

GEMS OF MENTOR INDIA

MESSAGE FROM MISSION DIRECTOR



Dr Chintan VaishnavMission Director
Atal Innovation Mission,
NITI Aayog

Our former Prime Minister late Shri Atal Bihari Vajpayee Ji believed that the future of this country lies in the hands of youth and the Atal Innovation Mission (AIM), named after his legacy, is an effort towards translating his dreams into reality. AIM is a flagship initiative to promote innovation and entrepreneurship across the length and breadth of the country. As a part of this mission, AIM is setting up state-of-the-art Atal Tinkering Labs (ATL) in schools across the country. This initiative is designed to systematically hone young students on crucial 21st century skills including Creativity, Innovation, Critical Thinking, Social and Cross-Cultural Collaboration, Ethical Leadership and so on. Strengthening the ATL initiative is The Mentor India Program, which is built to promote mentoring as a nation building activity for experts across professions.

As we celebrate 75 years of India, we envision our Mentor India community to fill that vital gap which prevents a young person's ingenuity and handwork from meeting global opportunities. This program has shown us how a good mentor can not only nurture the innovative spirit of a young person but also the mentee as a whole.

The Gems of Mentor India is a publication in recognition of such brilliant mentors who have risen above and beyond their call of duty to further strengthen the Atal Tinkering Labs ecosystem. In this book, we are recognising mentors who have featured consistently as the top mentors or have performed exceptionally in the ATL Tinkerpreneur bootcamp.

This book is an effort towards capturing and showcasing how the Mentors of Change are working at the grassroots in different parts of the country, to help students transform into innovators and develop an entrepreneurial mindset, which will pave the way forward for developing a 'New India'. So, let us together explore the world of Atal Tinkering Lab and empower our young minds to innovate!

My best wishes to all mentors!



ABOUT MENTOR INDIA

The Atal Innovation Mission

AIM, NITI Aayog is envisaged as an umbrella innovation organization that would play an instrumental role in alignment of innovation policies between central, state and sectoral ministries, by incentivizing the promotion of an ecosystem of innovation and entrepreneurship at various levels-higher secondary schools, higher educational and research institutions, and SME/MSME industry, corporate, and government ministerial level, by public-private partnership.

Atal Tinkering Labs

With a vision to 'Cultivate one Million children in India as Neoteric Innovators', Atal Innovation Mission is establishing Atal Tinkering Laboratories (ATLs) in schools across India. The objective of this scheme is to foster curiosity, creativity, and imagination in young minds; and inculcate skills such as design mindset, computational thinking, adaptive learning, physical computing etc.

ATL is a workspace where young minds can give shape to their ideas through hands on do-it-yourself mode; and learn innovation skills. Young children will get a chance to work with tools and equipment to understand the concepts of STEM (Science, Technology, Engineering and Math). ATL would contain educational and learning 'do it yourself' kits and equipment on – science, electronics, robotics, open-source microcontroller boards, sensors and 3D printers and computers. Other desirable facilities include meeting rooms and video conferencing facility.

In order to foster inventiveness among students, ATL can conduct different activities ranging from regional and national level competitions, exhibitions, workshops on problem solving, designing and fabrication of products, lecture series etc. at periodic intervals.





Mentor India

Mentor India is a strategic nation building initiative to engage leaders who can guide and mentor students in over 8700+ Atal Tinkering Labs that Atal Innovation Mission has established across India. The Mentor India program is a voluntary national movement being led by AIM, wherein skilled professionals provide pro-bono mentoring to young ATL innovators, with a strong sentiment towards nation building.

These skilled volunteers, who are called the 'Mentors of Change' spend time on-ground with ATL students, who are the young innovators of India and enable them to experience, learn and practice 21st century skills such as human centric design approach, computational thinking, physical computing etc.

They work with a vision to give back to the country, and play a significant role in building a new India - one which pioneers in technology and innovations and emerges as a world leader

ATLs are non-prescriptive by nature, and mentors are expected to be enablers rather than instructors.



Why do we celebrate the GEMs of Mentor India?

Mentors are the driving force behind the Atal Tinkering Labs. They are the ones who bridge the gap between the modern and traditional learning systems of India to prepare ATL students with the critical skills they need to excel in the 21st century.

Today over 5000 mentors from across the country have pledged to volunteer two to three hours every week to mentor. To appreciate and thank them for their service in moulding the young minds of India, every year, we recognise the top performing mentors from across the country.

Process of identifying GEMs of Mentor India

To document their mentoring activities, all mentors are required to submit a mentoring report on the Innonet Mentor Portal (https://atlinnonet.

gov.in



) with the details of their mentoring session, number of

students, and the contents of the themes taught in the session.

We use these mentoring reports to identify top mentors every month. The mentor session reports are all a crucial criteria in the selection of Regional Mentors of Change.

The Gems of Mentor India are selected on the basis of their consistent engagement for the last one year with Atal Tinkering Labs as reported via their mentoring reports on the Innonet portal.

Role of GEMs of Mentor India

- ➤ The GEMs of Mentor India should first and foremost continue their work as Mentors of Change and Regional Mentors of Change with the same zeal and enthusiasm
- Guide and motivate other MoCs by sharing your ATL experiences and best-practices.
- ➤ GEMs of Mentor India should become ambassadors for the ATL's challenges, innovation events and encourage participation from their region's ATLs.



Introducing our Gems of Mentor India - 2021

Let's know more about their lives and their best practices for mentoring young innovators at ATLs



GD Goenka Public school Agra, Saraswati vidya Mandir Aligarh, kendriya vidyalaya Aligarh

State

Uttar Pradesh

1. ABHISHEK NAIR

Lessons for STEAM oriented learning, incorporating technology to solve daily problems.

Best Practices

Associate work flow with stories and character's wherever possible and generate problem statement associate it with games/toys or any physical object.





