Vigyan Ashram Status Report

Volume 43 Issue 3 **March 2026**

In this issue

A] Remembering Amma: ART-Day celebration on 18th march

18 March was observed as 'Art-Day' on the 9th anniversary of Amma (Smt. Mira Kalbag). A homage was paid to 'Amma' through 'vipassana meditation'. This year we tried to learn Rangoli, Soft toy making and Jewellery making. Asmita lab team led these workshops as experts. A dance performance was practised for a week by ladies' staff and students. The program concluded with their dance performance.



B] Fifth Make-a-thon on advanced metal fabrication

The Fifth Makeathon on 'Advanced metal fabrication' skills for ITI students were held from 9th to 13th March for Shri Kulaswamy ITI Wadj. Total 22 students from the welder and fitter trades were participated. These students followed a design thinking approach and developed a kitchen table for guest hostel, a display rack, D. C. electrical wheel bureau. During the program, students gained hands-on experience in various skills such as different types of welding, powder coating, CNC lathe, Wood Router, Plasma cutting. During the last 12 months, total 203 rural boys & girls from Industrial Training Institute (ITI) and engineering & science colleges have been trained in 'design-thinking' methodology through 5-day residential make-a-thons. We are thankful to SPA Education Foundation & La-Foundation (Dassault systems) for their financial support to the program.



C] Inauguration of IBT program in Gujarat

The IBT (Introduction to Basic Technology) programme was inaugurated at Sokhda, Vadodara, Gujarat with the financial support of Schaeffler India. CSR Box is implementation partner for the program. The initiative is being implemented in 5 schools to introduce vocational education from Grade 6. The programme focuses on practical learning and hands-on training. A Kaushal Mela was also organized where students showcased their skills and projects. Mr. Rajesh mandan (Plant head, Schaeffler), Mr. Yogesh Kapse (Head-CSR, Schaeffler) were chief guests. Mr. Ranajeet Shanbhag and Ms Archana Shinde participated the program (STARS Forum).

D] STEM Fair organised in Ranchi

STEM Fair was organised on 18th March at +2 Girls High School, Bariyatu, Ranchi. 40 KGBVs and JBAVs from seven districts actively participated in the exhibition. Total 120 students (Grades 6–10) and 50 teachers from these schools participated in the fair. They presented 60 innovative STEM models and experiments.
Dignitaries from Unicef from country office and state office, Govt officials, representatives of donor agencies visited STEM fair and interacted with students.

STEM Fair

Visit of delegation to KGBV, Itki, Ranchi

A visit of donors was organised by UNICEF to KGBV schools. They are funding STEM education program in KGBVs. Dr. Yogesh Kulkarni attended meeting with donors on 16th March at UNICEF Ranchi office. On 17th March, delegation from donors and UNICEF team visited KGBV Itki and KGBV, Chanho.

E] Entrepreneurship Development Program (EDP) update (VATF):

Training workshop: In the month of March, following training workshops were conducted –

- March 1: A one-day training workshop was conducted for 'Women Self-Help Group' (WSHG) at Tambe village (Junnar, Pune). Training was attended by 50 women to learn Poultry & goat farming training.
- March 7th & 8th: A technology-based entrepreneurship development program was conducted for WSHG members of Kokankheda village associated with RAH Foundation (Nasik). Training was attended by 25 women to learn basics of business-plan development including conducting market survey, investment plan, calculating ROI etc. through hands-on activities.
- March 14t: A one-day training workshop on 'Papad & Spice making enterprise' was conducted for women-entrepreneurs associated with the WOTR organization. Training was conducted at Pabal campus and Narayangaon. Total 8 individuals attended the training program to learn making two types of Papad and 10 types of spices on a commercial level.


Field visits:

- Yogesh Onkar conducted a field-visit to grass-root organizations in Amaravati, Nagpur, Yavatmal and Gadchiroli district. The field visit was aimed to build a long-term partnership for implementation of skills training & EDP programs in Vidarbha region. He visited 7 organizations during 1st to 4th March in Amratvati and Nagpur region and 5 organizations in Gadchiroli, Yavatmal and Wardha region during 24th to 27th March. During the visit he also met Adiwasi Ashram school administration & students for awareness for DBRT course. We are planning field training workshops and post-training handholding to beneficiaries in collaboration with this organization.
- Yogesh Onkar visited Khoj Organization (Gaurkheda, Paratwada) on 23rd March to meet Mr. Bandya Sane, Ms. Purnima Upadhyay & team. Aim of the visit was to collaborate for tribal students skills training & EDP programs under Shroff Foundation support program.

