

# Vigyan Ashram Status Report

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## In this issue

- **Sharing Vigyan Ashram's Training methodologies**
- **IBT Instructor & coordinator training @ Uttar Pradesh**
- **Strengthening Atal Tinkering Lab (ATL) – Andhra Pradesh and Karnataka**
- **BSF based waste processing & DIC updates**

### A] Sharing Vigyan Ashram's Training methodologies (STARs & VATF):

Vigyan Ashram is working for last 40 years in the area of skills training. We are conducting skills trainings for rural youth, school drop outs. We have 'Introduction to Basic Technology (IBT)' program for formal schools. In Design Innovation Center (DIC), we are conducting training for graduate and post graduate students. Under Entrepreneurship Dept, we have programs for farmers, Self-help group women etc.

We have decided to share our experience & learnings with other NGOs under the theme '**Skills Training: What works & how to make it happen?**'. STARs forum had agreed to host the training as part of their 13<sup>th</sup> annual national conference. It was held from 5<sup>th</sup> to 7<sup>th</sup> December @ J.P.Naik Center, Pune. Total 52 representatives from 18 NGOs from Maharashtra, Gujarat, Assam, Karnataka, Meghalaya, H.P, Panjab participated in the conference. Dr.Yogesh, Ranajeet, Sachin, Yogesh omkar from Vigyan Ashram conducted the session on 5<sup>th</sup> and 6<sup>th</sup> Dec along with Mr.Narendra Paul (CORD), Mr.B.R Venkatesh & Mrs.Tejaswini Kulkarni as a resource person.. There was a field visit to Vigyan Ashram on 7<sup>th</sup> Dec. This conference gave us a chance to review our methodologies and documents our learnings. VATF was financial and organizing partner for the conference.



### B] IBT instructor and coordinator training @ Uttar-Pradesh (Stars forum):

- IBT Instructor's training program was conducted from 11<sup>th</sup> to 14<sup>th</sup> Dec at Lucknow (IED centre), Uttar-Pradesh. Training was attended by 57 instructors. Instructors were trained to conduct activities from class VI-VIII as per NEP 2020.
- IBT school principal's meeting was conducted on 16<sup>th</sup> Dec @ Lucknow. Various operational issues, time table and material procurements etc were discussed during the meeting.

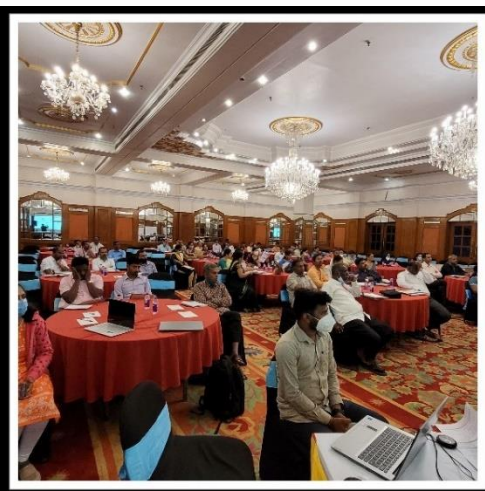


- A IBT school coordinator training was organized on 20<sup>th</sup> Dec at Lucknow and 22<sup>nd</sup> Dec at Ghaziabad. Total 41 coordinators attended training. We had discussed program implementation guidelines, its relevance with NEP, activity planning etc.
- Yogesh participated in a meeting on NEP 2020 at New Delhi with Education Secretary organised by Unicef on 16<sup>th</sup> Dec.

### C] Strengthening of Atal Tinkering Labs (ATL) updates:

i) ATL Teachers training @ Pabal: A training workshop for selected Atal Tinkering Lab (ATL) school teachers from Andhra Pradesh was conducted at Pabal & DIY Lab (Pune) from 19<sup>th</sup> to 21<sup>st</sup> December. Total 32 ATL teachers participated in the hands-on workshop. They learnt basics of 3D designing, printing, application of sensors & Arduino microcontroller, basic programming etc while working in small groups.

ii) ATL School Principal's orientation @ Bangalore: Strengthening of ATL activities in Karnataka state is formally inaugurated by State project Director (SPD) Smt B B Cauvery, IAS and Mr. Shubham Gupta (AIM) on 27<sup>th</sup> Dec. Training program of



ATL program inauguration @ Bangalore

ATL principals and co-ordinators was conducted on 27<sup>th</sup> and 28<sup>th</sup> Dec. It was attended by 40 teachers from various labs across Karnataka.