Name of ATL
Sri Ramakrishna Matriculation Higher
Secondary School

State Tamil Nadu

2. ABINAYA INBAMANI

Sr.R.Ravi, School Principal helped me in bringing out the innovation among the student community. During this pandemic situation, the ATL school in charge, Mr. Ganesh helped me in forming groups wherein teachers actively sent the links to the children and ensured they attend the classes regularly. The students actively participated in the ATL classes and more than 60 percent of the ATL curriculum was covered so far. The students began to learn the concepts and built web and android applications by themselves. My sincere gratitude to Principal Dr.N.R.Alamelu, Head of the department Dr.S.U.Prabha and my husband Mr.B.Arun for their continuous motivation and support.

- 1. The key to success is consistency. Hence regular ATL classes were arranged for the students.
- 2. Teacher training programmes were conducted for school teachers on a monthly basis to inculcate the importance of ATL curriculum.
- 3. Good rapport was maintained with students and their doubts were cleared then and there to ensure their creativity is not lost.
- 4. Collaboration with other Mentors of Change was done to build a wider community towards building a stronger nation.
- 5. Seeked the guidance and help of Regional Mentor of Change Dr.Prashant R.Nair and Navaneetha Krishnan R incase of any difficulties.



Name of ATL Amity International School, Noida

State Uttar Pradesh

3. DR. AMIT SEHGAL

Being an ATL Mentor has given be the opportunity to interact with the young innovators. The creativity and zeal to innovate is phenomenal in the school children. Though throughout the year, all the sessions were conducted in online mode, ATL incharges made left no stone unturned to keep the students engaged with the ATL activities. The energy and interaction of the young innovators motivated me to support them whenever they reached me with queries. While preparing for ATL Marathon, one-to-one mentoring sessions were arranged and children were always available with improvements done in their projects as suggested. This initiative will definitely result in many successful entrepreneurs at early age.

Best Practices

Regular interaction through whatsapp group, one-to-one session with the teams working on innovative ideas, making children understand the importance of validating the problem statement and ideas.



Name of ATL
Delhi Public School, Mandla Road
Jabalpur

StateMadhya Pradesh

4. ANKIT RAJAK

During the hard times of pandemic, Atal Innovation mission launched the initiative "TinkerFromHome" with the aim to continue innovation amongst the students. I found it the best medium where I can engage myself as well as help students with different science based activities. I conducted more than 10 sessions in April 2020 which not only engaged the students but also provided me with a purpose for that time. Based on my sessions I was recognised as amongst the Top 5 'Mentor of the Month' by Atal Innovation Mission. ATL activities provided me with a purpose during lockdown and created a new era of working.

- 1. Project and problem based mentoring
- 2. Mentoring with supports of parents and teachers
- 3. Encourage students to create an ATL news letter
- 4. Promote digital platform based innovation tools
- 5. Sustainable Development Goals based mentoring sessions



Saryu Narayan Bal Vidyalay Inter College Kanpur

State

Uttar Pradesh

5. ANKUR YADAV

It was a very exciting mentoring session with students who are lacking in physical gadgets but with a very sharp mind having the potential to change our country in technology. Always felt blessed to be a part of this ATL.

All credit goes to our government for this initiative.

Best Practices

Mentoring session of 3D printers excited students very much, knowledge of plastic gave goosebumps to students and they learnt so much from the session. Students designed many objects



Chinmaya Vidyalaya, Manav Sthali School, Air Force Bal Bharati School

State

Haryana

6. ANURAG PANDEY

"Those who have guts to risk their life, to think different"

In this challenging Covid-19 time, I with my team of 59 people working exclusively to highlight the issue of Major science contributors i.e. schools through talks to let school speak out their challenges and its measures publicly so that other people can join and understand and ask live question with their Principal. I have used SciComm as a platform to host the talk and this talk was a huge success.

- 1. Getting organized, make a plan, and set a schedule
- 2. Don't multitask. Studies have shown that multitasking is physically impossible
- 3. Divide the work into manageable chunks and reward yourself when you finish each chunk will make studying (more) fun.
- 4. Develop the habit of note making
- 5. Manage your study space.
- 6. Be inquisitive and Ask questions. You're in school to learn, so don't be afraid to do just that!



Borivali Municipal Secondary School Rajadanagar, Karmaveer Bhaurao Patil Vidyalaya And Shakunatni Parera Junior College Juchandra

State

Maharashtra

7. ASAWARI SHIPOSKAR

My Journey with Atal Tinkering Lab started, when I was selected as a Master trainer for the Unbox Tinkering Program organized by SAP India in Goa, Surat, Ahmedabad, & Bhavnagar. I conducted sessions on Ideation, Design Thinking, Basic Circuitry and Arduino Programming. In 2020, I was selected as a Mentor of change, which made me aware of the pain points of teachers and students who were unable to grasp the concepts provided to them in technical jargons. I created a YouTube channel for students and ATL in-charges which has videos in Marathi but the slides are in English, as I believe in thinking locally and acting globally. With children more eager to learn and explore new disciplines, online teaching has been a blessing in disguise. Online teaching through WhatsApp and videos has helped to keep the students engaged and creatively active, keeping the motto of Atal tinkering Lab intact.

Best Practices

Following practices are found effective during pandemic;

- 1. Activities initiated through digital mediums such as WhatsApp
- 2. Interactive learning techniques through videos
- Learning via indulging in dialogue with peer groups including group discussions



Name of ATL

Delhi Public School Ghaziabad Vasundhara

State

Uttar Pradesh

8. DR. ASHISH MITTAL

Becoming a Mentor of Change and then Regional Mentor of Change has been a delightful experience for me so far wherein I could accomplish my goals by empowering youth with knowledge and wisdom. My various sessions on Leadership, Entrepreneurship, Growth Mindset etc. have always witnessed an incredible response in the direction of tinkering and becoming self-reliant. Students come up with inquisitive ideas and innovations which further motivates us to guide them. My endeavour has always been to motivate and encourage the ones who have minimal interest in such fields as streamlining their thoughts through guidance can help them tap their qualities.

Best Practices

Developing leadership qualities, creating more entrepreneurs and developing a growth enriching mindset have been my core areas where I am working. Over the years, I have witnessed many students paving the path in becoming a good entrepreneur and I wish to witness many more such moments.