Hero of the month:

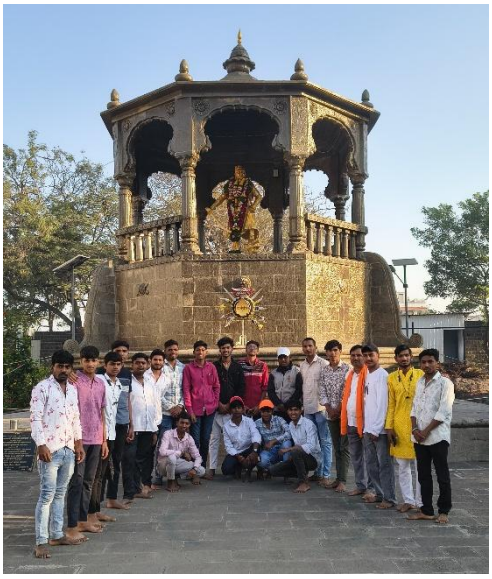
Mr. Arjun Takalkar started a welding shop at Wafgaon, Taluka Khed, Pune. He is Vigyan Ashram's 2012-13 DBRT student. He has invested Rs. 1,40,000/- to purchase machines and to build a shed.

F] Diploma in Basic Rural Technology (DBRT) course updates:

Apart from regular skills training activities, DBRT students enjoyed field trips & celebration of Holi festival. Following are some of the important learning activities as –

- On 2nd & 3rd March, students celebrated the festival of Holi with natural colours and electrical Holika. The home & health section students prepared colours from dried flowers, maize flour. They celebrated festival of colour in environment friendly way.

- On 6th March, DBRT students visited 'Vijay Stambh' at Koregaon Bhima and Chatrapati Sambhaji Maharaj Samathi at Tulapur as field trip. On the way, they met with our alumni entrepreneur and enjoyed local food & hospitality.
- Admission campaign DBRT 2026-27 batch: For creating awareness on DBRT 2026-27 batch, VA team conducted field visits at Nadurbar (5th & 7th March), Tung & Shirgaon-Pune (2nd March), Dharni & Melghat (3rd to 6th & 14th to 17th March), Maher institute (Wadu-Koregaon on 25th March). The team also conducted a webinar on 22nd March with 30+ participants.
- The Maharashtra State Board of Skills, Vocational Education & Training (MSBVET) practical & theory examination was conducted on 30th March & 2nd April. Total 48 students attended the exam for a 6-month certificate course in Basic Food-Processing (08 students), Electrical Wireman (20 students), Solar technician (11 students) and Gas & Electrical Welding (09).



Section specific skills training updates:

<u>Energy & Environment section:</u> In the electrical section, students attended a Solar Photovoltaic Panel manufacturing and installation training at Hoshang Patel Tech Centre (Lavhale, Chiplun, Ratnagiri) during 9th to 16th March. Total 9 students participated in the training. They learned design & assembly of solar PV panels, installation & repair of solar street lamps and solar inverter systems. At Pabal campus, students learnt land survey techniques (plan table & dumpy level survey). As regular maintenance work, they repaired a water pump DOL starter, a pump of evaporative air-cooler and installed ceiling fan & water heater. Total value of their community service was Rs. 9,500/- including students earning of Rs. 3,390/-.

<u>Engineering section</u>: In the engineering workshop section, students learnt welding & powder coating skills while fabricating a safety door to the new hostel. Students worked on fabrication of 'semi-automated chapati making machine' and 'furnace oil stove' using CNC plasma cutter and milling machine. They also completed WC installation & concealed plumbing work for 'new ladies toilet block'. Total value of their community service was Rs. 17,546/- including labour charges of Rs.2,359/-.

Safety door Installation

<u>Home & Health section:</u> In Home & Health section, students practiced food processing skills while preparing bread (28 kg), Tamarind Sauce (5 kg), Peanut ladoo (80 units), Moringa Chikki (28 kg) and Instant Pooran mix (4 kg). They also prepared cakes, veg-patties & puff, cookies, Amla pickle & supari as trial production. The total value of their community service was Rs. 25,400/- during month of March.

<u>Agriculture section:</u> Students harvested 1000 kg of 'sweet corn' and sold it in the market for Rs.7/ kg. They also produced 100 Papaya and 50

Solar Panel Training

Drumstick plants in the nursery and planted 50 capsicum plants in polyhouse. Students worked in a team to fabricate a shade-net structure for production of vermicompost & Liquid Organic Fertilizer (LOF). They filled 2 vermicompost beds by using approximately 1.5 to 2.0 tons of Farm-Yard-Manure (FMY) from a cow & goat farming unit.

