

Vigyan Ashram Status Report

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A] Graduation of Diploma in Basic Rural Technology (DBRT 2023-24):

DBRT batch (2023-24) completed their course on 25th June 2024. DBRT is Vigyan Ashram's flagship skills training program for rural youth. Total 46 students (out of 49) successfully completed 1-year residential course and placed for apprenticeship. Their graduation ceremony took place on 25th June at Pabal. Mr. Nilesh Garge (Praj Industries), Mr. Mandar Pophale & Mr. Suresh Renuse (Praj Foundation) were Chief Guest for graduation ceremony. Following students received awards on the occasion:

- Best community service: Malikarjun Alkalkote for earning of Rs. 33,171/- (Total community service earned by batch is Rs. 2,93,394/-)
- Best students of the batch: Vishal Dhanade (89.00 %)
- Best blog & documentation: Soham Kolanki ([Soham Kolanki | Vigyan Ashram](#))

Learning journey of DBRT students is captured in short video - [DBRT Batch 2023-24 \(youtube.com\)](#).

DBRT students learning activities can be found on: <https://alumni.vigyanashram.blog/dbrt-batch-23-24/>

We wish all the best for outgoing DBRT students. We are thankful to ASHA for Education, Eaton Foundation, Praj Foundation, La-Foundation (Dassault Systems), SPA foundation & many individual donors for supporting DBRT program.



B] Seed the Future Entrepreneur Award:

SDMNPV School (Chikhali, Pune) won the first prize in the 'Made in 3D - Seed the Future Entrepreneurs' competition organized by La Foundation (Dassault Systems) & Atal Innovation Mission (AIM). The program encourages school students in creating pseudo startups, developing innovative ideas, designing and

manufacturing dream products using 3D Digital Technologies, and marketing campaigns. Chikhali-IBT students participated with their innovative solution for manual sugarcane harvesting: the “Quick-multi cutter”.

This product is designed for small-scale farmers, offering an easy-to-handle, affordable tool with an adjustable cutting rod. Their ‘idea’ has been selected from 140 participating schools & 12 finalist across India. Grand-finale program was held on 8th June. Vigyan Ashram team mentored them. Out of 6 IBT schools mentored by VA team, 4 made it to semifinal. The success of the students shows impact of IBT program in students’ creativity & skills development. Students project details can be found on <https://www.youtube.com/watch?v=nCSR3MYP8yo> and

<https://www.youtube.com/watch?v=KtUOmUP8Y3Y>

Award was given at the hand of Dr. Chintan Vaishnav (Program Director, Atal Innovation Mission, Government of India) , Deepak N G (Managing Director of Dassault Systemes India), Sudarshan Mogasale (CEO of Dassault Systemes Solutions Lab) and Jayesh Rathore (Technology Advisor of Akshara International School).



C] ‘Atal Innovation Mission’ director, Dr. Chintan Vaishnav visited Vigyan Ashram

AIM Director Dr. Chintan Vaishnav visited Vigyan Ashram on 9th June. He was accompanied by Mr. Prateek Deshmukh and Mr. Suman Pandit. During the day long visit, they visited various projects and facilities on the campus and interacted with students. We had discussed various programs of Vigyan Ashram especially with Atal tinkering lab, Design innovation center. We also discussed possibilities of future collaboration. Dr. Chinan visited Vigyan Ashram 10 years back for a Fab Lab project at MIT, USA. He stayed at ashram for a month at that time. This visit gave us a chance to refresh old memories and associations.



D] ‘Introduction to Basic Technology’ (IBT) Instructor’s Training Program:

June is the beginning of new academic year! We had conducted annual refresher training for IBT instructors. We have introduced new skills viz. advanced carpentry tools, solar PV installation, Jamun processing, using various mobile applications for farming etc. We have also included soft skills training on entrepreneurship development, documentation & video-reels making in this training. Instructors were introduced with ‘New Education Policy (NEP)’.

