Vigyan Shaala
COMMUNITY • SCIENCE

2019-2024

PROGRESS REPORT

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ABOUT US

1.1 INTRODUCTION

Unlocking the Power of STEM Education for Women Empowerment, Rural Upliftment, and Societal Development

Dear Partners, Supporters, and Friends,

We are delighted to present the Vigyan Shaala Progress Report 2019-2023, a testament to our unwavering commitment to STEM education and societal transformation.

With an emphasis on STEM (Science, Technology, Engineering, and Mathematics) education, we believe in creating opportunities that pave the way for brighter futures for the youth, particularly those in rural areas, and we are determined to bridge the gender gap in the STEM fields. This report showcases our journey, achievements, and the transformative impact of our programs on the lives of thousands of students across the length and breadth of India.

Being scientists ourselves, we have witnessed the transformative impact of STEM education first-hand. Our experiences have further strengthened our belief that quality STEM education is not just an academic pursuit, but rather a catalyst for individual and societal development. In a rapidly evolving world, a strong understanding of elemental concepts, problem-solving abilities, critical thinking skills, and the temperament to create and innovate are not only essential for personal and professional growth, but also for addressing complex societal challenges.

One of our most significant achievements is the progress we are making in closing the gender gap in STEM fields. Historically, women have been underrepresented in STEM careers. To tackle this, we have implemented strategic, data-driven programs to increase female representation in STEM fields. By encouraging and supporting female students, we are challenging gender stereotypes and dismantling age-old barriers.

As a testament to our efforts, we have witnessed an increase in the number of young women showcasing an interest in pursuing careers in a wide range of STEM fields, from 3D printing to computer science to biotechnology.

In the coming years, we aim to positively impact the lives of millions of students in India by providing more opportunities for rural and marginalized students, access to well-equipped laboratories in several locations, and more support for female students interested in pursuing STEM careers. Together, we will continue to make a difference as our hearts and minds are aligned to enable the youth of today to build a better world for themselves.

Thank you,
Team VigyanShaala

1.2 MESSAGE FROM OUR FOUNDERS

Dr. Darshana Joshi,
Founder and CEO

I am a daughter of an electrician and a homemaker from one of the most remote areas in India. I am also a first-generation learner and a PhD in Physics from the University of Cambridge. My journey from a Delhi government school to a doctorate at one of the world's leading universities was made possible thanks to the support of my mentors, teachers and the Udayan Shalini Fellowship, a program nurturing ambitious girls from low-income families in India.

I believe education, in particular STEM education, has the power to transform communities. It is a great enabler that has empowered me to break many social barriers and inspire those around me.

The mission of my life is to empower youth from the most marginalized backgrounds with STEM education and 21st century skills. This is why, through VigyanShaala, I am proud to be building a community of innovators from the most marginalized backgrounds, who will collaborate and co-create solutions to the world's greatest challenges. Come be part of this inspiring tribe that will shape the future of humanity with STEM!

1.2 MESSAGE FROM OUR FOUNDERS

Dr. Vijay Venugopalan,
Founder and COO

I believe all human beings deserve a chance to shape their lives and find solutions to their own challenges. I believe that only by lighting the spark of innovation and tech-independence in communities, will the dream of a truly 21st century independent and empowered citizen be realized. In short, the answer to solving the billions of problems faced by millions of marginalized Indians is in using modern Science and Technology.

My dream is that every city, town, and village should have spaces for STEM that are accessible to all. Individuals who come together to find solutions to their challenges always bring about local innovation. In my eyes, the fields of science and technology are the ones that can be most readily democratized.

I build bridges; bringing high-quality mentoring from willing experts to the marginalized youth of India. At VigyanShaala, youth create and own their own spaces of technology and research. These skilled and empowered youth become community leaders who drive innovation and scientific temperament forward locally. I empower communities to lead technologically independent dignified lives. Would you like to join this radical, rational movement?

1.3 WHO WE ARE

At Vigyan Shaala, we strive to make STEM accessible to marginalized communities across the length and breadth of India.

All our efforts are rooted in the belief that everyone, irrespective of their background, economic status, gender, or ethnicity, deserves the opportunity to create a better world for themselves, their families, and their communities through science.

1.3.1 OUR FOCUS AREAS

Increasing female participation in STEM

Women make up a small part of the STEM workforce in India. Through Kalpana, our virtual mentorship program geared towards women, we aim to build a community of 1 million aspiring girls in STEM by 2030, mentor 300,000+ girls, and establish Kalpana Chapters in 3,000+ colleges.

Practical STEM Education

Most youth in India never get the chance to perform hands-on science experiments in their whole academic journey. To tackle this, under the STEM Champions program, we have set up community labs in remote areas, to make practical scientific education accessible to students.

Expert Mentoring

Marginalized youth lack the local role models and mentorship needed to thrive in scientific pursuits. Our network of 200+ global mentors enables us to make quality STEM education accessible to all and provide expert guidance on emerging career opportunities in STEM.

1.3.2 SNAPSHOT OF OUR IMPACT

200,000+ mentoring hours facilitated

15,000+ students engaged with hands-on STEM

250+ mentors and STEM leaders from 10 countries

3 rural innovation spaces set up

6,000+ Kalpana fellows from 22 states

150 rural STEM champion fellows

200+ hands-on STEM workshops

100+ frugal research projects

Imagine a world where the 230 million youth of India can become innovators

1.4 MISSION AND VISION

MISSION

Enabling the innovators of tomorrow to achieve their dreams by bringing science, technology, and learning to their doorstep today.

VISION

Giving everyone, irrespective of their background, the opportunity to create a better world through science.

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OUR PROGRAMS

2.1 CURRENT PROGRAMS

Being scientists ourselves and using our years of dedicated research into the STEM sector, we have been able to pinpoint the critical problems affecting STEM education in India and other parts of the developing world. To tackle these issues, we have designed data-driven solutions that make access to quality STEM education free, engaging, and accessible to marginalized communities. To achieve this, we have implemented the following two-pronged approach:

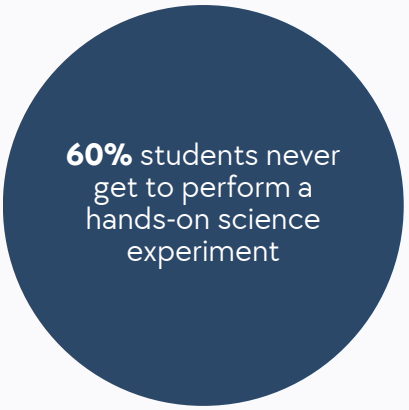
Kalpana - She for STEM

- **Challenge Identified:** Gender gap
- **Target Student Population:** Female students across India.