Name of ATL ATL Baglur

State

Karnataka

9. AVINASH CHANDRA

Started the journey from Zero interaction to even now available over Whatsapp for Q&A

Best practices

Out of Box approach



Name of ATL JSS, HSR Layout, Bangalore

State

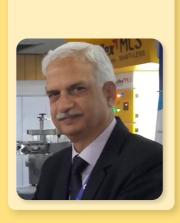
Karnataka

10. DEEPESH GOEL

We created an IOT project on water conservation which can be applied to toilets or any leaking environment with class 4 students who participated in CBSE Science Fest on 22/11/19 at DPS Electronics city Bangalore. A faucet dripping slowly at only one drop every two seconds will waste more than 1,000 gallons or 3.7 m3 per year. Water flow sensor consists of a plastic valve from which water can pass and a water rotor along with a Hall Effect sensor measures the water flow. When water flows through the valve it rotates the rotor. In order to make it, various materials like particle photon, resistors, jumper wires etc. were used in this.

Best Practices

Students have turned out to be true achievers as the team met on 18th Dec 2019 to prepare for the contest and on 22nd Dec 2019, successfully participated with a working prototype. This is a clear demonstration of strong willpower, determination and innovation amidst adversity when you are running against time. They have proved perseverance and practical approach to problems as amazing practice.



Name of ATL Surai Bhan DAV Public School

State Delhi

11. GAURI DUTT SHARMA

With a corporate background, initially I naturally tended to present my thoughts as I had been doing. It took me a while to realize the drastic change in audience profiles. And I started to modify my approach. The biggest challenge so far has been to attract full attention of the students to my guidance. In order to learn the best methodology of transmission of my thoughts, and to pick vital clues, I often watch teachers interacting with students.

- Students tend to start working on projects with the concept of "I too
 can do it". Time and again, I challenge the novelty aspect, and try to
 make them think rather: "Only we can do it" (meaning that the idea and
 concept has to be unique/novel, and better than the current practice.
 Also to make them understand that teamwork increases the chances of
 success)
- 2. When they work on the projects in the ATL lab, I insist on them to display a project status card (designed by me) on each table. This is a concise information for the stage of innovation, and will help the students and teachers to keep track of progress.



Name of ATL Amrita Vidyalayam Puthiyakavu, Amrita Vidyalayam Thalassery

State Kerala

12. GAYATHRI MANIKUTTY

It has been a year since I have had the opportunity to be an ATL mentor although my interactions with children from Amrita Vidyalayam - Puthiyakavu, and Amrita Vidyalayam - Thalassery goes back to nearly five years now. I consider myself most fortunate to have had this mentorship experience which began with my robotics and experiential science workshops in the two schools. Being a technologist and faculty at AMMACHI Labs, Amrita Vishwa Vidyapeetham, my passion is to teach physical computing to school children - the art of tinkering and making with electronics, IoT and robotics. I along with the students enjoy the thrill of an LED lighting up for the first time when programmed as it opens up a whole new world of possibilities. Through ATL Marathon 2020, students developed a voice controlled wheelchair for the blind.

- 1. Give time to children build relationship with them
- 2. Mentors should not be afraid to share their personal failures
- 3. Mentors must themselves have an open attitude to learn
- 4. Mentors must believe in the experiential learning process
- 5. The key to success is consistency and collaboration
- 6. Regular teacher training sessions conducted



Kv sunjuwan, kv bantalab and air force school jammu

State

Jammu

13. DR. ISHA SHARMA

I believe in collaborating with the institutions so that the necessary human capital can be brought and channelised to the bottom of the educational pyramid for creating innovation clusters and developing a nation state that is innovative and entrepreneurial despite from where and in what context we operate.

- 1. Collaboration with academic institutions
- 2. Mobilising students to move to best incubation facilities



Name of ATL Army Public School

State Delhi

14. JABA SEN MENON

Army Public School has received many accolades and leveraged the potential of mentoring by institutionalising a sustainable structure.

Best practice

Inviting Honest Expression of Children, Strengthening interpersonal relationship skills.



Name of ATL
Velammal Matriculation Higher
Secondary School

StateTamil Nadu

15. KAJA BANTHA NAVAS RAJA MOHAMED

Framed and Executed 15 hrs Design Thinking curriculum Velammal Matriculation Higher Secondary School, Chennai under the Government of India's flagship programme ATAL Thinkering Labs, Atal innovation Mission NITI Aayog, Govt of India.

Best Practices

Discussed and Interacted with the following topics

Session -1 Design Thinking - Fundamentals

Session-2 Observation Problem identification from the environment, Need Findings

Session-3 Empathy and Product Visualization

Session-4 Persona

Session-5 Wheel on Product and Wheel on Life

Session-6 Ideation

Session-7 Product to IPRs

Session-8 Prototype and Experiments



NMMC Secondary School, Ghansoli, Navi Mumbai

State

Maharashtra

16. DR. KETNA ATUL MATKAR

I have been inclined towards mentoring due to my background and qualifications. I felt highly motivated when I got selected as a MoC in 2020 and selected NMMC Secondary School, Ghansoli, Navi Mumbai. I was determined to initiate my mentorship journey and bring some positive outcomes through my contribution. This gave me the required threshold and gradually I steered through. I have experienced immense trust, participation and positive response from the school management, teachers and students as they were able to understand the concepts and their applicability owing to its delivery in Marathi. I felt the satisfaction of being able to reach out to the students who have limited resources and this mentoring activity has also rewarded me, and I am very sure this would further generate "Upstream Reciprocity", influencing the students and teachers to indulge in altruistic activities.

- 1. Discussing the topics of sessions with faculty
- 2. Researching on the topic, finding relevant case studies in Indian context
- 3. Graphic Presentations
- 4. Sharing the material with Principal and ATL In-charge for circulation and record keeping respectively
- 5. Regular submission and update of mentoring activities on the ATL portal.