Training was conducted in 2 batches –

i) 1st batch: 34 instructors (10 schools) from 5th to 8th June. Schools from Talegaon region of Pune, financially supported by M/S Schaeffler India CSR initiative.

ii) 2nd batch: 43 instructors (12 schools) from 11th to 14th June. Schools from Ambegaon, Shirur, Rajgurunagar (Pune district), Waghere (Nasik) supported by M/S MAHLE Engineering Services India Pvt. Ltd. & TATA Technologies CSR initiative.



Learning new welding technique



Planning community services for next academic year

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

Apiculture enterprise - Webinar & training: A webinar on enterprise opportunities in 'apiculture' (honeybee

farming) was conducted by EDP department on 9th June. Webinar was attended by 45 participants. Bee-keeping expert Mrs. Shweta Gaikwad guided participants on honeybee farming, honey extraction, marketing etc. (video link- <https://youtu.be/OrMu63ZORj4?si=4Czz-oPk9iWT3eIY>)



Based on the feedback of webinar & interest of the participants, a 2 days hands-on training workshop was organized on 29th & 30th June at Pabal. Training was attended by 16 participants to learn bee-keeping technologies, bee handling, feeding management, bee boxes design, harvesting, processing etc. Mrs. Shweta Gaikwad trained participants at Pabal campus and Mata Balak Sangopan Kendra, Rajgurunagar.

Marketing linkage & mentoring support:

- Ganesh visited Dnyaneshwar Butte (DBRT 2011-12 student) to provide marketing linkage support. Dnyaneshwar has started 'Shrikrushna Dairy products manufacturing & retailing shop' at Peth-Pargaon (Tal-Ambegaon, Pune).
- Van-Dhan Vikas Kendra Training: Yogesh visited Kolhewadi (Junnar, Pune) to meet Van-dhan members. We have organised one day field visit for Van-Dhan members to M/S Agrozee Organic Millet processing unit and Shambhu Mahadev Dairy (Urali-Kanchan, Pune) on 18th June. EDP team is providing technical support to purchase processing equipment & machineries procurement.

Hero of the month:

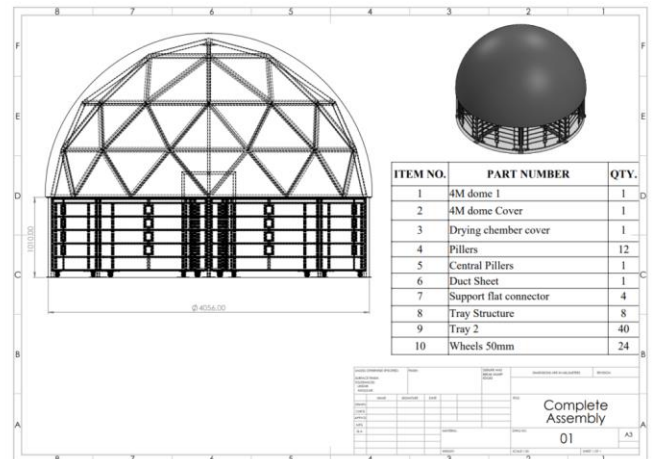
Mr. Somnath Gorade started his electrical and home appliance enterprise "M/S Maharaja Electricals" at Khadakvadi, Tal-Ambegaon (Dist.-Pune). Somnath is our short-term course student & getting technical mentoring, licensing and market linkages support. He has invested Rs. 70,000/- for new enterprise.

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

i) Red-Chilly dryer (DST SUNIL):

Fabrication of 200 kg red-chilly loading capacity solar dome dryer has started at Pabal. It is a 4 M diameter dome structure with black HDPE plastic cover. The dryer will have dome-shape air heating chamber (top) and 40 triangular trays (bottom) with central air circulation fan. After fabrication, team will collect data on temperature & humidity profile at different level to decide air circulation & exhaust fan running time. Detail of dryer fabrication can be found on-

<https://vadic.vigyanashram.blog/2023/11/07/solar-chilli-dryer/>



ii) Black-Soldier-Fly (BSF) based composting & poultry farming:

- The BSF breeding cycle restarted after lowering of atmospheric temperatures in June. Mahesh started collection of BSF eggs & 5 Days Old Larvae (DOL) from breeding chamber. He processed 75 kg kitchen waste to get 6.2 kg pupae, which will be further used for breeding.
- M.Sc. Biochemistry student interns from SPPU chemistry lab carried out analysis of dried BSF powder for its protein, carbohydrate and fat content. Their results showed 55 % fat, 32.37 % protein (Kjeldahl method) and 11.84 % carbohydrates. The fat content is relatively higher than earlier analysis done at BAIF (Urali Kanchan) laboratory. They will repeat analysis with fresh samples to verify reason of higher fat content.
- On 20th & 26th June, Ganesh & Ranajeet visited backyard poultry farming beneficiaries at 8 tribal hamlets of Malin, Ahupe and Talegaon region (Ambegaon block, Pune). During their visit, they collected post-intervention data & guided farmers on better feed management, housing, vaccination. Though beneficiaries are satisfied with birds' growth & economic benefit but they are facing issues like mortality due water-borne diseases, wild-animal attack, lower feed quality etc.



BSF breeding chamber

hamlets of Malin, Ahupe and Talegaon region



Plantation in polyhouse

iii) Polyhouse climate control system development:

- Electrical wiring work for newly installed solar water pump for fan-pad & fogger system, temperature humidity sensors is completed during June.
- 318 seedlings of capsicum (variety-Indra) are planted in polyhouse. The crop growth will be studied with respect to automated climate control system. Data for pest (mite & thrips) incidence will

also be collected for selected 60 plants to check pest incident & growth intensity with respect to temperature & humidity.

- Mr. Lohit Kalay (PhD students @ IIT-Pawai) visited Vigyan Ashram on 22nd June. Lohit & his team at IIT is working mobile app-based pest-management system.

Other research-fellow projects:

- In the food processing section, Anjali has started working on fermented khaman-Dhokla ready-mix powder while Rutuja is working on standardization of millet-based noodles.
- Himanshu and Mahesh completed modifications in E-Rikshwa based sugar-cane juicer. The juicer was packed & dispatched to New-Delhi for further field trials.
- Sidhant Said has started initial experiments on water-less urine project. He is trying rotating drum filled with saw-dust and microbial culture for odourless & aerobic decomposing of Ammonia in Urine.
- Shrutika, Neha and Pranit joined DIC fellowship program. They will be working on soil microbiology, Black Soldier Fly and website development project respectively.
- Himanshu completed his fellowship. He has worked on E-Rikshwa project.



Packaging of millet base Chocolate

Fab-academy update: Sumit completed all assignments. He gave final project presentation on 7th June 2024.

His project & assignment details can be viewed on -

<https://fabacademy.org/2024/labs/vigyanashram/students/sumit-thakare/Final%20Project.html>

iv) TAP-RISE project update: Under the Technology Acceleration Platform for Rural Innovations & Social Innovation (TAP-RISE) program -

- i) Working on business model development support in Madhya-Pradesh Vigyan Sabha (Bhopal) for Mahua based products.
- ii) Greeny-the-great: Helping Greeny for registration of home-composter on ONDC (Open Network for Digital Commerce) platform.

G] DBRT Skill training update:

Eaton India Foundation (EIF - CSR wing of Eaton India) team comprises of Mr. Bobby Zachariah, Ms. Karishma Bajaj and Mr. Abhijit Waghmare visited Vigyan Ashram on 21st June 2024. They interacted with DBRT & DIC students on their learning & future plans. EIF is financially supporting DBRT-DIC program and visit was part of their annual review.

Following are some of the important section specific learning activities -

Workshop section: During 11th to 15th June DBRT students learnt basics of CNC turning machine. This year CNC turning lathe is newly added in DBRT course. Students were divided into small batches to learn basic CNC coding & operational practices. Apart from this, students had completed wall-painting for classroom & ladies hostel building, plumbing repair & solar water heater installation at DIC hostel as their regular learning activities. Total cost of community service for month was Rs. 38,472/-.