- **Program Objective:** Creating a framework for encouraging women to pursue careers in STEM, providing them with expert mentorship, and ensuring equal opportunities for women in science.
- **Mode of Learning:** Online
- **Targeted Outcome:** Build a community of 1 million aspiring girls in STEM by 2030, mentor 300,000+ girls, establish Kalpana Chapters in 3,000+ colleges, and boost female innovation, productivity, and pathways to higher education and careers in STEM

STEM Champions

- **Challenge Identified:** Rural opportunity gap
- **Target Student Population:** Youth in rural and remote areas from low-income and marginalized backgrounds



- **Program Objective:** Setting up guide-managed physical laboratories in rural areas, which are equipped an Internet connection, advanced materials and resources, and all the necessary programs for enabling experiential and project-based learning
- **Mode of Learning:** Physical/project-based
- **Targeted Outcome:** Students cannot excel in the STEM field if their school/college laboratories do not have the requisite infrastructure to enable them to perform scientific experiments. The well-equipped laboratories set up under the STEM Champions program solve this problem by bringing science to remote areas where it has never been available before

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KALPANA - SHE FOR STEM

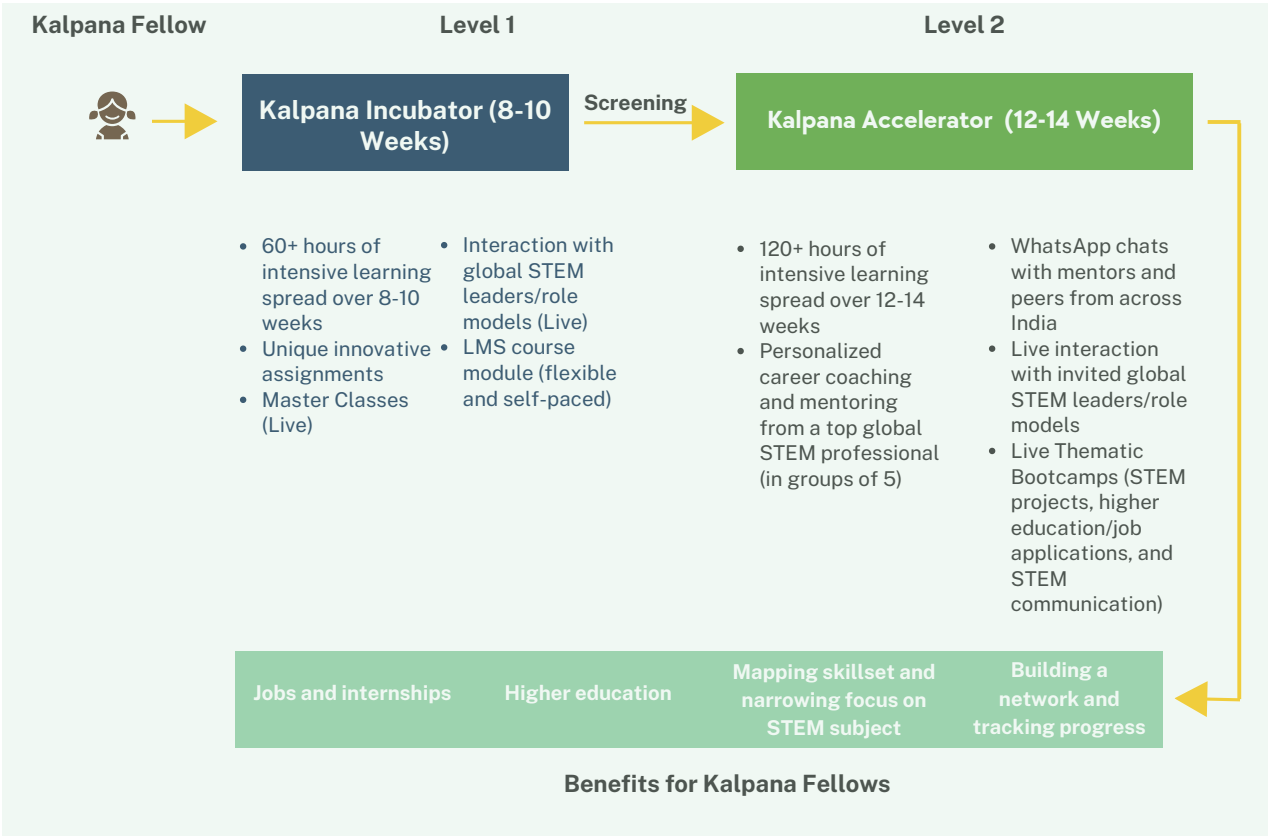
2.1.1 KALPANA - SHE FOR STEM

As per estimates from the World Economic Forum, more than 80% of future jobs will require advanced STEM skills. These include critical thinking, problem solving, hands-on experimental skills, advanced data analytics, and mathematical and logical reasoning, among others. However, the opportunities are simply not available for everyone.

In India, women make up less than 15% of the STEM workforce. This is despite women having one of the highest percentage of enrolments (45%) in STEM at the undergraduate level. This signifies that every two out of three girls who study STEM do not make it to the STEM workforce.

The Kalpana - She for STEM program is named after Kalpana Chawla, the first Indian-origin woman to go into space. Kalpana was born in Karnal, Haryana, and defied all odds and gender stereotypes to become the first Indian-origin woman astronaut. Kalpana is a true inspiration to us all and her achievements are a testament to the capabilities of Indian women. Through the Kalpana - She for STEM program, we intend to hone these capabilities by investing in building the STEM capabilities of Indian women and unearthing many more Kalpana Chawlas.

2.1.1.1 Kalpana - She for STEM Model



2.1.1.2 Kalpana - She for STEM Approach

The Kalpana Fellowship is a mentoring and career development fellowship designed to successfully place every Kalpana fellow on a high-confidence STEM path. It is a two-level fellowship comprising the Kalpana Incubator and Kalpana Accelerator. Our state-of-the-art mentoring curriculum is designed and delivered by global scientists and STEM professionals.

The Kalpana Fellowship program is for all enthusiastic and bright female undergraduates in STEM fields. The three key pillars we look for in a Kalpana Fellow are Ambition, Commitment, and Talent (ACT).

As Vigyan Shaala is a not-for-profit organization, this program is free for every girl with a family income below INR 3 lakh per annum. For girls with a higher family income bracket, about 95% of the program cost is subsidized.

2.1.1.3 Program Highlights

01 Personalized Mentoring from Experts

Our personalized mentoring curriculum focuses on strategic planning, individual development, self-efficacy, career vision and readiness, scientific temperament, and research-grade experimental projects

02 Academic Excellence

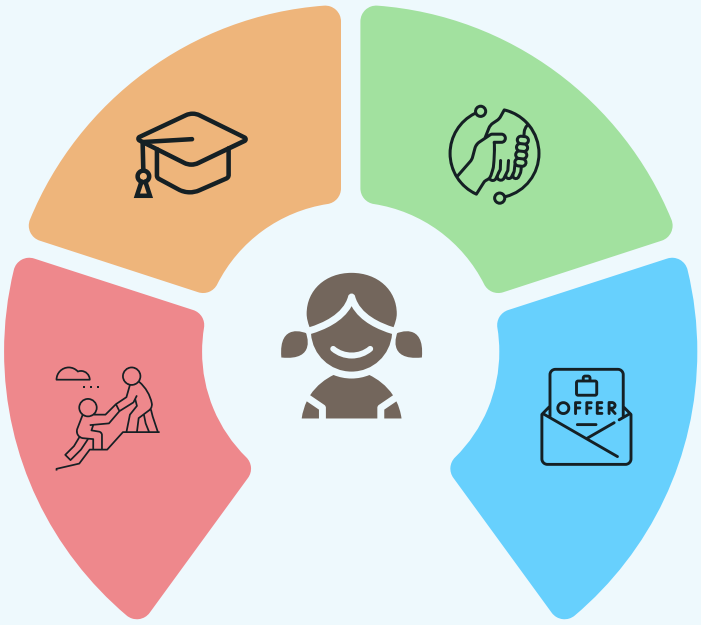
The experience and skills gained by our fellows set them on a high-confidence trajectory toward higher studies in STEM at leading global and national universities