Name of ATL Air Force School Hebbal Bangalore

State Karnataka

17. KIRAN KUMAR H S

ATLs are a great place to explore, experiment, tinker, discover and innovate. But, how can students take their tinkering & innovation projects forward, commercialize them, add value to people, and earn an income while still studying? This is the story of "Solopreneurship", a 10-week intensive bootcamp in Solo-Entrepreneurship I conducted for my students (class 6 to 12) at Air Force School Hebbal, Bangalore between Oct 2020 and Jan 2021.

By the end of the bootcamp, the students acquired the core competence to start their own part-time online business, develop digital products, service niche customers, and earn passive income while still studying in school. Now, the students are helping their teachers become Solopreneurs as well and one teacher has recently gone online with her hand-made jewellery store.

- Set-up a web-portal for students to tackle the ATL Marathon 2020 and submit their entries. It helps students to tackle the top-level ATL Marathon problem statements easily using top-down decomposition or bottom-up elaboration techniques
- 2. Helps them learn to conduct research and gain understanding of the problem statement
- 3. Use various design thinking tools to solve problems with innovative solution
- 4. Build virtual prototypes using online digital tools and technologies



Name of ATL

Delhi Public School Jodhpur, Kendriya Vidyalaya Number One Afs Jodhpur, Kendriya Vidyalaya Number One Army Jodhpur

State

Rajasthan

18. DR MUKESH UPADHYAY

In my mentoring Sessions I have taken 39 sessions mentoring about electronic components, programming and creating embedded systems. My motive is from "PROJECT TO PRODUCT", guiding students how to convert ideas into reality through innovation. I was placed amongst Exemplary top 5 mentors in month of June 2020. During COVID-19 Lockdown period in 2020 I have conducted online mentoring sessions, which were highly interactive.

- 1. Movitating students learn How to convert "Project to Product".
- 2. Small but consistent practice leads you achieve goal.
- 3. Teach every topic from Scratch.
- 4. Give fair chance to every student to ask questions about the session
- 5. Build the knowledge of students by giving practical examples



Name of ATL Model Academy, Kendriya Vidyalaya Bantalab, Kendriya Vidyalaya Sunjuwan

StateJammu and Kashmir

19. DR. PALLVI ARORA

My mentoring story is a story of imparting knowledge, skills and an enthusiasm that 'We all are capable of bringing out the best in us'. Through the ATL platform, I have come across a number of students who are full of innovative ideas and hold immense potential. This is the youth of our nation who is capable of transforming India. Through mentorship, I have been able to tap on to the innate potential and passion of the students and ignite the same. The mentoring sessions bring two way learning, brainstorming, imagining and sharing. These sessions have enabled me to mentor students on their entrepreneurial front and their interpersonal and professional skills. Thus, my mentorship story is a story of encouragement and touching lives of students to understand their capabilities and the potential to bring positive change.

Best Practices

My mentoring best practices include experiential learning, face to face and online interactions on themes of innovation, entrepreneurship, interpersonal skills and leadership development. It also includes hands on activities along with enhanced industry-academia interfaces at a national as well as an international level to bring the best of the world to my mentees both in terms of knowledge and exposure.



Name of ATL

Bal Bharati Public School (Ludhiana, Punjab), Bhatnagar International School (Vasant Kunj, New Delhi), Maa Anandmayee Memorial School (Raiwala, Uttarakhand)

State

Maharashtra

20. PAREMVIR MALIK

I started my journey as a Mentor of Change with ATL Bal Bharati Public School - Ludhiana followed by Bhatnagar International School - New Delhi, and Maa Anandmayee Memorial School - Raiwala. It has been a wonderful learning experience interacting with young minds and varied institutions. All my ATLs are consistently recognized as ATLs of the month and have constantly set new records. We have succeeded in involving 100+ community innovators and students from nearly 20 schools across India as a part of our day to day sessions, activities and events. We have constantly focused on systems to build a culture and simplify the definition of Innovation beyond just AI, Robotics or Technology to a more solutions based orientation and adopt them in our daily life. I proudly say that our model is the most unique and truly innovative owing to which we also launched 'My ATL Mobile App'.

I have an integrated ATL Leaders team and Tech team for efficient performance of ATLs, monthly reviews are conducted, online open sessions and usage of E-Tools is the key to make ATLs more inclusive and efficient. We also conduct a joint Tinkerfest monthly for the students of the three schools.



Name of ATL

Amrita Vidyalayalam Puthiyakavu,
Holy Cross English School

State Kerala

21. PARVATHY KRISHNAN K

Given the COVID-19 crisis, it was a challenge to ensure the sessions are frequent at the same time flexible because of connectivity issues. It was hence important to create an agenda and framework for the program. Hence we created the theme as Applying Data Science for Sustainable Development, and each session we discussed various projects and innovations around the globe around this theme. The students actively participated in identifying challenges around the theme and in brainstorming for innovative ideas. I learned a lot from the students and we had such a fun and exciting journey together.

- Create a Mentor Action Plan with clear goals, and agenda
- Encourage respectful debate on different views/opinions
- Monitor and discuss progress with the students to identify obstacles



Name of ATL
Yuvabharathi Public School,
Coimbatore

State

Tamil Nadu

22. DR. PRASHANT R. NAIR

I identified the thrust area of ATL Yuvabharathi as IoT application for preventing human-animal conflict that people living in Nilgiris face animal attacks at night. I guided the ATL on this thrust area with the support of my university students from Amrita Vishwa Vidyapeetham, Coimbatore who act as co-mentors for specific student projects and innovations. Compound-Eyes is the most successful application which works as a surveillance for home security systems providing security for residences that are prone to wild cat attacks. This application uses a micro-controller based mini-car that uses an App to send alerts via Wi-Fi to its owner/forest officers or forest rangers on detecting wild cats such as leopards inside the premises of a building. It has won the first prize in Coimbatore Science and Technology Festival 2019 and also been featured in the ATL wall of fame.