Computer section: In the computer section, students learnt floor plan creator application along with presentation and poster design AI applications. Students updated their personal blogs and prepared portfolio documents. Individual students blogs can be found on: https://alumni.vigyanashram.blog/category/batches/2025-26/

G] Technology development & Design Innovation Centre (DIC) updates:

Vibro-Thermal-Disinfector for store grain: During grain storage, pests deteriorate the quality of food grains. A Vibro-Thermal-Disinfection (VTD) kills store grain pests (& its eggs) by heating it to 50-60 Deg C for 8 to 10 min. Vibrating movement ensures better heat and disinfection efficiency. A project on developing VTD for commercial utilization started at Pabal campus. We have built a prototype by using Bhabha Atomic Research Centre (BARC) design. The working prototype will be fabricated with 40 kg/hr capacity & field tested at military campus i.e. 441 (I) Supply Platon ASC Ch. Sambhajinagar. During March, the team finalized drawings, Bill of Material (BOM) and started fabrication work.

Vibro thermal Disinfector

Developing a 1 MT onion storage:

Harshad, Yashwant & team completed fabrication of 7 units of 1 MT capacity modular forced ventilated onion-storage system. A live trial with 2 MT onion (1 MT for control Vs 1 MT for experimental) system with temperature, humidity, CO_2 and H_2S gas sensors. The data collected from sensors will be used in deciding air-circulation requirements (exhaust fan on-off timing, speed etc). After initial trials at Pabal campus these units will be installed with selected farmers for field trials.

Black-Soldier-Fly (BSF) & Backyard poultry farming:

- Vigyan Ashram's work on Black Soldier Fly (BSF) technology development & field testing has been included in the Organic Waste Management in Urban (Tamil Nadu) manual. The manual is published by the State Planning Commission, Government of Tamil Nadu (ISBN: 978-81-993139-1-0). We are very thankful to authors and publishers for acknowledging our efforts in this regard. (VATF)
- A BSF based poultry feed has been formulated and lab-tested for its nutritional analysis. The nutritional analysis of the feed was done at Venkateshwara Hatcheries Laboratory (Pune). The feed report showed 13.09 % protein (slightly low) and 9.25 % fat (moderately high). The feed was prepared from dried (non-de-fated BSF larvae). Based on the feed analysis necessary changes will be made in larvae processing & feed formulation. Ganesh conducted field visit & on-site support to 15 back-yard poultry farmers in Taleghar (Ambegaon) region on 5th March.

Other highlighted technology development work:

Rotating wheel hydroponic

- Harshad conducted trials on drying of Sweet-Corn silk (LOD 86.7 %) in a flat-bed and inclined panel solar dryer. He found an inclined panel solar dryer removed 80 % water in 3days drying time. Dried sweet-corn silk is commonly used in herbal tea and herbal medicine.
- Nachiket completed fabrication of a small prototype of a rotating-wheel hydroponic system. The rotating wheel hydroponics are popular as it gives better nutrient distribution and root aeration as compared to Nutrient Film Technique (NFT) and Deep-Water Culture (DWC) systems. He will test it & compare results with NFT & DWC systems.
- Sayali found dosing of Iron (Fe-2.5 ppm), Magnesium (Mg-32 ppm), Manganese (Mn-1.9 ppm) along with other major nutrient (N-162 ppm, p- 57 ppm, K – 169 ppm, Ca -170 ppm) help Merigold to overcome deficiencies with better root growth & flowers in hydroponics system.
- Abhijit completed fabrication of 'flat-bed' dryer and delivered it to Women Self-Help Group (WSHG) formed by Mr. Sachin Patwardhan (Ratnagiri) on 25th March.
- Abhijit conducted a webinar on 'design-thinking approach of technology development' for engineering students supported by Cybbage Khushboo Foundation on 31st March.
- In the soil analysis lab, the team tested Organic Carbon (OC) of 39 soil samples with Walkley & Black method and colorimetric (Prerana-Lab) kit. The team also tested 3 water samples for E.coil presence.
- Amisha Kashyap completed her 1 year research fellowship in Plant Tissue Culture (PTC) section. She worked on development of the PTC protocol for the Aglaonema plant.
- Dr. Yogesh attended DST -Expert Committee meeting to review progress of TAP-RISE online on 30th March.