03 Continued Support

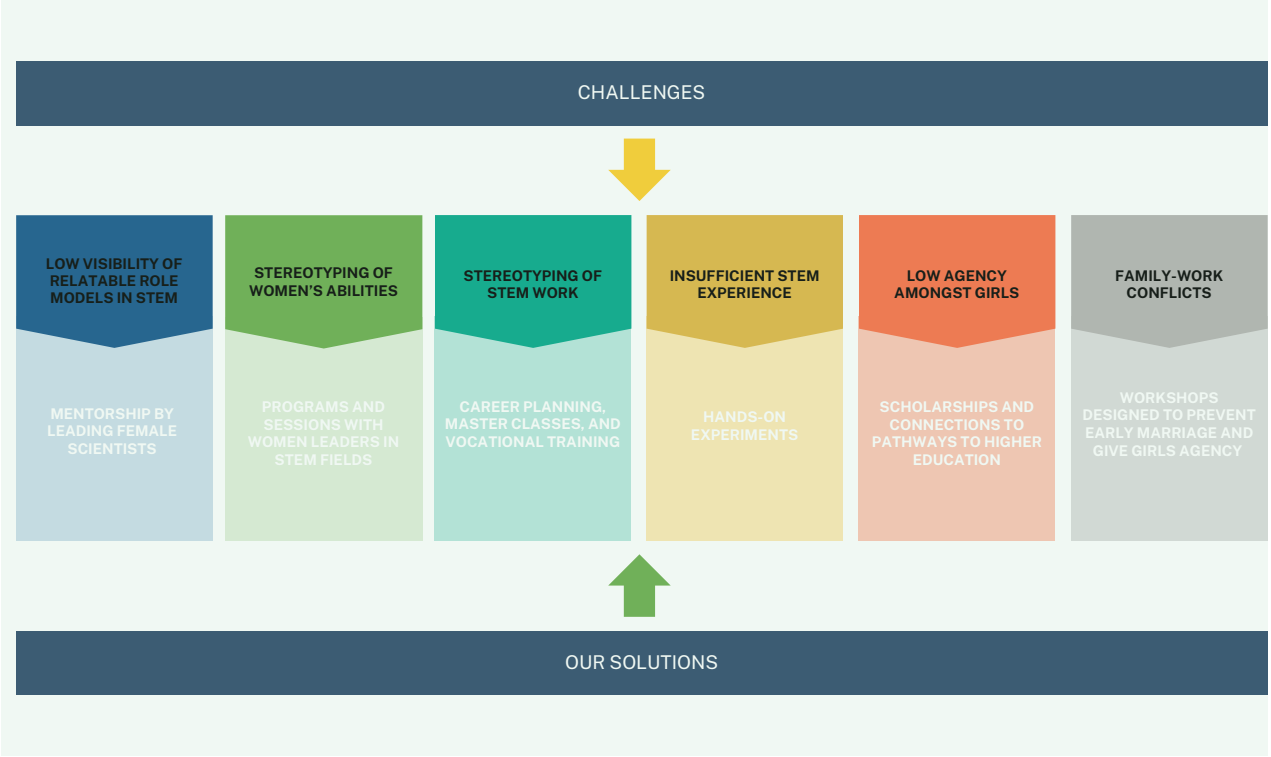
What's the best way to say in touch with your customers to not lose business? Yes! Send valuable tips!

04 Job-readiness

Our focus on intensive training, expert mentorship, and continued learning helps Kalpana fellows become subject-matter experts, which helps them in landing attractive jobs



2.1.1.4 Tackling Challenges Faced by Women in STEM



2.1.1.5 Program Structure

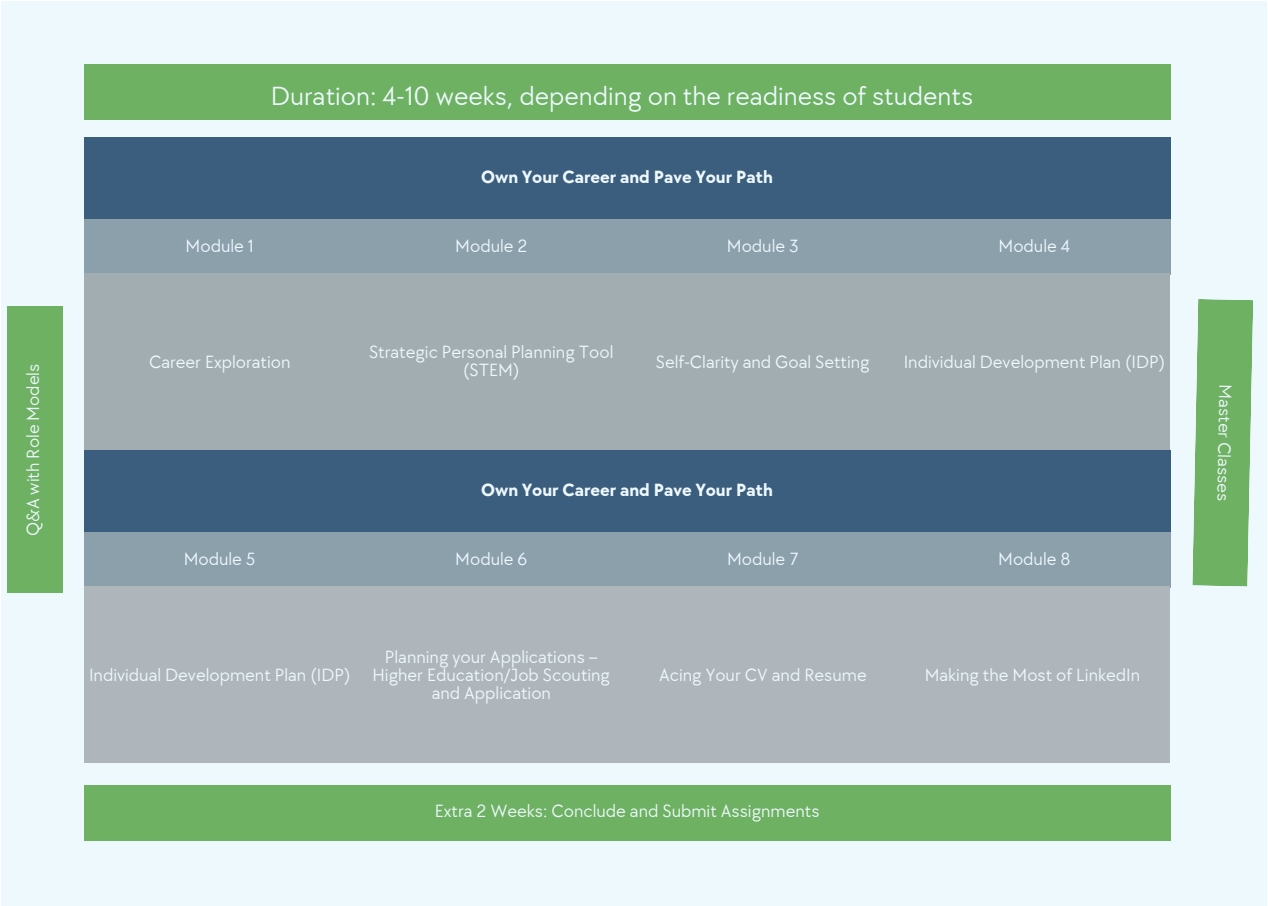
Level 1: The Kalpana Incubator (8-10 Weeks)

This program is focused on making our fellows job/higher-education-ready with 60+ hours of intensive learning spread over 8-10 weeks. Our unique, innovative assignments initiate deeper self-reflection and enable fellows to chart various careers paths and possibilities in STEM. At the end of the incubator, our fellows are able to take charge of their career paths with clarity, conviction, and confidence.

Highlights:

- Master classes (Live)
- Interaction with global STEM leaders/role models (Live)
- LMS course module (flexible and self-paced)
- Assignments (flexible and self-paced)

Incubator Modules



Level 2: The Kalpana Accelerator (12-14 Weeks)

The Kalpana Accelerator program includes 120+ hours of intensive learning spread over 12-14 weeks. This program is open to all fellows who have successfully completed the Kalpana Incubator. With personalized career coaching and mentoring from a top global STEM professional (in groups of 5), the Kalpana accelerator supports our fellows in narrowing a unique focus and following it with discipline.