- 1. Connecting the ATL of the school with college, and conducting webinars, seminars in collaboration
- 2. Faculty Development Programs on IoT & AI as part of the trainer series to upgrade the skill-set of the school faculty for addressing new CBSE curriculum with significant IT integration.
- 3. Support for patent application and filing for ATL students



1. Nutan Government Higher Secondary, Indore 2. Paramount Academy Kasrawad, Khargone 3. Government Excellence No1 Morar, Gwalior

State

Madhya Pradesh

23. PRATEEK SANCHETI

Started in 2015 after quitting my Job with Cognizant as a Software Engineer. Being a techy, I always loved to enhance and share the experience among the young minds and have understood the importance of proper guidance and mentoring. I started my journey with basic 3D Printing, added on to IoT, AI, Robotics and now the only company in Central India working on Bio 3D Printing, doing research on Organs Manufacturing through Bio 3D Printing.

I am fortunate to be a part of such a prestigious program wherein I could deliver my experience to at least 100 schools/colleges and thousands of students across different states.

- 1. Use of cutting edge technology to foster learning and enhancing skill set
- 2. Continuous motivation to grow leadership
- 3. Cross platform learning by engaging with other mentors
- 4. Inculcating entrepreneurial spirit by innovating
- 5. Using learning module in AIM website and enhancing my skills before conducting the session
- 6. Being in regular touch with school administration to keep conducting workshops
- 7. Attending Mentor meets which helps in exchanging thoughts and ideas for impactful mentoring
- 8. Connecting Industry Professional with students, to help them in understanding the utilization of the technology.



Name of ATL
C N English Medium School
State
Gujarat

24. RAJ ARVIND KUMAR HAKANI

Three time selected top five mentors DEC 2019, May 2020 & Sept 2020

Best Practices

Taught Theory with Hand On Session and comparing it with real life example



Name of ATL Sarvodaya Central Vidyalaya; Saraswathi Vidyalaya

State Kerala

25. RAJIT KARUNAKARAN NAIR

I believe in the power of storytelling as they not only entertain us but propel us to think. So I used storytelling as a tool with students during sessions on ideation related to ATL Marathon 2020. During one of the sessions, I was exploring the problem statement on integrated healthcare and health/healthcare gadgets. Further, I showed them a device called "why cry?" for understanding and identifying reasons for what makes an infant cry. The logic behind the working of this device is that each cry has different frequency patterns and the device just compares the cry of our baby with the patterns stored in its system. Then it will display the reason with 93% accuracy. This story triggered the thinking of the students and many ideas started flowing. Every mentoring session had one such "WOW Moment" to trigger their thinking.

- 1. Share your story (Storytelling)
- 2. Keep questioning your Mentees to trigger their thinking
- 3. Teach them how to think (use Design thinking)
- 4. Encourage Mentees to identify their strengths
- 5. Make them believe that they (only) can do it.



Name of ATL Kaligi Ranganathan Montford School

StateTamil Nadu

26. RAMA VAIDYANATHAN

I took sessions for classes 6-8 during lockdown wherein ATL in-charge and I worked on ATL curriculum and found ways to keep the classes engaging for the students. The web links for relevant videos in the ATL curriculum were a great help and the Mobile app building course was a boon and Plezmo app was again another exciting course learning. It was such a pleasure to see the apps completed and displayed by students to the class in the Annual Science Fair which was conducted online. We also organized the Business Pitch session and were amazed by the thought process and efforts of young minds. When I was invited as the Chief Guest of the Science Fair at the School, I was so honored. At the end of the year, about 5 groups of students applied in the ATL marathon. We also planned a final session where we distributed story books to the most interactive and active students. In all in the year 2020-21, we were locked in but not knocked out.

- 1. Celebrate student's smallest contributions
- 2. Make the classes interactive by using Google forms etc.
- 3. Understand student's point of view every time



Name of ATL

Saraswati Vidya Mandir Sr Sec School Aligarh, Agrasen Inter College Harduaganj Aligarh Kendriya Vidyalaya Aligarh

State

Uttar Pradesh

27. RITESHAM

नवाचार यानी इनोवेशन, समुदाय के सर्वश्रेष्ठ को अनुभव करने के लिए एक योजनाबद्ध बदलाव है। अटल टिंकरिंग लैब असीम संभावनाओं वाला एक अन्ठा स्थल है, यहाँ हम ऐसे इकोसिस्टम में निरंतर सतत रूप से वैज्ञानिक, नेतृत्व क्षमता और एंटरप्रेन्योरिशप जैसे गुणों को विकसित कर लेते हैं। मेरे मेन्टिरांग अनुभव के आधार पर मैंने समझा कि अटल टिंकरिंग एक भविष्य के निर्माता- स्कूली विद्यार्थी के जीवन की गुणवत्ता में सतत सुधार की रचना है जिससे लाभान्वित विद्यार्थी भविष्य में होने वाली वास्तविक आय में वृद्धि, उद्यमशीलता, शिक्षा में नवाचार और टिंकर प्रोजेक्ट के जिरए लॉजिक समझ, स्वास्थ्य तथा जीवन की सामान्य गुणवत्ता में सुधारों और प्राकृतिक पर्यावरणीय साधनों की गुणवत्ता में सुधारों में प्रोब्लम सोल्वर बन कर उभर रहा है। मेरी मेन्टिरांग कक्षा के दौरान मेरा लक्ष्य होता है कि नवोद्धिद विद्यार्थी कुछ ऐसे समाधानों पर चर्चा करें जिससे सभी लोगों के जीवन की गुणवत्ता में सतत सुधारों का सृजन हो और पर्यावरण और प्राकृतिक संसाधनों का संरक्षण नियम किया जा सके। मेरे विद्यार्थी प्रित माह दिए जाने वाले थीम (विषय) पर पूरे उत्साह के साथ सम्मलित होते हैं। इस अत्यंत सुखद अनुभव के साथ हम श्रेष्ठ भारत बनाने की ओर अग्रसर हैं।

- 1. Focus on achieving tinkering goals and themes.
- 2. Create sustainable goals that will contribute to our social development.
- 3. Transforming a student into a problem solver and initiating ideating mindset.
- 4. Preparation of mentoring calendar and plan mentoring meetings.
- 5. Stay connected and in communication with students, ATL teachers, and the AIM team.
- 6. Keep documentations and align improvements with feedback.
- 7. Maintaining momentum for entrepreneurship, leadership, and logic solving capabilities



Name of ATL Kendriya Vidyalaya Karwar, Annasaheb Kalyani Vidyalaya, Satara

StateMadhva Pradesh

28. ROHIT PENDHARKAR

Mentoring with ATLs is like upgrading yourself and guiding the students on 21st-century skills and emerging technologies. It's a pleasure working with future innovators to solve community problems and create an ecosystem of entrepreneurship and innovation.