EIF visit to Vigyan Ashram

Home & Health section: In this section students learnt processing of Jamun fruit for Ready to Serve (RTS) juice (28 kg), Syrup & Squash (15 kg) and Jam (47 kg). They processed 154 Kg of raw jamun from Pabal based farmer. Students also processed 24.5 kg bakery flour for making of bread. Total value of product sale was Rs. 16895/-.

Energy & Environment: Students installed 8 LED tube lights in boys' hostel and repaired switch boards, installed new power-invertor. They learned repair & servicing of deep-freezer. They had also installed new panel box in the polyhouse for temperature & humidity sensor. Total value of their community service was Rs. 42,870/-.

Agriculture & Animal husbandry section: Farming activities geared up with 61.57 mm rainfall in June. Students participated in the farm preparation activities and sowed Maize (2 kg) and 3 type of beans (4 kg).

They made planting beds for capsicum in polyhouse and harvested 7 kg papaya. A new female baby-calf welcomed in dairy farm but unfortunately 2 female goats died due to ETV infection.



Polyhouse wiring

H] Introduction to Basic Technology (IBT) program updates:

IBT Maharashtra: Following are some of the highlights of IBT program –

- A baseline assessment was conducted in 10 schools of Talegaon region in Pune district. Students were assessed on the basis of their learnings of previous IBT class. Test was conducted on 524 IBT students from 10 schools. The results of test will help school administration & IBT instructors in better planning

of IBT activities.

- Students of energy & environment section from Kohinde Ashram Shala installed 40 new LED tube-lights in the students' hostel. They learnt basics of electricity, wire connections, switch board connections etc. through this activity.
- Workshop section students from Waghera (Dist-Nasik) constructed a drainage chamber in school premises. A new classroom is under-construction in school. Students visited construction site and worked with local masons to learn basic brick-laying skills. Students learnt differ type of brick-laying bonds, mortar preparation etc. through this activity.



Agriculture plough repair: Nigade IBT school

- IBT students in Dhamari (Dist-Pune) worked in teams to complete wall-painting of 16 classrooms in school. Monitory value of their work was Rs. 55,000/-.



Waghera IBT: Drainage Chamber

I] Atal-Tinkering-Lab (ATL) & DIY lab update:

- Regional training workshop (AP): Two advanced teachers training workshops were conducted for ATL teachers. The 1st training was held at ZPHS Vepagunta on 24th to 26th June while 2nd training was conducted at ZPHS Penamaluru on 27th to 29th June. Each training was attended by 10 ATL In-charge teachers and Head Masters along with 6 District Science Officers to learn application of digital fabrication, AI tools & programming.
- Summer boot-camp for ATL students (KA): A summer boot camp was conducted at Karnataka Public School Narsapura (Karnataka) during 3rd to 5th June. Camp was attended by 35 students & 3 ATL teachers to learn basics of electronics, robotics and paper-art based hands-on activities.
- Summer boot camps (Telangana): Two summer boot camps were conducted for ATL students of Telangana state during 3rd to 5th & 7th to 9th June at ZPHS Armour & ZPHS Boys Bhiknoor respectively. A total of 68 students and 6 teachers from these two schools participated in these summer camps.



Andhra Pradesh ATL teachers Regional Training



Summer boot camp @ Bhiknoor (Telangana)

J] Do-It-Yourself (DIY) lab updates:

- Following activities were conducted @ DIY Lab: Scissor lift (1st June), Newton's Cradle (8th June), Illusion art work (15th June), Scratch programming (18th June), Basics of HTML, PHP, CSS and Microsoft Excel (15th June)
- Arya Angre (Student of Electrical Engineering, COEP, Pune) completed 1 month social internship program at DIY lab. He worked on developing website for DIY lab, conducted activities on AI aided video-making for DIY students.

K] Project ASMITA & Wikipedia update:

- Shweta Lanke (Fashion Designer) and Vaishnavi Lokhande (Fashion Designer) joined VA team for ASMITA-Women led garment manufacturing unit project.
- The first batch training started with 30 women in sewing lab. They visited the Sangamner Garments Foundation (Sangamner) on 18th June 2024. This exposure visit was to learn standard practices in garment manufacturing like process flow, machines & equipment requirement, inventory management, skills requirement etc.



