

# Vigyan Ashram Status Report

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### A] Open House Exhibition: Remembering Dr.Kalbag

30<sup>th</sup> July is anniversary of Dr.S.S Kalbag, founder of Vigyan Ashram. Every year we are organising 'Open House Exhibition' of all our projects to pay tribute to Dr.Kalbag. During last 2 yrs, we were forced to organise 'Open House Exhibition' in online mode due to pandemic. But this year, Open House Exhibition was organised at Pabal. Anticipating good response, it was organised for two days i.e on 29<sup>th</sup> & 30<sup>th</sup> July. First day was reserved for school students from Pabal & surrounding villages and 30<sup>th</sup> July was for general visitors. Total 3800 + visitors visited the exhibition.

On the occasion, 'YUVA UDYOJAK' award in the memory of Dr.Kalbag was given to Mr.Yogesh Lad (DBRT 2013-14 batch) for his metal fabrication enterprise at Kankavali (Dist-Sindhudurg). He is employing three persons and



recently started his transport business. Mr.Vasatnrao Alhat (ex-staff member), who worked with Dr.Kalbag was chief-guest of the program. Some of the highlights of exhibition are as follows –

- Chhatrapati Shivaji Maharaj Vastu Sangrahalaya, Mumbai stationed their 'Museum on Wheels' bus at Vigyan Ashram on both days. They exhibited exhibits on the theme of 'Indian Heritage'.
- A poster show & interactive display on misinformation, fake editing, data privacy on social media etc was put on displayed in collaboration with Tactical Tech initiative. They had sponsored the display of 'The Glass Room' ([The Glass Room – Looking into your online life.](#)) exhibition.
- New Technology projects on display in the exhibition are Black Solder Fly (BSF) cultivation, Hydrogen Sulphide (H<sub>2</sub>S) based water testing kit, Hydroponics vegetable cultivation, Sanitary pad incinerator, EV Riksha & bicycle, Low-cost UV water filter, DIY students' projects, Grey water recycle, tissue culture etc.
- IBT students from 6 schools displayed their innovative projects like peanut roaster, dung cake maker, onion leaf cutter and various food products.
- Entrepreneurship Development Program (EDP) beneficiaries Ms.Kalyani Chavali (Sahrudaya Foods), Mr.Tushar Yede (Yamai food industries), Sunita Jadhav, Vitthal Shid displayed their innovative products.
- Many of our funding partners viz Praj foundation, La fondation, Suzlon foundation, donors, Volunteers, network organisations, villagers, alumni visited Vigyan Ashram on the occasion.



## **B] Beginning of Diploma in Basic Rural Technology (DBRT- 2022-23) batch**

New academic year is started with 58 students (including 8 girls) joining DBRT 2022-23 batch on 11<sup>th</sup> July. Students came from Odisha, Madhya-Pradesh, Rajasthan & various districts of Maharashtra. There are 21 students from tribal parts of Maharashtra.

These students will be on campus for next one year and will learn multiple skills in Engineering, Energy & Environment, Agriculture – Animal husbandry and food processing. After initial introductory activities and tour to village, students became busy with the preparation for 30<sup>th</sup>



July exhibition and each one of them got responsibility to show case one VA projects during Open House exhibition.

We are looking forward for eventful year ahead with lots of projects, cycle trips, study tour and contract orders. We are very thankful to ASHA for Education, Eaton India Foundation, Praj foundation, SPA Education foundation and many individual supporters for their financial support.

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

- Sonal & Akshada prepared 400 lit of composting culture (200 lit each for agro-waste & urban waste) for distribution to farmers. They also prepared 96 H<sub>2</sub>S strip based potable water testing bottles & sold during 30<sup>th</sup> July Open House Exhibition.

- Shradha conducted experiment on treatment of bio-toilet outlet (black-water) water. It was found that through air blowing (40 Hrs) & MBBR based microbial culture, Chemical Oxygen Demand (COD) reduced from 1938 mg/lit to 612 mg/lit (68 % reduction)



**Black water recycling system installation**

while total Dissolved Solids (TDS) were reduced from 1420 ppm to 1007 ppm (29 % reduction). Based on these trials, experimental setup is installed for black-water recycling system for ladies' hostel bio-toilet system

- In the month of July, 22 new student interns joined for 1 to 4 months DIC internship program. They are from Sanjivani College of Engineering, Kopargaon (8), D Y Patil College of Agriculture BTech, Kolhapur (2), Sahydra College of Agriculture BTech, Karad (5), Sriram College of Agricultural Engineering, Solapur (5), CAET, Dr.Balasaheb Sawant Konkan Krushi Vidhyapeeth, Dapoli (2).