Best Practices

The mentoring best practices involve 1.To make students observe the community problems 2.Think and react in a structured manner 3. Acquire the skills 4. Share your ideas 5. Take ideas from prototype to product.



Name of ATL Shivalik Public School, Learning Paths School

State

Punjab

29. DR RUCHI SINGLA

I used to look forward to the sessions with the students and tried to structure the session as per the needs of the students. Starting from awareness about Aeronautics to drone technology, learning Coding basics to awareness of startups, everything was a learning experience for me too.

- 1. Giving opportunity to all the students
- 2. Discipline and Punctuality
- 3. Positive Attitude
- 4. Inbuilt desire to help students



Name of ATL
Government Sr. Sec. School (Sande Hasham), D.C. Model Sr. Sec. School

Hasham), D C Model Sr Sec School (Ferozepur Cantt)

State

Punjab

30. SAHIL ARORA

To discuss the ideas, I have organized a session with the students of class 6 to 9. A 8 year old kid came up with an amazing idea which can resolve the problems that his father is facing during his farming job. A kid from a small village has an outstanding observation skills. This was an amazing experience of my mentoring journey with ATLs.

Best Practices

Listening and Appreciating the Ideas



Name of ATL
Pravara Public School (Pravaranagar),
Symbiosis Convent School (Kalwa)

StateMaharashtra

31. SANDEEP KHUPERKAR

I was delighted when I got selected as MoC in 2018 and looked forward to teaming up with young minds. When I visited my assigned school-Pravara Public School, I was amazed to see the curious and bright students. That's when I felt that this journey is not only about sharing my experience and wisdom with young minds, but instead, I will learn a lot in this journey from them. The mentors and school need to ensure that we together create an environment that enables them to grow to their fullest potential which is precisely ATL's goal as well. I have created an environment where we travel outside the lab, explore problems and provide meaningful solutions. Students have wonderfully come up with; "Third Eye for Visually Impaired" and piloted it in nearby villages in blind schools and were welcomed with great feedback.

- Be a "learning facilitator" rather than the person with all the answers.
 Help your mentee find people, resources, answers that go beyond your experience and wisdom on a topic
- 2. Develop alternative interpretations and approaches and learn strategies from the past
- 3. Focus on confidence building



Name of ATL Kendriya Vidyalaya No. 1 Rewa State

Madhya Pradesh

32. SANYAM CHHAJED

Mentoring is very special to me and I enjoy doing the same. Students are a powerhouse of ideas and are always curious to know the things. This certainly propels me to nurture them and help them in solving various community problems via digital or physical interactions.

Best Practices

I do following things as part of best practices:

- 1. Letting students explore the things themselves. I just give the right direction wherever necessary. Once they do this, they will automatically do great things thereafter.
- 2. To give small tasks for the week so that they themselves curate the information and come-up with great ideas/information.
- 3. Clustering of students based on their interest, so making small groups and giving small activities to gather information on their own and present to others.
- 4. Students become teachers in which a student who knows few things on some topic (domain specific) takes a session and teaches others.
- 5. Lots of daily life examples help them to understand things easily.
- 6. Being available for them at any point of time and through any medium, helps me to connect with students, teachers easily.



Name of ATL

Techno India Group Public School, Mahatma Vidyalaya, Techno India Group Public School Bolpur

State

Karnataka

33. SAUROV SHYAM

I began my journey with my first online session on the topic; 'Let us Begin'. I wish to express my heartfelt gratitude to all the students and ATL in-charges of TIGPS-Siliguri, TIGPS-Bolpur and Mahatma Vidyalaya, Bengaluru for patiently listening to me, engaging with me even when we were miles apart. I feel personally connected to each one of them. I encountered wondrous questions during my sessions like; "Sir can we make a magnet which can attract all plastics thrown out on the ground and put them in a recycle bin". These questions left a lasting impact on me and I was motivated to enable them, encourage them to think with same curiosity. I am very thankful to the team of Atal Innovation Mission for making me part of the family and giving me the opportunity to work towards a bigger vision of self-reliant India.

- 1. Before starting the journey of tinkering, first inculcate the right mindset amongst the students, so that they are not afraid of failure and understand that it is part of life.
- 2. Nurture the cognitive skills first before imparting technical know-how.
- 3. Build a psychologically safe environment so that they are not afraid to ask, show curiosity and come up with out of the box ideas.
- 4. Never laugh at any ideas they propose.
- 5. Motivate them by appreciating their ideas. However, ask the right questions to guide them, empathize the problem statement and think distinctively, π



Name of ATL GHSS Mezhathur, PHSS Pallipuram, SDVHSS Peramangalam

State Kerala

34. SEBIN SUNNY P

As a mentor of change, I was able to initiate the online mentoring activities through different digital platforms. We initiated weekly sessions starting from June 2020 and in September, I successfully collaborated with Raspberry Pi Foundation UK to conduct two weekly sessions (Friday and Saturday). Now we have children from 5 ATL schools and 8 non ATL schools attending our online sessions. Now I look forward to inviting more mentors and international agencies to collaborate with us to do more online and offline sessions.

Best Practices

I believe that slow and steady wins the race. We need to conduct regular sessions and promote follow-ups and updates periodically to successfully create an innovative ecosystem.