Highlights:

- Live interaction with mentors in groups of 5 students each
- WhatsApp chats with mentors and peers from across India
- Live interaction with invited global STEM leaders/role models
- Live Thematic Bootcamps: STEM projects, higher education/job applications, and STEM communication

Accelerator Modules

Take Control of Your Education and Chart Your Path Toward Highly Rewarding STEM Careers			
Module 1	Module 2	Module 3	Module 4
Strategic Personal Planning Tool (STEM)	Individual Development Plan (IDP)	Individual Development Plan (IDP)	21st Century Skills: Communication
Own Your Career and Pave Your Path			
Module 5	Module 6	Module 7	Module 8
21st Century Skills: Creativity and Growth Mind-set	21st Century Skills: Critical Thinking	21st Century Skills: Collaboration	21st Century Skills: Problem Solving

Week 9-10 : Concluding Kalpana Online Modules and Assignments Submission

2.1.1.6 Prominent Mentors and Role Models

Jaya Jagadish

Country Head and Senior VP,
AMD India

Nivruti Rai

Country Head, Intel India
VP, Intel Corporation

Savi Sharma

VP Business Transformation,
SAP Americas

Neema Nair

Technical Director Engine
Business, Cummins India

Dr. Archana Sharma

Head Engagement Office,
CMS Experiment, CERN,
Geneva, Switzerland

Ruchi Varshneya

Divisional Vice President,
Global Marketing,
Abbott Rapid Diagnostics

Shobhana Narasimhan

Professor of Theoretical Physics,
JNCASR, Bangalore

Pratibha Jolly

PI GATI - A DST Project
Academic Consultant NAAC
Former Principal Miranda
House, University of Delhi

2.1.1.8 Program Growth and Trajectory

Launched in October 2020 by Prof. Ashutosh Sharma, Secretary Department of Science and Technology, Government of India, and Prof. Shobhana Narasimhan of JNCASR, the Kalpana program kicked off during the pandemic, amidst lockdowns. It involved a small group of 60 girls from 8 states in collaboration with the Udayan Shalini Fellowship of Udayan Care. With a team of volunteers spanning 10 countries and just 2 full-time members, we successfully conducted a thorough 10-week mentoring program delivering 100 hours of mentoring to each fellow.

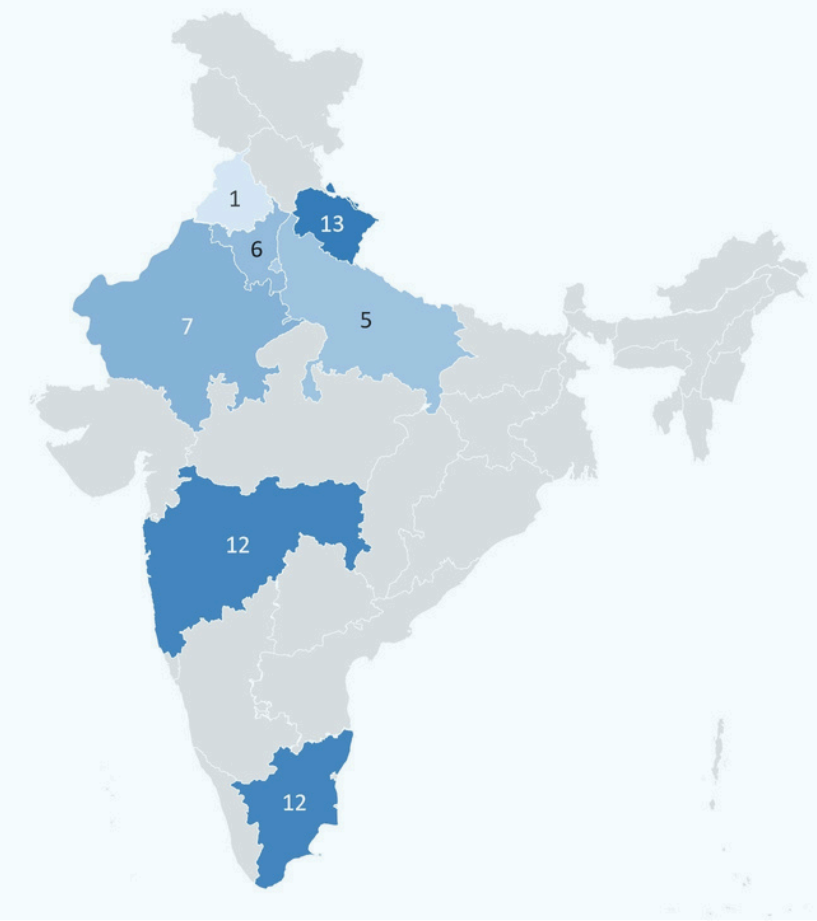
2020

Key Highlights

60
Total Enrollment

8
Number of States

29
Number of Districts



In consultation with our fellows and their mentors we reworked the program structure, delivery and included more hands-on elements via a project phase and launched the next edition of the program in May 2021. We received over 1000 applications but had just 100 slots, which we then doubled to incorporate many more deserving girls. This whooping demand got us thinking on how can we make our program more scalable and don't say no to any girl who needs our support and mentoring. Thus leading to the phase 3 of the program with a two stage scalable model.

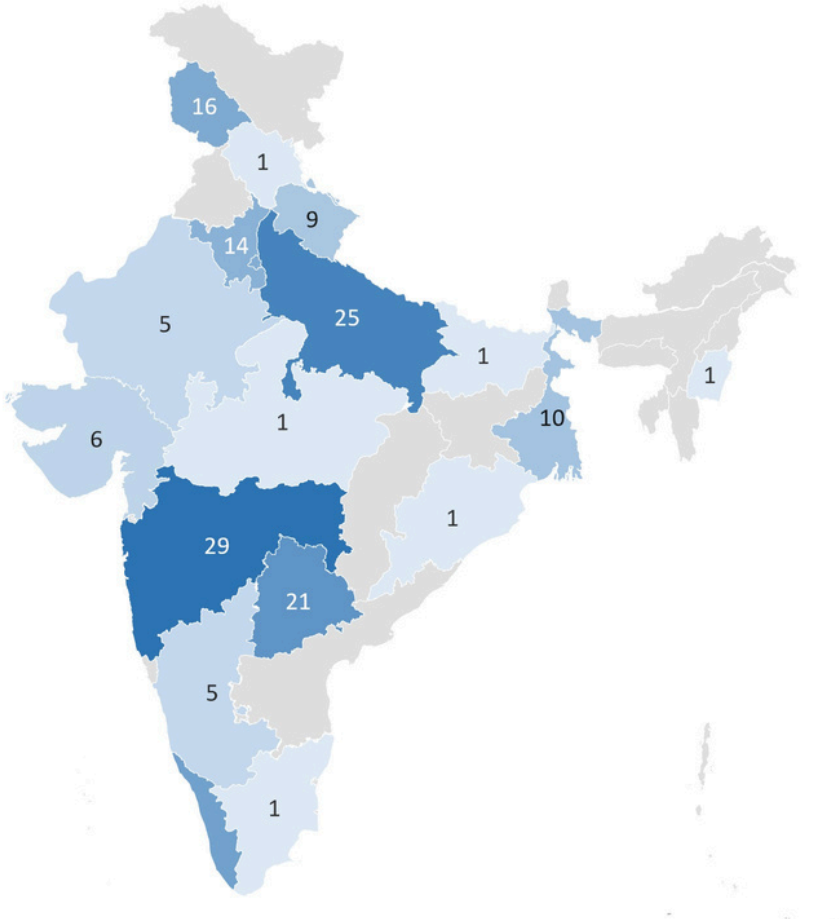
2021

Key Highlights

181
Total Enrollment

19
Number of States

113
Number of Districts



With a new design and delivery mechanisms in place, we launched the third iteration of Kalpana with a mission to reach 10,000 girls studying STEM programs by 2024. This mission was launched by the Principal Scientific Advisor to the Government of India, Prof. Ajay Sood, and Country Head Intel India and VP of Intel Foundry Services, Nivruti Rai, on July 9, 2022. This cohort reached 3000+ Girls in STEM from almost 20 different states in India and over 50+ International Girls in STEM from Zambia, Cameron, Nigeria, South Africa, Sri Lanka, Australia, and the Chez Republic.+ Girls in STEM from almost 20 different states in India and over 50+ International Girls in STEM from Zambia, Cameron, Nigeria, South Africa, Sri Lanka, Australia, and the Chez Republic.