- Grey water installation at Dingrajwadi is complete. A review meeting was conducted with INSIC and Dr.Gon choudhari on 27<sup>th</sup> July. We are not able to commission the system due to monsoon and since some construction work is pending from Gram panchayat side.

- Fab Academy: 5 students successfully graduated in Fab academy- 2022.

They will receive they Diploma in fab

conference in Bali. Unfortunately, one student found to be guilty of plagiarism and he was deferred and asked to redo all the assignments next year.



**DIC Girls Team**



## D] Entrepreneurship Development Program (EDP) update:

- On-field mentoring support: Yogesh Onkar visited 5 budding entrepreneurs namely Om Nirmiti Fabrication (Pargaona), Vedika Dry fruits (Urli), Mahalaxmi Fabrication & Enterprises (Pargaon), Pansare Goat Farm (Karanjwane) and Sonakshi Poultry Farm (Kohinde).
- In this month EDP section provided licencing / enterprises registration support to 5 new enterprises (Udyam Certificate-2, FSSAI Licence-1, Shop Act-1)



**DBRT alumni entrepreneur: Nandini**

### Hero of month:

➤ **Nandini Narawade:** Nandini is DBRT alumni (2020-21 batch). She has started 'Rich village Agro food products' organic liquid fertilizer (Jivamrut) & pesticide enterprise @ Kolvan, Tal-Mulshi. Dist.-Pune.

➤ **Satyam Dhawale:** Satyam started a sheep farming unit 'Dhawale Patil Sheep farm' at Halgaon Dist.-Ahmednagar. He is student of EDP goat farming training & getting on-field mentoring support from us.

## E] Fab lab for tribal area update: Installation of digital fabrication tools

Work of DST supported project on 'Establishing fab-lab in tribal area' is in progress. Following are highlights of both the labs -

i) Narmadalaya (Madhya-Pradesh) lab: Installation of digital fabrication tools as laser cutter, 3D printer, PCB milling, vinyl cutter etc were done during 4<sup>th</sup> to 12<sup>th</sup> July. Wiring work was completed. Training of local instructors is done. Fabrication work is completed.

ii) Govardhan Skill training institute, Palghar: Tools were delivered by vendor. Installation of laser cutter

machine is completed. Lab tool setup at Palghar was completed during 18<sup>th</sup> to 24<sup>th</sup> July.

iii) Mr.Sumit Thakare and Mr.Rohit Mankar joined on fab lab project from 1<sup>st</sup> July as project engineer.



### **F] DBRT student learning updates (VATF):**

i) Annual meeting of VA team was held on 9<sup>th</sup> July and we have made certain modification in the syllabus and teaching-learning methodologies. We have added few new skills as an optional course for students viz. aluminum sliding window, FRP, Tissue culture, plasma cutting etc. Internship with our alumni for 1.5 months as a part of course will be continued.

ii) DBRT new batch started their course from 11<sup>th</sup> July. Students were introduced with course structure, campus activities, daily schedules etc during 1<sup>st</sup> week. They were also introduced with various projects on campus. They were engaged in preparing exhibits for Open house exhibition.

iii) Following are some of the highlights of students learning activities:

Workshop section: Students did floor work for kitchen storeroom. Total cost of work was Rs.4932.00 including Rs.986.00 labour charges.

Energy & Environment section: Students fixed 13 new plug point for 30<sup>th</sup> July exhibition stalls. Total value of work was Rs.11443/-.

Home & Health section: Students prepared Peanut chikki ( 14 kg), Moringa & sesamum chikki (3 kg), Millet ladu (5.0 kg), Pop-corn (3 kg), Tamarind sauce (11.5 kg) cookies & cakes (2.5 kg). They sold these products during 30<sup>th</sup> July Open House Exhibition and earn community service of Rs.7385/-.