H] School based vocational program updates:

Introduction to Basic Technology:

- Koushal Mela was organized at Rakesh Jain Vidyalaya Shivkar on 5thMarch, at Dnyanada Vidyamandir, Narayangaon school on 11th March, and at Hindustan Antibiotics School on 28th March. The mela was organised to showcase practical skills and year-long learning under the IBT (Introduction to Basic Technology) program.
- Students from Khandaki School developed an innovative, eco-friendly backrest made from a fermented mixture of soil and cow dung to help drivers and office workers deal with back pain and body heat. Unlike common plastic or nylon versions, this product provides a natural cooling effect and is completely biodegradable, making it safe for the environment.

- On the occasion of National Science Day, the TATA Technologies supported 9 schools organized a workshop "Science Around Us" . These schools invited local traditional artisans to campus to showcase their unique skills, such as pottery, carpentry, Mochi and Blacksmith. While artisans were showing their art, teachers connected this art with scientific concepts like friction, heat transfer, and chemical changes. It was an exciting experience for students as they could actually see science working in real life rather than just reading it in books.

Learning By Doing (LBD) (Uttar-Pradesh):
In the ongoing teachers training program, so far 3288 teachers from 16 districts of Uttar Pradesh are trained since Aug 2025. In this month, following trainings were conducted at SIRD, Lucknow:

Date (March 2026)	Batch number	Districts	Participants
9th to 11th	27	Banda, Jalun, Jhansi	82
12th to 14t	28	Firozabad, Moradabad, Pilibhit	89
16th to 18th	29	Etawa, Sultanpur, Hathras	90
19th to 21st	30	Kaushambi, Manpuri, Mau	80
23rd to 25th	31	Gonda, Kanpur Nagar	90

I] FAB lab & DIY lab update:

Fab Lab and academy:

For Fab academy, students worked on four assignments in the month of March. Electronic PCB making for different electronic assignments was focused for this month. Kishore and team designed and fabricated own PCB to combine all 4 assignments including electronic production, input, output device and networking & communication.

DIY Lab:

DIY summer workshops started with Niramay Bharat organization for students from grade 6-9.

Two workshops were conducted this month. First was conducted at Upper Indira Nagar, Bibwewadi, Pune between 23rd March to 27th March with 22 students. Another workshop was conducted at Janata vasahat, Parvati between 31st March to 4th April with 30 students.

- Regular membership students worked on following DIY projects as -

Workshop with Children of Niramay

Student learning activity	Video
Fun with Electronics- Hardware and Programming -	https://youtu.be/qehwnjJBx4c?si=0OnrtoO-25jfoVWD
3D Designing and 3D printing a Gyroscope	https://youtube.com/shorts/rdP8mYOUJAc?feature=share
Building Simple Machines	https://youtu.be/42llqEjr_u4?si=8vj3IMto33BUPXsd
RC Reversible Car	https://youtu.be/c9smf-vOgF0?si=fOkEKwrSF7TdFlye

- Partnership with Collins Aerospace for strengthening ATL in Karantaka:
  Vigyan Ashram entered into agreement with Collins Aerospace for working with Karnataka Residential Educational Institutions Society (KREIS) to strengthen 147 residential schools. The collaboration includes strengthening ATLs, STEM education and English enhancement program. Vigyan Ashram entered into partnership with Stepup for India foundation for English enhancement program. As a first step of the project, computer system and English language audio material was supplied to schools. First teachers training program in planned in April at Pabal.

J] Other titbits:

i. Yashwant & Ranajeet submitted a project proposal for Department of Science & Technology (DST), SAH-SANKALP Scheduled Caste (SC) Subplan Scheme on appropriate technology-based livelihood enhancement @ aspirational blocks of Dharashiv district in Maharashtra state.
ii. A News article on use of renewable energy & smokeless chulha at Pabal campus published by 'Sakal Newspaper' on 17th March. We are very thankful to 'Sakal' & local reporters for creating awareness in the context of shortage of LPG cylinders.
iii. The ASMITA (women led tailoring unit) team completed order of 75 kitchen aprons, 20 pillow & bed covers to earn a community service of Rs. 28475/-. They exhibited products in the SNDT (Pune) and Rajgurunaer exhibitions.
iv. Yogesh Onkar participated in 'Rural Development through Convergence' training arranged by BAIF organisation.
v. Yogesh participated in panel discussion on 'Why creative matters' organised by Pratham at Pune on 12th March.
vi. Fab-Lab team developed a Human Resource Management (HRM) mobile application for Vigyan Ashram staff members. It has geo-location-based attendance, leave application & other administrative features.
vii. Vigyan Ashram's supporter Bhondage kaka turns 95 years. He wanted to celebrate his birthday at Vigyan Ashram. He gave party to all ashram residents and VA students on 27th March.
viii. Weather record – Rainfall of the month – 00 mm (Total: 793.87 mm), Max temp-39.00°C, Min Temp – 15.00°C, Humidity –32 %, Water height in well– 2.60 m, Waste-water COD- Boys hostel- 200 ppm, Girls hostel- 190 ppm (within limit).
ix. Energy consumption record- Electricity unit – III Phase- 2771 units, I Phase import- 52 units, solar generation III Phase – 1495 units & I Phase- 712 units, Solar generation (off-grid)-134 units, DG used – 3.20 Hrs, Biogas- 44 m3 (880 kg dung used).
x. Animal Husbandry section update – Milk production –562 Kg (Rs :-360/-), Goat farm – 2 new goat kids added in stock (average weight of kid -99.16 gm/day).
xi. Online visitors: www.vigyanashram.com –2228 (Organic-1378, Other-850), Pabal campus visitors: 395.