### D] Design Innovation Centre (DIC) project updates:

i) Sonal & Akshda, prepared 15 agri-waste composting beds at Vadgaon-Pir village. They also tested 200 soil samples & prepared 280 lit (agro-waste + kitchen waste) composting culture for farmers.

ii) Black Soldier Fly (BSF) : Mahesh successfully installed Black Soldier Fly (BSF) based kitchen waste processing setup at specially abled school, Pabal (Matimand Mulanchi Shala). This school has around 7-8 kg/day kitchen waste. Mahesh used a special hanging basket for BSF rearing for effective aeration & rodents managements. These bags were hanged to tree (near kitchen) & local staff is trained in daily feeding of waste. A 5-day old BSF larva (330 gm) were introduced in waste with daily 133 kg feeding. During December month 217 kitchen waste were processed to produce 20.5 kg (pre pupa) larva. Mahesh is also processing 30-35 kg waste in experimental setup at Pabal campus every day.



Soil testing Lab @ Vigyan Ashram

iii) LPG Incinerator: Sanitary pad Incinerator installed at Shri.Bhagwanrao Naphate Institute of Nursing (girls' hostel) needs periodic replacement of LPG burners its piping. We are discussing with experts to solve the problem.

iv) Ranajeet, Sonal & Ganesh visited Samarth Biotech (Narayangaon) on 16<sup>th</sup> Dec to meet Mr.Pathare (owner) for discussing difficulties in VA tissue culture lab & marketing possibilities.

v) Peiree-Jean-Martin (EPFL, Switzerland intern) completed his internship 2 months internship in Fab-Lab. He worked on development of user interface & automation of polyhouse exhaust fans. His project details can be found on <https://vadic.vigyanashram.blog/author/Pierre-Jean-MARTIN/> .

### **E] Entrepreneurship Development Program (EDP) update:**

**i) Training on 'Wafers and Namkeen making':** A 2 days hands-on training was conducted on 10<sup>th</sup> –11<sup>th</sup> Dec 2022. Training was conducted at 'Aswad Chips' Perne-Phata (Koregaon-Bhima, Pune). Total 10 participants attended training to learn making of wafers, Soya sticks, Gathiya, Shev, Farsan etc. Entrepreneur Mr. Pradip Jadhav (proprietor of Aswad Chips) guided participants on recipe mix techniques. Mr.Ganesh Pingle and MR.Yogesh Onkar helped in preparing business plan & marketing strategy.

**ii) Webinar on Jaggery Processing:** On 30<sup>th</sup> Dec webinar on 'advanced technology in Jaggery processing' was conducted. Dr.Vishal Sardeshpande (Jaggery technology experts and founder of M/S Sarvay solutions) was invited to guide participants on jaggery making technology, market trend, advance & aseptic processing conditions, economics of jaggery processing etc. Total 80 participants attended the webinar.

**iii) Field visits & Licencing support:** EDP team visited Mr.Pramod Pansare (food enterprise) , Jyoti Karmale (Dairy farm) and also provided licencing support to 4 enterprises (2 Udyam Addhar + 2 FSSAI). Team also reached to 42276 social media viewers as part of promotional activity.

### **Hero of months:**

**Mr. Chaitanya Javane** started a sliding window and fabrications business by the name of "Shardai Furnishers" at Ahmednagar with initial investment of Rs.2.5 lacs. We are giving technical & Mentoring support through EDP program from last 6 month.

**Mr. Pravin Tavhare** started electrical sales & services business in the name of "Shri Electricals and electronics" At-Nirgulsar, Dist-Pune. We are giving Training, technical & Mentoring support through EDP program from last 1 year. He has invested Rs.4.1lacs with monthly turnovers of Rs.30000.