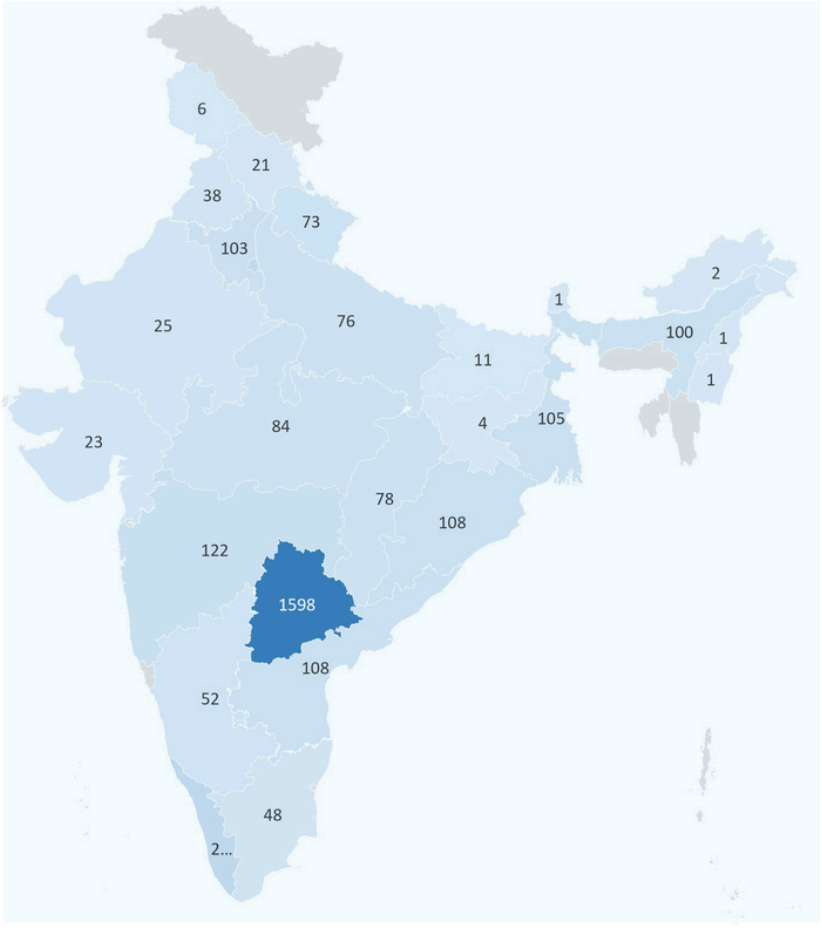
2022

Key Highlights

3,242
Total Enrollment

27
Number of States

233
Number of Districts



In 2023, VigyanShaala ventured into using the dual strategy of open-national cohorts, and state partnership programs for student acquisition, This ensured that girls from all segments of the society get a chance to do our program Kalpana and get the best tailored version for themselves. Our open national cohort is an all-online program, whereas, our state partnership programs include curricular intervention, and are based on a phygital model with a blend of offline and online intervention and delivery methods. We launched our first state partnership with the Telangana Social Welfare Residential Educational Institutions Society (TSWREIS), and Telangana Tribal Welfare Residential Educational Institutions Society (TTWREIS) for inclusion of our Kalpana program in the curriculum. These institutions serve the girls coming from the bottom of the pyramid communities of Telangana, from the historically marginalized communities of Scheduled Caste and Scheduled Tribes with annual incomes less than INR150,000. This phygital cohort delivered over 35,000 cumulative hours of mentoring, which has resulted in nearly 10,000 assignment submissions with two rounds of feedback each. A day-long finale event with 800+ girls participating in Hyderabad is being organised in April 2024. So, we are shaping aspirations of these women who would otherwise not have an entry into the door.