Name of ATL GGSSS, Kondli, New Delhi State Uttar Pradesh

35. SHEILY SHRIVASTAV

There are so many things one learns as a student. There are so many things one teaches as a teacher and the role reverses too. Students also teach their teachers without actually standing up to teach. As a faculty of architecture, I have been on a non-stop journey of learning – not only about architecture, but about design, communication, human psychology and life in general. My learnings were restricted to interactions with architectural students before AIM happened and my boundary of learning and sharing knowledge suddenly expanded. Being a Design Thinking Mentor of Change has so far been inexplicably fulfilling. From writing letters, giving speeches, making drawings, mind-mapping, seeing videos, listening to my stories to actually making waste recycled products – the students have been doing it all with so much energy. All I can say honestly, that they do definitely enjoy those two hours away from their regular curriculum.

- 1. Promote out of the box thinking
- 2. Never underestimate a child's potential
- 3. Demonstrate courtesy and respect for others
- 4. Be a good listener
- 5. Treat everyone as equal



Name of ATL

Rajhans Vidyalaya, Colaba Municipal Secondary School, K M S Dr Shirodkar High School & Jr Collage

State

Maharashtra

36. SONYA DUTTA CHOUDHURY

Worked with students and specially girls on presentation of scientific projectsbeing able to communicate science. Ran competitions, group discussions, screened documentaries.

Best Practices

Looking for gaps in the existing curriculum and working on filling them. Working alongside Atal Tech partners and science teachers.



Name of ATL Excel Public School

State Karnataka

37. SRINATH BIRUR

Great. Journey started in a small way and went on to build huge opportunities for ATL students. Executed many International projects, collaborations and participated in many programs which fetched loads of knowledge to students and to institution too.

Best Practices

Sharing knowledge, 100% participation, Introduced new innovation management, developed huge relationship of each students and connected in many projects. Participated in many International programs.



Name of ATL KV Sala Higher Secondary School, Virudhunagar

StateTamil Nadu

38. SUNDARAM SESHADRI

The evolution of the idea of using online programmes started with the ATL sessions as the first hand experience to the students and now has become a normal practice for the school. Sessions cutting across disciplines including agriculture, environment, biodiversity, copper from ancient civilization to covid times, robotics, artificial intelligence etc. along with effective use of social media and other programmes were organized online. The guests from IIT, Chennai, IIT, Delhi, CTARA, IIT Mumbai, University of Madras, AMD, Manipal Hospitals, Cognizant Technology Solutions, FedEx helped the students understand the advancements and opportunities for students. It was a unique experience to not only the students of the KV Sala ATL but also the students from other schools in Virudhunagar and to schools in Sivakasi and Rajapalayam towns.

Best Practices

It was an altogether new journey for the ATL and the school for the first time.

- 1. Programmes that will have greater impact on the students were chosen and experts were recruited with various expertise. Programmes were chosen to provide better guidance and growth for the students.
- 2. Sessions were held every week so that the students remain active and closely work with the ATL in-charge and school.
- 3. The student's progress was tracked and measured by the ATL in-charge with the help of the mentor. A few students were linked to a student's team of IIT Madras for counseling.



Name of ATL

Fort City School, A P Model School Ayyappanagar, A.P Model School and Government Junior College; Vizianagaram, A.P.

State

Andhra Pradesh

39. DR. S.V.A.R. SASTRY

Organizing sessions on 3 P's- Protype, Product design and Patents. Briefing about the transition from a prototyping to product designing. Understanding IPR, Patents, Copyrights, Trademarks and Design. Discussing various steps involved in filing a patent and registering the inventions and ideas. Making the students to give up any inhibitions by giving practical/easy/daily life examples. Also making the school managements to understand the importance and relevance of AIM.

Best Practices

Organizing and conducting numerous sessions for the ATL students and motivating them for positive attitude. Keeping a constant rapport with the ATL in charges and taking all the opportunities for bringing a positive outlook in the students. Organizing Boot-camps on a regular basis.



Name of ATL Shiksha Bharti Vidyalaya

State Haryana

40. TIRATH

Its incredible journey, where kids are exploring the Skills. And being a mentor I also get to learn so many things. In this pandemic situation, one of the best experiences was to connect with students virtually and enhance the learning.

One of my students developed a website to help her mother's "Beauty Parlour" business.

Best Practices

"Imagination" is the base of every experiment, and I always ask my students to imagine more possibilities to enhance the current things.

And also collaboration with a positive approach.



Name of ATL St John's Universal School, Goregaon west, Mumbai

StateMaharashtra

41. VAISHALI JOSHI

Mentoring school children from 6-12 grade is an amazing experience. Being a design professional as well as a faculty at design school, interaction related to design is not new. But design interaction with school children is very different as they are much more curious, inquisitive, and have tremendous potential to explore. Principal of my school is extremely supportive and flexible which has helped develop Design Thinking in children to their expectations. My journey has been very fulfilling and get charged after these sessions for the rest of the week.

- I prefer to work with children of different age-groups separately and believe introductory sessions are extremely important for students as well as faculty.
- An overview about Design Thinking and making them understand that it's not just about a profession or some task in technology to resolve something but also a way to live is extremely important.
- 3. I work with their day to day life's observations and needs. 'Listening to their world' is a key for my sessions. Whether online or offline, Design Thinking can be nourished and even though present pandemic has snatched their lab experience, but still keeping them on fire is challenging.



Name of ATL

Sri Sankara Vidyalayaa, Karur

State

Tamil Nadu

42. VALLIAPPAN MANICKAM

Truly a rewarding lifetime experience in acquiring the spirited "Innonet of Things" for our mission of innovative journeys with the smart pool of young incredible innovators.

Best Practices

Interact to Inspire for Innovation in India. Our ATL students interact with multidisciplinary experts from various parts of the world, especially Indian S & T diaspora pool, to get the blend of international experience in science, technology, economics and lifecycle thinking domains for deriving the best in class collaborative solutions.