**Farsan manufacturing training**



**Chaitanya Javane**

### **F] Fab-Lab for tribal area updates (DST support):**

Fab labs established for tribal areas at Namadayala (Madhya-Pradesh) and Palghar (Maharashtra) are progressing. Following are some of the key activities -

- Narmadalaya conducted two workshops on digital fabrication for engineering college students on 15<sup>th</sup>-17<sup>th</sup> Dec & 26<sup>th</sup>-28<sup>th</sup> Dec. These 3 days workshops were attended by 31 final year students to learn applications of digital fabrication.

- Narmadalaya prepared mobile skills training van 'Kaushalya Rath' (Skill-on-Wheel). It was inaugurated on 31<sup>st</sup> Dec.
- Shankar kewat (fab-lab manager) submitted proposal for 'Solar chilly dryer' for incubation support.
- Yogesh Kulkarni visited Fab-Lab Palghar on 10<sup>th</sup> December to attend review meeting with the trustees and management of Palghar lab.
- Fablab Palghar conducted basic camp for two schools with 155 students' participation. They also conducted 2 days' workshop for ITI students on 29<sup>th</sup> & 30<sup>th</sup> December benefiting 19 students.
- Fablab Palghar team completed automation of existing solar dryer and installed security alarm - wireless remote system on campus.



**Fab camp participants @ Palghar Lab**

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

Due to winter, weather is pleasant on campus. Students are busy with various activities. Few highlights are –

i) Students visited KISAN-2022 agro-exhibition at Pune on 16<sup>th</sup> December. It was exposure visit on new products and technologies in agriculture.

ii) As a part of Agriculture training, students planted Chilly (100 plants @ 729 Sq ft area), Brinjal (75 plants @ 640 Sq ft) and Cabbage (20 plant as mixed crop).

iii) Energy & Environment section: Students made electrical wiring for new CNC wood router. Total cost of work was Rs.17901/- and labour charges of Rs.1000. Similarly, students also fixed a LED flood-lamp for new VATF hostel building, prepared earthing pit & basic maintenance work in campus.

iv) Workshop section: Students fabricated Newspaper reading stand (Rs.1271). Plumbing work of WC unit, overhead tank & water taps (Rs.7492) and brick laying work of agri section (Rs.6932) in newly constructed agriculture classroom. Hrshikesh fabricated a staircase for recreation centre with cost of Rs.27,497 (labour charges Rs.4261.00). Ghanshyam completed renovation of roof for new food-lab [Rs. 39395.00 (labour charges Rs.7000)].



**Ground breaking ceremony for new hostel**



v) Students conducted series of trials on solar dryer to check its efficiency. They used 36.7 kg raw material to get dried products. Trials results are in the table. They also completed linseed & moringa chikki order for Sahyadri School (Rs. 7952.00), provided canteen service (Rs.5040.00) & sold processed products (Rs.5480.00) during December.

Date	Raw material	Initial weight	Final weight	Final moisture	LOD
2nd to 5th Dec	Methi	2 kg	200gm	1%	99%
6 to 8th Dec	Methi	2kg	237gm	12.23%	87.77%
9th to 15 Dec	Methi	5 kg	592gm	72.83%	27.17%
18th Dec	Instant Puran	2kg	1380gm	31%	69%
20th Dec	Moringa	2kg	360gm	84.65%	15.35%
22nd Dec	Instant Puran	2kg	1350gm	32.50%	67.50%
23rd Dec	Lemon peels	2.5kg	1040gm	44.00%	56.00%
24th & 25th Dec	Methi	6 kg	600gm	1%	99%
26th & 28th Dec	Amla Supari	4.5kg	1200gm	73.34%	26.66%
29th to 31st Dec	Amla Candy	9.7kg	5.3kg	45.37%	54.63%

vi) Individual student learnings & work updates can be found on their personal blogs @ <https://alumni.vigyanashram.blog/dbrt-batch-22-23/>

## H] IBT Maharashtra & Uttar-Pradesh updates:

### IBT Maharashtra updates:

- Coordinator training: A one day IBT school coordinator training program was conducted at Vigyan Ashram (IIE, Pune) on 24<sup>th</sup> December. Total 36 coordinators attended the training under LTI supported schools. Training was aimed to introduce IBT activity planning, examination pattern and Technovation-2023 preparation. Coordinators also discussed some of the challenges in implementation of activity-based learning in school & strategies to overcome it for effective learnings.
- Installation of Solar PV system: A 15 KW on-grid Solar PV installation work was started at Shri Dadamaharaj Natekar Panchakoshadharit Vidyalaya (chikhali, Pimpri-Chinchwad). Vigyan Ashram is doing this work with the support of MAHALE Engineering Services-CSR initiative.