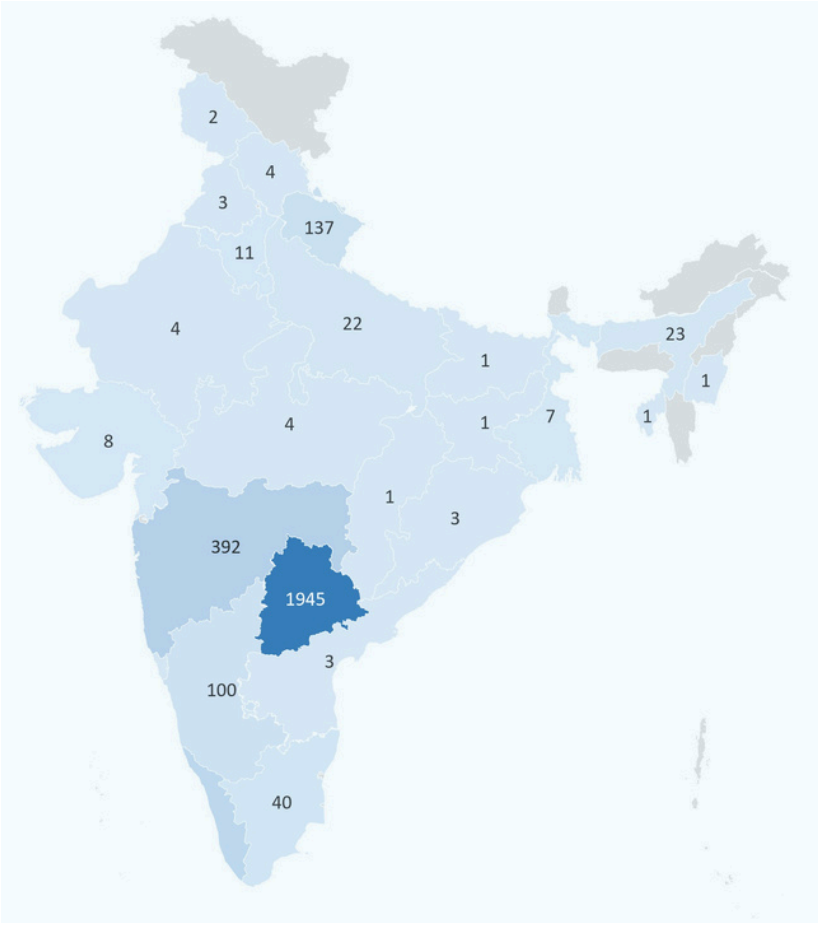
2023

Key Highlights

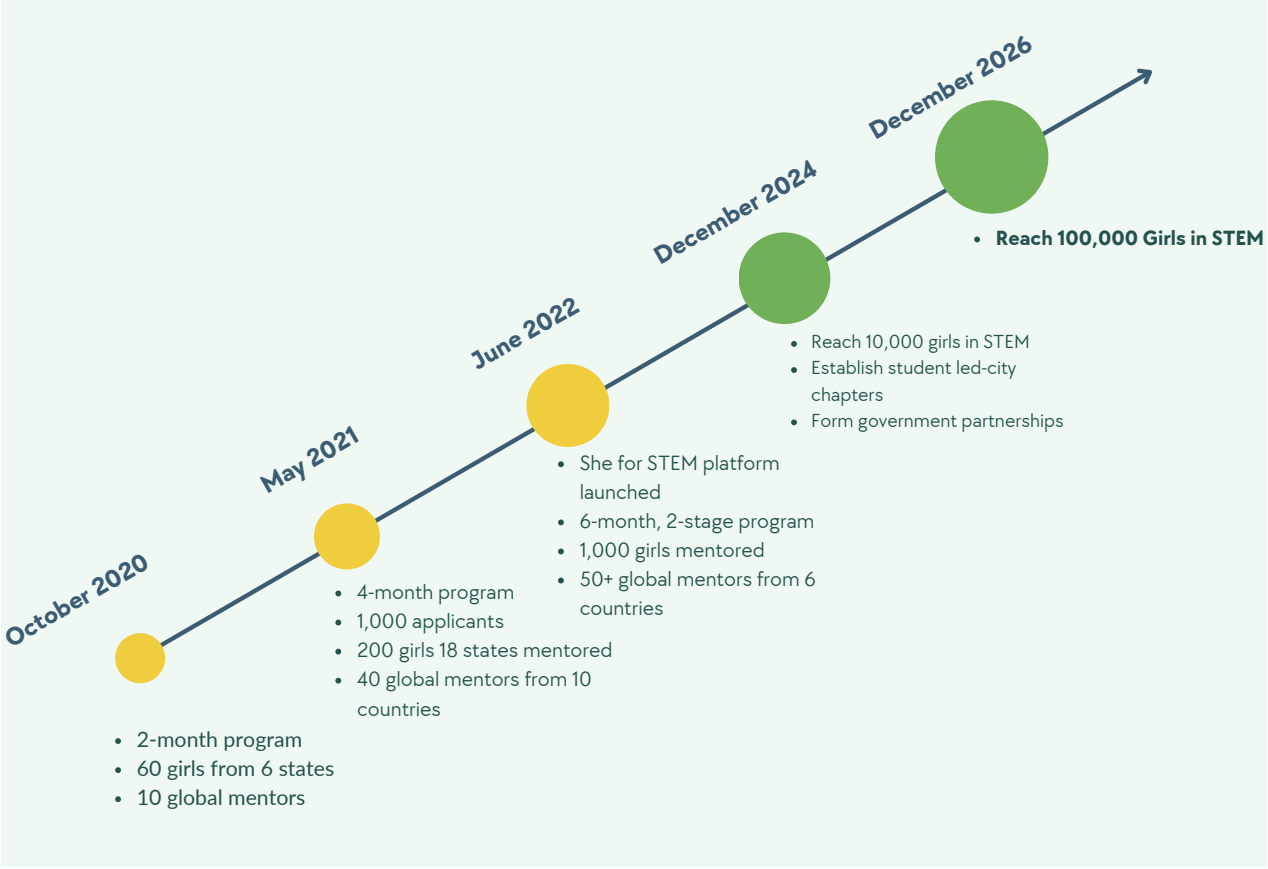
3,030
Total Enrollment

25
Number of States

187
Number of Districts



2.1.1.7 Program Milestones



For Government partnerships VigyanShaala works on a 3-year plan of Reach/Research – Test to Scale/Innovation – Scaling Model for our state partnerships. In Uttarakhand, we signed a partnership with the Uttarakhand council for science and technology (UCOST) in Feb 2024, through which we aim to including every undergraduate and post graduate girls pursuing STEM programs from government colleges in the program Kalpana. We are looking forward to impacting 20,000 girls in Telangana and Uttarakhand each over the next three years. Our core team is working on optimizing various elements of the program, especially personalized feedback to our fellows, for reaching the anticipated scale. **By 2028, we will build an active ecosystem to mentor 100,000 aspiring girls in STEM, boosting female innovation, productivity, and pathways to STEM higher education and careers.**

2.1.1.9 Testimonials from Kalpana Fellows

"Now when I look back I can see the difference in me; how Kalpana has helped me in understanding my potential and improving my skills. I was in my first year when I joined Kalpana. I joined IISER just because I love studying science, but I didn't know what I will do with a BS-MS degree. So the Sunday sessions with scientists were an eye opener that showed me the opportunities that I have. Listening to their stories and interacting with them was very inspiring. The one thing that I loved the most in Kalpana was the sessions with my mentor. We had different modules and the way she explained everything to all of us was amazing. Every meeting with her was like an energy booster for me."

Andria Sunil, IISER Bhopal

Rishita Deore, Maharaja Sayajirao University of Baroda, Gujarat

"I consider myself grateful that I got to know about Kalpana. Before this program, I didn't know about the tools like CAP and SMART goals. While writing CAP, I came to a conclusion that there are a lot more things involved in a journey to achieve a particular goal. The milestones section was a gem of that module! For SMART Goals, "Time-bound" point helped me to know how exactly am I going to move ahead with my goal step-by-step in a time-bound dependent manner. For me, my this year's biggest achievement is that I got accepted at The University of Tennessee Health Science Centre for my Master's thesis project. I would like to emphasize that for my application, whatever was discussed in the mentoring phase helped me a lot."

"My journey with Kalpana fellowship has been very educational and fun. It introduced me to a range of new STEM careers. I especially learnt a lot from my mentor, on how to set our goal and the right and suitable way to approach it. She has helped me and other mentees on how to assist ourselves and acknowledge both our strengths and weaknesses and how to deal with both. The sessions have been very inspiring too, to interact with such powerful speakers with all inspiring life and background, it has really boosted my curiosity and interest. It has been a privilege to be a part of Kalpana fellowship."

H Pinky Ruth Chanu, NIT Manipur

2.1.1.9 Testimonials from Kalpana Fellows

"The Kalpana program was great. I got to interact with many scientists who faced a lot of struggle in their life to achieve their goals. During the Kalpana program, we learnt different things like SWOT, SMART goal, CAP, etc. It was very helpful for me. Sunday sessions were amazing. Interaction with my mentor was great and helpful in each step. I enjoyed the discussions and conversations to some extent with my mentor. This was because it was during the pandemic and I got ill. I missed 2-3 classes because of it and felt disappointed for missing the sessions. But the best thing was that when I became fine, my mentor took special classes for me to helped me learn things from the sessions that I missed."

Kanchan Bafila, Postgraduate College, Berinag, Uttrakhand

Shivani Sharma, Raghunath Girls Postgraduation College, Meerut

"I have really very excellent experience with whole Kalpana family. I gained a lot of confidence in myself with this program, clarity and guidance towards my goals. Listening to the experiences of successful women from all over the world and asking questions to them is really great opportunity for me. I realised what exactly is it for a girl to achieve her goals in spite of society's thoughts. When I initially joined Kalpana program, I was not much aware of so many skills, opportunities and I used to be very shy. I had never done such interesting and amazing assignments before, but now I am much more organised towards my goals and the skills I need to work on. I now know of the hidden things in myself, which I have never see before. Now I can use various platforms such as LinkedIn, Chatshaala, etc. effectively."

All the sessions were very inspiring. I have learnt a lot from all the speakers. I learnt that one should enjoy the process of learning. I am very grateful to my mentor and and the whole Kalpana team. My mentor is very humble and always ready to help. I love talking to her and I have learnt a lot from her. This program has helped me a lot in analysing me strength, weakness, my short and long term goals and has taught me how to approach towards the goals in a perfect manner. Whatever I have learnt will be with me for my whole life. Recently, I have secured 62 rank in GATE life sciences exam, 12th rank in IIT JAM 2022 exam and cleared TIFR exam too. I am all set to pursue my master's from IIT Bombay. This is possible because of the disciplined approach I have used during my preparation and team Kalpana was undoubtedly a big support for me.