Agriculture & Animal Husbandry Section: From this year, we have decided to assign agriculture plot to all students during monsoon season. Everyone will complete their practical of taking one crop during monsoon. Accordingly, students performed land preparation, seed treatment, sowing, weeding etc while planting Okra & Guar seeds, cucumber & spinach.



### **G] IBT Maharashtra & Uttar-Pradesh updates:**

#### **IBT Maharashtra updates :**

- i. Instructor training (Stars forum): 2<sup>nd</sup> batch of IBT instructor training program was conducted during @ 4<sup>th</sup> to 8<sup>th</sup>. Training was attended by 54 instructors from 22 schools in Maharashtra state. This training program mainly focuses on design thinking and activity-based hands-on training of various technologies as per the IBT curriculum.



- ii. IBT students of 9<sup>th</sup> std @ Dharmavir Sambhaji Vidyalaya (Tulapur, Pune) learnt the importance of electrical earthing while preparing earthing pit for their newly built electrical lab.



- iii. On 14<sup>th</sup> July Sachin & Archana conducted meeting of school principal of nine schools in Mulshi areas supported under M/S Scheffler CSR to discuss and sign the MoU. Meeting was organized at Talegaon on 14<sup>th</sup> July 2022 at Adarsh Vidyalaya, Talegaon. (Stars forum)
- iv. Student activity: IBT students @ Dhauvalli (Dist- Ratnagiri) School earned community service of Rs.22500.00 by selling 1500 kg vermicompost to farmers in the village. As a part of the agricultural section learning activity, students have prepared 4 vermicomposting beds on school premises. Students are regularly collecting garden waste & prepare vermicompost. Farmers are appreciating students' activity & purchased compost for their orchards.



**Vermi compost : Dhauvalli**

### **IBT Uttar-Pradesh updates (Stars forum) :**

IBT program in Uttar-Pradesh restarted after summer vacations. Students are enjoying learning through life skill-based hand-on learning activities.

- Ranajeet Shanbag visited Lucknow from 4<sup>th</sup> – 7<sup>th</sup> July. He visited schools in Kulgaon (Kanpur) & Navbasta & Aurangabad (Lucknow) on 4<sup>th</sup> & 5<sup>th</sup> July. Ranajeet and Sharad discussed issues in IBT program implementation. Ranajeet also met officials from labour department, UNICEF & Educational department.
- Dr Yogesh Kulkarni gave presentation about Work centric education program on 22<sup>nd</sup> July to district education officers of UP. The program was organized as a part of their training to train out of school children.
- Some of the highlights of the programs are:



**Composite school @ Kanpur**

- i) Students @ Naubasta (Lucknow) learnt basic of batteries, register, soldering, LED lamp etc while making LED 9V torch in school. Total of 14 students participated in the activity to make 8 torches in class.
- ii) Students in Laxminaga, Mathura, School fabricated a stool while learning basics of wood cutting & metal fabrication skills.
- iii) Students at Purana Lookerganj, Prayagraj learnt plant propagation & seed treatment while preparing seedling of chili plant by using nursery tray & cocopeat.
- iv) Students of workshop section @ Bareilly, Uttar Pradesh made rain gauge from scrap plastic bottles.

## HJ DIY Lab (Pune) and Atal Tinkering lab (ATL) support:

### Do-it-Yourself Lab:

- Prathmesh & Indrajit conducted workshop on effective implementation of ATL activities through 'design thinking' methodology @ V.S.S. High school, Wagholi on 2<sup>nd</sup> July.
- DIY lab students learnt fabrication of 'line follower robot' on 14<sup>th</sup> July. Students enjoyed robotics activities while scientific principles behind sensor application. They also learnt laser engraving 3D designing, 3D lithophane printing skill while making personalized 'Rakhi's' in a Rakhi making workshop on 16<sup>th</sup> & 23<sup>rd</sup> July.