J] Data Report:

https://shorturl.at/f2895

(Work at Vigyan Ashram is supported by: EATON Foundation, LTI-Mindtree, SPA Education Foundation, Dept. of Science & Technology, La-Foundation, UNICEF, TATA Technologies Pvt. Ltd, MAHLE Engineering Services Pvt. Ltd, Schaeffler India, Texol Engineering Pvt Ltd, K R Shroff Foundation, INDUSA Endowment, Savitribai Phule Pune University, Asha for Education, Praj Foundation, The Prabhu Trust, STARS Forum and many individuals and foundations).

Photo Gallery:

सकाळ TODAY

इंधन बचतीची 'सौबानिचू' त्रिसूत्री

पाबळच्या विज्ञान आश्रमाचा ऊर्जा बचतीचा प्रयोग

शिक्रापूर, ता. १७ : वाढती इंधनटंचाई आणि गॅस दरवाढीवर पाबळ (ता. शिरूर) येथील 'विज्ञान आश्रमा'ने सौरऊर्जा, बायोगॅस आणि निर्धूर चूल (सौबानिचू) या त्रिसूत्रीचा यशस्वी प्रयोग केला आहे. या हायब्रीड यंत्रणेमुळे आश्रमाच्या स्वयंपाकघरात ८० टक्के एलपीजीची बचत होत असून, ग्रामीण भागातील नागरिकांना याचे मोफत मार्गदर्शन दिले जाणार आहे.

दिवंगत शास्त्रज्ञ डॉ. श्रीनाथ शेषगिरी कलबाग यांनी १९७९ मध्ये स्थापन केलेल्या या आश्रमात सध्या १०० विद्यार्थी निवासी आहेत. १९९५ पासून येथे प्रायोगिक तत्त्वावर पर्यायी इंधन व्यवस्था राबवली जात आहे. यामध्ये 'पॅराबोलिक सोलार कुकर'च्या मदतीने डाळ-भाजी शिजवली जाते, तर दूध गरम करण्यासाठी आणि नाश्त्यासाठी निर्धूर चुलीचा वापर होतो. यामुळे १०० मुलांच्या खानावळीत १९ किलोचे व्यावसायिक सिलिंडर तब्बल २० दिवस पुरते. केवळ चपात्या भाजण्यापुरताच गॅसचा वापर मर्यादित ठेवल्याने मोठी बचत साध्य झाली आहे. या तंत्रज्ञानामुळे अन्नाची चव आणि पौष्टिकताही टिकून राहते, अशी माहिती संचालक रणजित शानभाग यांनी दिली.

पाबळ (ता. शिरूर) : विज्ञान आश्रमात अनेक संशोधनांनंतर दररोज १०० मुलांच्या स्वयंपाकासाठी वापरली जाणारी निर्धूर चूल.

यंत्रणेत अनेक सुधारणा

- हवामानातील सततचे बदल आणि शेणाची उपलब्धता लक्षात घेऊन आश्रमाने या यंत्रणेत अनेक सुधारणा केल्या आहेत. पर्यायी इंधन प्रकाराचा प्रसार व्हावा म्हणून ग्रामीण युवकांसाठी नियमित मोफत कार्यशाळाही घेतल्या जातात. अर्थात, या कार्यशाळांमुळे या क्षेत्रातील रोजगार संधीही नव्याने उपलब्ध होत असल्याचे रणजित शानभाग यांनी सांगितले.

Sakal paper news about renewable energy

Annual review meeting of VA projects (VATF)

Membership students operating 3 D printer @ DIY lab

Holi celebration at Pabal campus

Toy making on the occasion of Art Day @ Pabal

Holi celebration at Pabal campus

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