Name of ATL

DAV Dayanand vihar, ASN mayur vihar, Lotus valley

State

Delhi

43. VIJI SRIDHAR

As luck would have it, me becoming the Mentor coincided with the breaking of the pandemic in February'20. But it was not to deter my enthusiasm & zeal of looking beyond adversities Initially I was clueless,not knowing How to start my mentoring journey in schools without physical reporting .My transition from an ATL coordinator to a MOC saw a great transformation from physical mentoring to virtual. I felt empowered Children enjoyed every bit of my sessions and participated enthusiastically. To name a few, sessions on prototyping, Micro innovations, design thinking, patenting, Communication, critical thinking 3D printing and collaborations Virtual tours and celebrations changed the topography of the my journey. It's rightly said "Journey is more beautiful than the destination"

I am thankful for the faith reposed in me by AIM, which motivates me to undertake new initiatives & to augment the level of imparting knowledge at the grass root level. It has enabled me the freedom of devising education-centric programs & knowledge-centric workshops for students at various levels. My take away from 2020

Be adaptable to situations and make much out of the available situation

Best Practices

Micro vs Macro innovations, Ideation, Design thinking, 21st century skills, Critical thinking, Effective Communication, soft skills.



Name of ATL Kendriya Vidyalaya No 2 Afs Pune

StateMaharashtra

44. VIKAS SHARMA

It's amazing experience to teach kids and learn from them.

Best Practices

Empathize with students and encourage two way communication



Name of ATL
Thirumala Vidya Niketan
State
Karnataka

45. VISHNUPRIYA SHARMA THIRUMALE

With the pandemic situation the ATL Marathon got extended. So, I encouraged the school to nominate as many students as possible for the Marathon. The school acted quick and we had 4 projects which were selected by the students themselves. The students, with their dedication and enthusiasm, presented their best foot forward with certain direction from us. What worked for us: An infrastructure in place for mentoring (like ATL Marathon, consumables provided for the lab); Supporting resources (RMoCs, WhatsApp groups for communication and clarity); School with students who are ready to learn and most importantly, all these aligned with the vision to create and innovate.

- 1. Facilitate not direct-ask questions
- 2. Show up in time and stay available
- 3. Treat failures as opportunity to learn and a step closer to success
- 4. Leverage all available resources
- 5. Keep communication channels with school teachers, parents, RMocs, open

ATL Tinkerpreneur

In the summer of 2021, AIM organised the very first two month long, digital skills and entrepreneurship bootcamp called "ATL Tinkerpreneur" – deriving the name from 'enabling students to *tinker* from the comfort of their homes and become an entre*preneur* this summer'. The bootcamp began on May 31st and ended on August 1st.

The bootcamp witnessed participation from over **9000 students** and leveraged the knowledge and hands-on involvement of over **650 Mentors of Change**. The mentors were mapped to a group of 15 students who received regular mentorship throughout the bootcamp. This when combined with one- to-many live mentoring and inspirational sessions by industry leaders, provided students a thorough introduction to entrepreneurship.

Over **50 one-to-many live sessions** were also organised by AIM with experts across India organised which garnered over **4.5 lakh views** in a time span of 9 weeks. These sessions were not only conducted in English but in **6 regional languages** as well – Hindi, Marathi, Tamil, Telugu, Malayalam and Kannada.

All students and mentors also were given access to an **exclusive portal developed by AIM** which was a repository of digital and entrepreneurial curated learning resources, do-it-yourself content, simple assignments to enable them to create their own digital product and venture.

Read more about ATL Tinkerpreneur



The videos on ATL Tinkerpreneur can be found here



This bootcamp relied heavily on the passion and expertise of Mentors of Change. We have identified the top Mentors of ATL Tinkerpreneur on the basis of certain metrics such as the feedback given to them by their students, their consistency in reviewing every assignment submitted by their students, and finally also the performance and consistency of the students that were mapped to them.

Mentors, we are proud of you!

Let's meet the Top Mentors of ATL Tinkerpreneur!



A shout out to the Top Mentors of ATL Tinkerpreneur



Aditya Sharma Rajasthan



Alwin Vinifred C Tamil Nadu



Anbarasu P Tamil Nadu



Arvind Janardan Londhe
Maharashtra



Atul Ranjan Bihar



B Priya Tamil Nadu



Chhagan Lal Bothra Rajasthan



Deivanayagi STamil Nadu



Dhanpat Raj DhariwalRajasthan



Dr Amit SehgalUttar Pradesh



Dr Pradyut Kumar Biswal Odisha



Dr S V A R Sastry Andhra Pradesh



Dr Sunita Vikrant DhavaleMaharashtra



G Saravanan Tamil Nadu



Gayathri Manikutty Kerala



Gowsikraja Tamil Nadu



Hetal Sonpal Haryana



Joji Jacob Kerala



Kamala B Tamil Nadu



Ketna Atul Matkar Maharashtra



Kiran Kumar H S

Karnataka



M.Vasavi Telangana



Mandeep Kaur Chohan Andhra Pradesh



Manikant RoyGujarat



Meenakshi Sundar K Tamil Nadu



Mehak Kharbanda Delhi



Pandyaraj V Karnataka



Prabu DJammu And Kashmir



Prashant M Kakde Maharashtra



Pratyush Priyadarshi Karnataka



Pravar Joshi Madhya Pradesh



Praveen SharmaBihar



Pushpa Kumari Himachal Pradesh



R M Asha Tamil Nadu



Raju Tamil Nadu



Ramneek Kalra Haryana



Remya V Tamil Nadu



Renu Sharma Rajasthan



Renukadevi B Tamil Nadu



Roopa D Kerala



Sandhya Sandeep Save Maharashtra



Saswati Kumari Behera Maharashtra



Saurav Singh Delhi



Senthilkumar BTamil Nadu



Shivam SinghUttar Pradesh



Soumitra Dey Uttar Pradesh



Sumathi S Tamil Nadu



Tasneem HotelwalaGujarat



Tirath Haryana



Vijisridhar Delhi



Vikram Gupta Uttar Pradesh



Vinay Taneja Delhi



Vinod Beda Rajasthan