ATL session at Wagholi

### ATL @ Andhra-Pradesh:

- Mentoring visits to 20 ATLs to make them model ATL is in progress. We have specified 11 parameters of model ATL as per AIM guidelines. Team is also providing support to school administration in solving ATL dashboard issues for registering school projects.
- Team also provided guidance to students of 3 ATL labs to participate in 'Horses Stable Junior' competition ([Junior | Horses Stable : Bharat's largest funding gameshow.](#))



ATL activity @ ZPHS, Kaikaluru

### IJ ASTI – Distance Learning Library:

- We gave presentation about DLL project to Curriki – MS team on 6<sup>th</sup> July. Curriki is online open education service. It is decided to make one sample lesson using Curriki studio and curriki team will support us in developing it. As a follow up, Bhakti & Prasad participated in meeting with CurrikiStudio ([CurrikiStudio](#)) team on 14<sup>th</sup> July. Curriki team will provide training & technical guidance for making video content more interactive & effective by using editing advanced tools.
- Content & script writing work of 5 modules of 'solar water installation' is completed. Video shoot & voice-over recording is planned in the month August-September.
- A review meeting was undertaken with Prabhu trust to review of project progress. It is one year since start of the project and we are not able to develop satisfactory content. This is a cause of concern with Dr.Prabhu as well VA team. Pace of development is far from satisfactory for various administrative and technical reasons. We have discussed several measures as a corrective action.



## J] Other tit-bit:

- i. Marathi Wikipedia team completed scanning of 6 books of Mr. Anil Gore covering 1186 pages.
- ii. Management committee meeting of Vigyan Ashram was held on 3<sup>rd</sup> July at Pabal. Mr.Ashok kalbag, Mr.Vijay kumar, Mr.Mahendra Rajgude, Dr.Yogesh Kulkarni were present for the meeting. Various issues were discussed and decisions were taken. IIE administrator Mr.Gokhale resigned on 29<sup>th</sup> June and new administrator Mr.Sanjiv Kumar (Retd Judge) was appointed as Administrator on IIE board by Hon High Court in the first week of July.
- iii. Online webinar on 'DBRT training course' was conducted for NGOs, schools & parents on 9<sup>th</sup> July. Vishal visited to Mulshi, Bhoisar, Jahvar for creating awareness about DBRT course.
- iv. We have received 5 workstations as a donation from La fondation. They are all high configuration machine to use design software's. We are thankful to la fondation for their support.
- v. Yogesh visited STI hub of Dr.Babasaheb Ambekar Marathawada university from 21<sup>st</sup> – 23<sup>rd</sup> July. He also visited Snehalaya at Ahmednagar on 21<sup>st</sup> July.
- vi. Purneshwar Sahu (BE, Mech) and Sarikha Wargade (Bcom) joined team as DBRT instructor & Accountant.
- vii. Weather record – Rainfall 247.38 mm (Total: 351.01 mm) ,Max temp-31.00 °C, Min Temp –21.00 °C , Humidity – 71% , Water height in well– 2.30 M.
- viii. Energy consumption record- Electricity unit – III Phase -386 unit, I Phase import- 52, Solar generation- 2100. DG used – 08.00 Hrs.
- ix. Animal Husbandry section update – Milk production –0 Kg (cows are in dry phase), Goat- Average weight of bucks – 108.93 gm/day, Goat insemination service: 12
- x. Biogas produced-33.44 M<sup>3</sup> (Dung used- 810 Kg), E-rikshwa uses- 206 Km.
- xi. Online visitors: www.dsttara.org – 804 (New visitor-690, Repeated-114), www.vigyanashram.com – 1489 (New visitor-1276 Repeated-213)



**Chaitanya SHG on whose request we have developed Rice Dehusking machine. Chaintanya SHG @ Open House Exhibition**



**DBRT new batch visiting Mastani's grave**

**K] Data Report:** <https://docs.google.com/spreadsheets/d/1CQVGOJlbe-dt2y2UVVbEDI48asL36b4-/edit?usp=sharing&oid=101141840668207826730&rtpof=true&sd=true>

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Services Pvt Ltd, INDUSA Endowment, Govt of Chhattisgarh, Savitribai Phule Pune University, Suzlon foundation, Dept of Science & Technology, and many individuals and foundations)

**Photo Gallery:**



DBRT : Maintenance of Flour mill



DBRT : Erecting Dome for open house



Fab Lab team with GSC Management @ Palghar



Fab Lab team with Narmadalaya Management @ Lepa



IBT Head Master's meeting of Scheffler supported schools



Food stall @ Open House exhibition

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