumbai, Thane and Goa

Project Jigyaasa

Supported by Siemens | Nine cities across seven states

Project Jigyaasa is Siemens' long-running STEM education initiative for government schools, with ISPF as technical and implementation partner. This year the programme ran in Bengaluru, Chennai, Gurugram and Noida, and in Mumbai, Navi Mumbai, Thane, Goa and Kolkata. It took children well beyond classroom activities, into their environment, the night sky, digital design and solving real problems.

What We Did

1. **STEM clubs:** Learner-led, multi-grade clubs met regularly with STEM coaches, and in Bengaluru, Chennai, Gurugram and Noida attendance stayed above 90% through the year.
2. **Beyond the textbook:** Children mapped local trees and lakes, identified birds, audited their school's water and waste, studied the solar system and moon phases, and tried robotics in selected schools.
3. **Exposure visits:** In Goa, children visited a polar and ocean research centre, the state science centre and an engineering college.
4. **Digital skills:** Children learned computer and office skills, Siemens' Solid Edge design software and self-paced coding, and schools received computers and 3D printers.
5. **Teachers:** In Navi Mumbai, 40 teachers from 20 schools were trained in inquiry-based learning, and coaches in other cities introduced teachers to free, low-cost experiment resources.
6. **Career guidance:** Older children attended career sessions and fairs, with take-home handouts in Kannada, Tamil, Hindi and other regional languages covering academic and vocational pathways.
7. **Innovation challenges:** Teams identified local problems and built working models at school level, and winners went on to city hackathons to design train wheels and rubber-band cars against the clock.
8. **Volunteers:** Siemens employees led National Engineer's Day and National Energy Conservation Day sessions, mentored teams and judged hackathons.

Impact

1. **Competencies grew.** In Bengaluru, Chennai and Gurugram, an assessment that tracked children's competencies from the previous year showed improvement across most competencies and grades, with the strongest gains in observation and reasoning.
2. **Learning gaps became clearer.** New baselines showed a dip in Grade VII and continued difficulty with higher-order reasoning in the upper grades, which now shapes how coaches plan for those grades.
3. **Children applied science to real problems.** Innovation challenges produced solutions to local issues, from flood alerts and waste segregation to water reuse and safer tools for manual work.
4. **Children led their peers.** Club members ran their own sessions to help classmates with computers and design software, and some went on to lead activities in their own classrooms.
5. **Schools asked for more.** Principals who had worked with the programme asked for it to be extended to the new schools they moved to.

FROM THE FIELD

A Better Way to Reach the Tap

At one Bengaluru school, children had to bend low to reach a water outlet on the compound wall to wash their hands and plates. A Grade 8 girl assumed only experts could fix it. Then, at a National Engineer's Day session led by Siemens volunteers, she saw a working hand pump model. She adapted the principle to design a setup that made water easier to reach, and in doing so she came to see that she could solve problems in her own school.

Identifying High-Potential Learners

A pilot with Altius, testing how hands-on activities reveal talent

Many capable children in government schools go unnoticed, because schools have few ways to recognise exceptional promise. In early 2026, ISPF piloted an approach in which children in Grades 6 to 9 show their potential through hands-on science and mathematics activities, and teachers nominate them based on what they observe. The schools included Jawahar Navodaya Vidyalayas, Eklavya Model Residential Schools and Sainik Schools.

What We Did

1. **Bootcamps:** ISPF facilitators ran two hands-on sessions per grade in each school, linked to the national curriculum.
2. **Independent exploration:** Children were asked to extend their work and repeat the making-and-exploring process with two further activities, while teachers observed them.
3. **Measurement:** In a sample of four schools, children took a short written test before and after the programme, to see whether their understanding of concepts had changed.

What We Found

1. **The written test showed no measurable overall gain.** Children improved on questions that tested understanding, but not on questions that asked them to apply or analyse.
2. **Facilitators saw a different picture.** Children explained concepts such as force, respiration and separating mixtures in their own words, extended activities on their own initiative and linked them to things they had seen outside school.
3. **The conditions were difficult.** The pilot ran during exam season, the independent phase was only partly completed in several schools, and the test was in English, which many children in rural and tribal schools found hard to read.

What We Learned

Challenges from the year and how we are responding

The year tested us across both programmes, and the lessons are shaping our next steps.

1. **School calendars and permissions set the pace.** Exams, closures and delayed approvals affected activities in several cities and compressed the pilot into exam season, so we will align milestones with school calendars and seek approvals earlier.
2. **Learning becomes uneven in the upper grades.** Children manage familiar tasks well but struggle more as questions demand reasoning and transfer, so we will give more focused support in Grades VII to IX.
3. **Teachers need clear roles and ongoing support.** Where teachers were unsure what was expected, independent work faltered, so we will begin with hands-on teacher orientation and regular follow-up.

4. **A short written test cannot capture everything.** Tests in Marathi and Bengali helped this year, and we will combine local-language tests with observation and children's own explanations.
5. **Infrastructure needs follow-through.** Delays in computer, internet and power set-up held back digital sessions in some schools, so we will agree firmer timelines with suppliers and schools.
6. **Enthusiasm must outlast events.** Children were most energised at challenges and fairs, so we will build steady follow-up through clubs and child-led activities.

Looking Ahead

Priorities for 2026-27

ISPF will build on this year in four ways.

1. **Deeper learning:** more time for making, observing and discussing, rather than covering more activities.
2. **Stronger teacher partnership:** clearer roles, hands-on orientation and regular follow-up.
3. **Better evidence:** mixed-method assessment in local languages, timed away from exam periods.
4. **Reach:** extending hands-on learning and talent identification to more schools and states.

Our Partners

With thanks to the organisations that made this year possible

Our work in 2025-26 was made possible by our partners.

1. **Siemens**, whose Project Jigyaasa has supported STEM learning in government schools for many years, together with the Siemens employees who volunteered their time.
2. **Altius**, which supported the pilot to identify high-potential learners.