Wikipedia: Wiki team submitted 5 videos of rural women led activities under 'She-leads' campaign ([Category: Capturing "Her Life", "Her Skills" and "Her Art"](#)). Following videos were completed this month: Daily life of shepherd women [A shepherd woman's life](#); Bamboo basket making [Basket and article making using bamboo](#)

L] Other tit-bits:

- i. Design Innovation center (DIC) alumni Mr. Siddhesh Sakore (Founder of AGRO RANGERS) honored as a Land Hero by the United Nations Convention to Combat Desertification (UNCCD). We congratulate him for his achievement.
- ii. Yogesh visited IBT schools @ Kolhapur, Belewadi Kalamma, Hasur Khurd on 15th June.
- iii. Ajinkya Kasab and Saurabh Shinde joined team as IBT-Field officer and EDP-Project officer (VATF) position respectively.
- iv. Yogesh participated as a panelist in a discussion on 'Co-exploring Multiple Dimensions of Assessment in Higher Education' program at MSFDA on 3rd June 2024.
- v. Weather record – Rainfall of the month – 61.57 mm (Total: 61.57 mm), Max temp-37.00° C, Min Temp – 21.00° C, Humidity –83%, Water height in well– 4.20 M.
- vi. Energy consumption record- Electricity unit – III Phase-654 units, I Phase import- 500 units, Solar generation-124 units (Solar on-grid meter has malfunctioned). DG used – 11:40 Hrs, Biogas- 52.12 m³ (dung used 1042 kg)
- vii. Animal Husbandry section update – Milk production – 463 Kg (Gross loss Rs: 4,772/-). Poultry- 80 egg produced. We lost 2 female goats due to enterotoxaemia (ET) disease caused by intestinal bacterial infection.
- viii. Online visitors: www.dsttara.org – 991(Organic search-795, Direct search-196), www.vigyanashram.com – 1347 (Organic search- 694, Direct search- 653. Campus tour visitors –198).



Yogesh visiting Hasur Khurd



Yogesh @ MSFDA

K] Data Report: <https://rb.gy/9lffif>

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Photo Gallery:



Dome Dryer for chilly getting fabricated



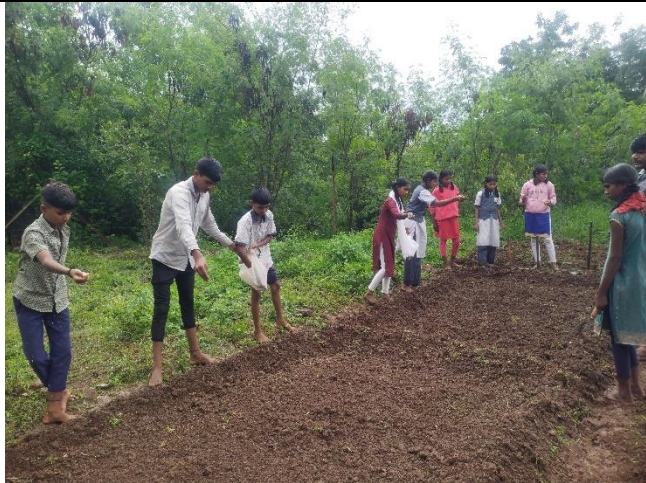
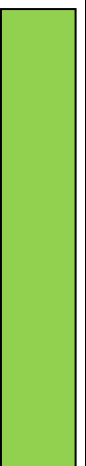
DBRT graduation ceremony



E-Rikshaw based Sugar cane juicer ready for despatch



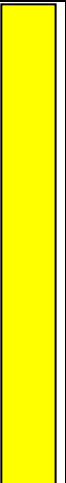
DBRT student repairing Deep Freezer



Agriculture activity @ Kohinde IBT school



Resin art and 3D printed key chains @ DIY lab



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