Garima, Bhaskaracharya College of Applied Sciences, Delhi

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STEM CHAMPIONS

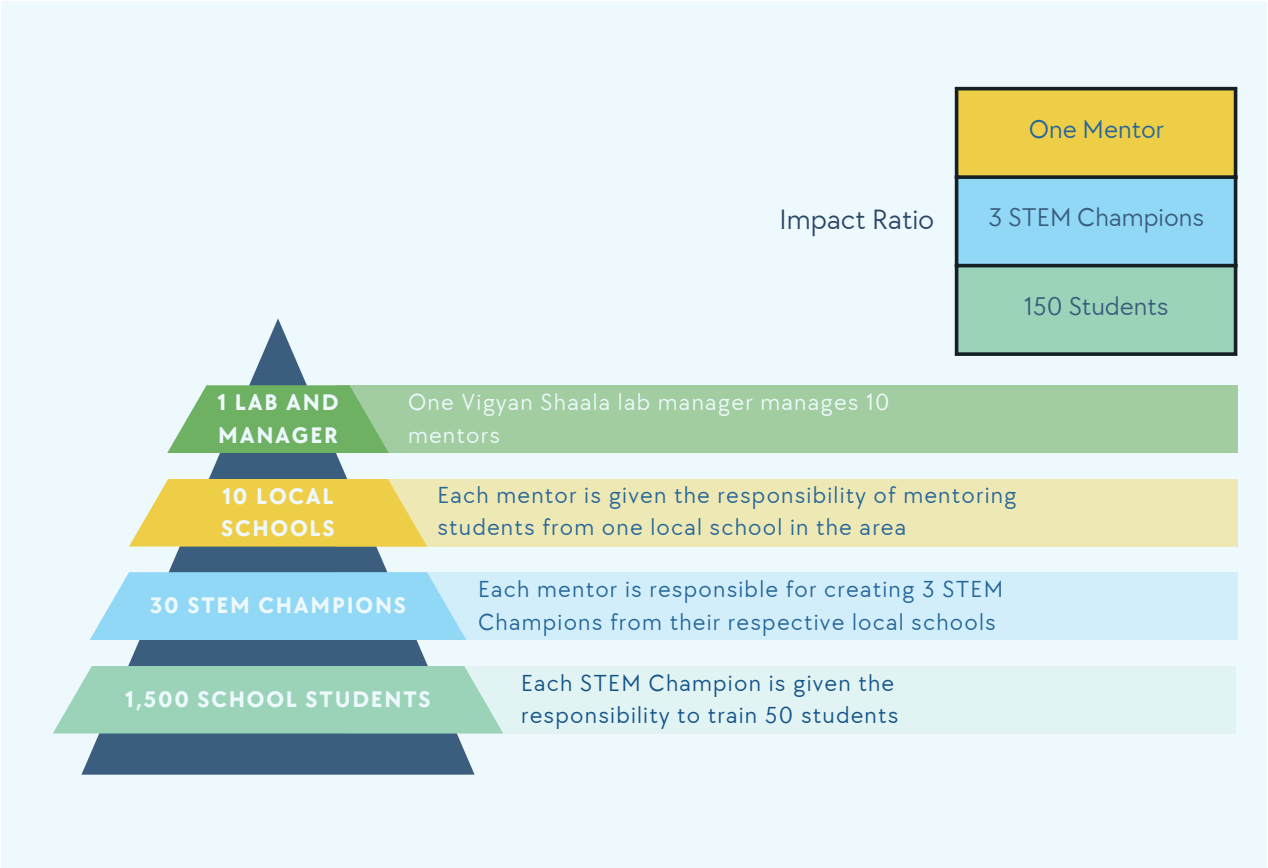
2.1.2 STEM CHAMPIONS

Poor-quality STEM education and skilling is stunting the innovation potential of India and cutting-off sustainable development at the grassroots. As many as 60% of STEM graduates in India do not have hands-on science experience. Rural students fare much worse than their urban counterparts.

Through access to high-quality STEM education, the youth of India would be equipped to face the challenges of the future and pioneer innovations to overcome these challenges. To make this a reality, STEM Champions is focused on supporting individuals who can champion STEM in their communities. Currently, we have **three fully-functional Rural Innovation Labs in Berinag, Champawat, and Pithoragarh in Uttrakhand.**

In a year, our fellows receive 24 Mentoring sessions from Vigyan Shaala's vetted global pool of professionals, 150 hours of training, undertake 2 research projects, and reach 100+ school students with hands-on STEM.

2.1.2.1 STEM Champions Model



2.1.2.2 STEM Champions Approach

In a year, our fellows receive 24 mentoring sessions from Vigyan Shaala's vetted global pool of professionals, 150 hours of training, undertake 2 research projects, and reach 100+ school students with hands-on STEM.

This hyper-localized model uses a hub and spoke approach, to enable one STEM Champion to impact hundreds of younger students, thus creating a ripple effect. Vigyan Shaala partners with rural colleges to set up STEM Labs where we provide mentoring, hands-on engagement, and training to under/post-graduate students pursuing STEM courses. The labs consist of Tinkering spaces, Concept spaces, and Maker spaces. The focus is on hands-on learning, research and development, and community mentorship. Through these chapters, we aim to foster a culture of Citizen Science that engages with local schools to advocate and inspire participation in STEM subjects.

Further, our rural fellows and labs, supported through means-tested fellowship and quality mentoring, become role models within their communities as they break traditional access barriers.

We are also developing a tech platform so that global mentoring and resource sharing can be available to anyone, anywhere.

2.1.2.3 STEM Champions Impact

Overcoming challenges through hyperlocal solutions

3
Community innovation labs opened

90+
Rural STEM champions

50+
Workshops in local schools

2,500+
Local school students engaged

Our pilot Rural STEM Champions fellowship program in Uttarakhand is yielding impressive results. Six girls from the most marginalized communities are now charting their journey in the world of science at top Indian universities and institutes, thanks to our patron, Jupiter 360, which is supporting their further studies through scholarships and bursaries.

These determined young women are bringing the perspective of their communities to the forefront of Science and Technology.

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SUCCESS STORIES

3.1 VIGYAN SHAALA - SUCCESS STORIES

Gauri Patti

Gauri Patti is a shining example of resilience and determination. Hailing from a lower-middle-class family in Kullu, Himachal Pradesh, Gauri faced formidable odds on her journey to STEM. Her parents, who could not even finish secondary school, run a small confectionery shop in Kullu. Being a first-generation learner, Gauri had access to limited opportunities of interacting with role models and mentors who could guide her to shape her career in STEM. Despite being an INSPIRE fellow, she initially struggled to leverage the annual research grant that came with the fellowship. Gauri's story is a poignant reminder of the challenges faced by women who lack support and mentorship. However, with her resilience and commitment, she made the most of every opportunity that came her way and found her way to the Kalpana: She for STEM program. After attending Kalpana: She for STEM program, she has now joined Masters in Physics at the University of Paris Saclay with IDEX scholarship and support from our partners at the Jupiter 360 Foundation.

The Speak Up Kalpana sessions enabled Gauri to interact with leading Women in STEM and learn about their journeys. Gauri is actively using her learnings from various Kalpana modules for defining her goals, analysing them, and then implementing them in the areas she needs to work on. Gauri has recognized that the inculcation of a growth mindset and setting SMART goals have been very useful in making a career action plan for herself. She is grateful to her mentor, Dr. Anushila Chatterjee, for being a constant support in her growth journey."

Diksha Nagarkoti

Diksha is from LSM PG College, Pithoragarh. She is an ecology enthusiast who was selected for a year-long internship with Dtime.ai, a London-based think tank. She worked with Dr. Hemant Tripathi from UNEP-WCMC, Cambridge, to harness data for developing a forecast tool to mitigate ecological and environmental shocks. Previously, as part of the Kalpana program, Diksha was recording insect biodiversity in her hometown of Pithoragarh. She has now joined ATREE Bangalore, for MSc Environmental Studies course in Conservation Practice, bringing the voice of her community to the forefront of science.

3.1 VIGYAN SHAALA - SUCCESS STORIES

Muralika XX

Muralika grew up in a small fishing village in Kerala, where opportunities in STEM seemed distant. Her passion for physics burned brightly but she lacked the necessary support and guidance to excel. During her second year of B.Sc. (Honors) Physics at the University of Delhi, she became a part of the Kalpana: She for STEM program, which marked a pivotal moment in academic journey. Kalpana provided exceptional mentorship by connecting Muralika with Darshana Joshi and Salini Senthil. Their guidance in soft condensed matter physics proved invaluable, and collaborating on a project with Salini provided a unique learning experience that propelled Muralika towards her next steps. As an Astrophysics Research Fellow at SARSTEM, she undertook a comprehensive study of Old Open Clusters by leveraging multi-wavelength data from the GAIA era. A project on the fundamentals of density functional theory at Hindu College further solidified her interest in condensed matter physics. The REYES program at UC Berkeley also equipped her with expertise in Monte Carlo Methods in Statistical Field Theories. These achievements have instilled in her a profound sense of confidence.

Muralika expresses her immense gratitude for the transformative opportunities, mentorship, and support she received from Vigyan Shaala. Vigyan Shaala has been more than just an organization; it has been a catalyst for her scientific exploration and success. Recently, she was selected for the prestigious PHC Summer Internship program at IISc Bangalore.

Mayank Bankoti

Mayank is a second-year B.Sc. student from the Govt. Postgraduate College in Berinag. He is determined to become a data scientist. Despite difficult family circumstances, Mayank draws his inspiration from the famous Physicist Prof D.D. Pant (student of Sir C V Raman), who also hails from Pithoragarh. Supported by the Mudita Alliance and Jupiter 360 Foundation, Mayank has recently completed his Masters in Electronics Sciences from Fergusson College, Pune securing highest rank in his class.

3.1 VIGYAN SHAALA - SUCCESS STORIES

Lavanya Sachdev

Lavanya Sachdev, an undergraduate student pursuing B.Sc. (Honors) in Biotechnology at IMS BHU, recently started her role as a research intern at the esteemed Virology Research and Diagnostic Lab. Her current focus involves bacteriophage therapy aimed at isolating bacteriophages to combat antibiotic-resistant bacterial infections.

With diverse research interests spanning bacteriophage therapy, cancer research, bioinformatics, nanotechnology, genetics, and climate change, Lavanya demonstrates a multidisciplinary approach to her academic pursuits. Lavanya's participation in the Kalpana: She for STEM program equipped her with career-ready skills, enhancing her readiness for the professional world. Beyond academics, Lavanya has gained hands-on experience as a Campus Ambassador at Paradyes and a Fundraising Intern at Muskurahat Foundation. As Vice President of the Journal Club of Biosciences and Chair of Health and Climate Change at YI Council, IMS Ghaziabad, Lavanya organizes informative sessions to raise awareness and promote youth engagement in pertinent issues

Aparna Manoj

During the lockdown Aparna, from IISER Bhopal, worked with Dr Swathi from Saint-Gobain, India to study electrochromic devices at home. She observed reversible colour change induced by electrochemical oxidation and reduction, usually seen in coordination compounds with simple set-up at home. She later bagged an internship at JNCASR Bangalore and eventually won a Globalink Graduate Fellowship 2023 for doing summer research in Canada.

3.2 GROWTH JOURNEY OF KALPANA ALUMNI

With the guidance and support of their mentors, a number of our alumni have made it to top global and national universities for higher education and internships.

Organizations where Kalpana Alumni have done Internships/Training Programs

MAKER'S ASYLUM · upGrad · bioXspace Synergizing STEM · ATLASSIAN

Universities/Institutes where Kalpana Alumni are Pursuing Higher Education

Erasmus Mundus · The University of Tennessee Health Science Center · University of Glasgow · University of Cambridge

Cornell University · Technische Universität München · IIT Bombay · JAM 2022 Joint Admission test for Masters संयुक्त स्नातकोत्तर उपाधि प्रवेश परीक्षा · Memorial University

UNI BONN · Rensselaer Polytechnic Institute · Azim Premji University · Jawaharlal Nehru Centre for Advanced Scientific Research · Schola Genevensis

Vigyan Shaala
COMMUNITY • SCIENCE

AWARDS AND RECOGNITION

Vigyan Shaala and its founders have been bestowed with eminent awards and our impactful work has been recognized by various national and international bodies. For a young organization like Vigyan Shaala, these awards are a testament to our focused approach and unwavering commitment to quality in the design and execution of our programs. Our work has positively impacted the lives of thousands of marginalized students across India, and we are on the path to impact the lives of millions more students.

WINNER
Falling Walls Engage
2022

Falling Walls Engage is the global platform for Science Engagement, hosted by Falling Walls in cooperation with the Robert Bosch Foundation.

RECOGNITION
She Is: 75 Women in STEAM Govt. of India
2022

Dr. Darshana Joshi was recognized in the She Is: 75 Women in STEAM by the Office of Principal Scientific Advisor to the Government of India.

FEATURED
Documentary by UNESCO New Delhi

Kalpana - She is for STEM program was featured in a documentary by the UNESCO New Delhi Cluster Office

RECOGNITION

Women Transforming India Award

NITI Ayog

Dr. Darshana Joshi was recognized by the Women Transforming India awards from NITI Ayog, Govt. of India.

WINNER

F5 STEM Education Grant Award

2023

VigyanShaala won the F5 STEM Education grant.

WINNER

Echoing Green Fellowship

2023

Dr. Darshana Joshi was one of the winners of the coveted Echoing Green fellowships.

Vigyan Shaala
COMMUNITY • SCIENCE

PARTNER ORGANIZATIONS

Our partner organizations have shown unwavering commitment to our goal of providing quality STEM education to marginalized youth in India. The mentorship, guidance, recognition, and funding provided by our partners have enabled us to expand our reach, develop innovative educational programs, and provide essential resources to students who otherwise would not have access to such opportunities. Your contribution has enabled us to empower young minds and inspire future leaders in STEM.

We recognize the importance of your partnership and the trust you have placed in Vigyan Shaala to make a meaningful difference in the lives of underserved communities. Your continued support motivates us to strive for excellence and to continually improve and enhance our programs.

Vigyan Shaala
COMMUNITY • SCIENCE

TEAM VIGYAN SHAALA

Scientists and Engineers from Leading Global Universities

Dr Darshana Joshi
PhD Physics , University of Cambridge, UK
Founder & CEO VigyanShaala

Dr Vijay Venugopalan
PhD Physics, Marie Curie Fellow Politecnico Di Milano, Italy |
Founder & COO VigyanShaala

Dr Anushila Chaterjee
PhD Biochemistry, State University of New York, Buffalo, USA |
Chief Impact Officer, VigyanShaala

Sreejith Srinivasan
B.Tech. Mechanical Engineering
Senior Associate - Operations

Salini Senthil
B.Tech Chemical Engineering & Computational
Chemist | Education Specialist(STEM Careers)

Bhuwan Joshi
M.A. - JMI | BASS - TISS Mumbai
State Program Manager, Utarakhand

Dr Tripti Joshi
Ph.D. NBRC | Columbia University
Program Associate - Accelerator

Monalisa Bandyopadhyay,
XLRI Jamshedpur
Partnerships & Fundraising

Thank you for joining us in shaping the future of STEM!

Vigyan Shaala
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