**IBT co-ordinators training**

### Few examples of Student's IBT activities in school:

- Group of 8<sup>th</sup> & 9<sup>th</sup> class students (engineering section) at Shree Pandharinath Secondary School, Pokhari (Ambegaon) constructed a plant-nursery on 20x20 ft area.
- Students of energy & environment section in Madhyamik Vidyalaya, Sangise (Pune) conducted a 'electrical earthing testing camp' in village. They did earthing for a house without proper 'earthing' during their community service activity.
- Engineering section students (10<sup>th</sup> class) of Pratik Vidya Niketan, Nigade fabricated a 'bicycle stand' for 24 bicycles.
- IBT students in PSG Chinchawad school fabricated a cloth-drying stand for their hostel.



**Earthing camp in village : Sangise school**

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

- IBT Instructor's Training Program (11<sup>th</sup> Dec to 14<sup>th</sup> Dec) at IED, Lucknow : Total 57 instructors were trained on learning while doing teaching methodology, project-based training, linking school curriculum to the IBT activities. Instructors were trained on record keeping and reporting of the program. The workshop was led by Mr. Sachin Punekar (Program Head) and Expert Trainers Mr. Bhanudas, Mr.Suyog, Mr.Kisan & Mr.Sharad along with UP IBT team. The valedictory ceremony was held on 14th December and the guests of honour were Mr. Ranjit Singh, education specialist, Samagra Shiksha, Gurminder education specialist, Samagra Shiksha & Mrs. Mamta, director, IED.
- Mr.Ritwik Patra of Unicef visited IBT program in Composite Vidyalaya, hajaripur and Composite Vidyalaya, Gorakhpur on 21<sup>st</sup> Dec. He observed solar cooker and preparing musical instruments activities in the school.
- 16 students of UPS Sundra Putha, Meerut prepared land for agriculture during their IBT class.



**Solar cooker training @ Instructors training**



**Before Land preparation for agri activities**



**After Land preparation**

### **I] DIY Pune & Digital Learning Library (DLL):**

i) A 3-D printing training workshop was organized on 10<sup>th</sup> December for IBT instructors & students @ DIY lab Kothrud Pune. Training was attended by 16 students & 4 instructors from Scheffler India CSR supported schools. They learnt basics of CAD designing (Tinkercad) & use of 3 D printers while making different objects like key-chain, pen stands, logos etc. Six online session (one session every Saturday) on 3D printing were conducted for all IBT schools.

ii) Following projects were made and sessions were conducted for ATLS in Andhra Pradesh and Karnataka.

1. DIY Soldering Station Accessories -

<https://youtu.be/AMvVMa4cJMo>



2. RFID Door locking mechanism (Electronics)-

<https://youtu.be/biJAmgLiVs>

3. Let's go on Solar energy-

<https://youtu.be/mAjeYDZ6kew>

4. Hydraulic scissor lift and press (Toy making)-

<https://youtu.be/uu2vllRuYc4>

iii) New students are joining DIY sessions on Saturday. This month, following activities were conducted -

Tod Fod Jod : Mixer grinder ; Fun with origami ; Project using Hydraulics

iv) Yogesh, Kishore and Avinash visited Narsingpura school on 26<sup>th</sup> Dec and finalized ATL lab location.

v) Kishore visited Vijaywada on 7<sup>th</sup> Dec and finalized location for state ATL.



**Wikipedia updates:** We have completed scanning of 5 books of Ms Tara Bhavalkar (434 pages)

### J] Other tit-bits:

- i. Management Committee (MC) meeting of Vigyan Ashram was held on 4<sup>th</sup> December @ DIY Pune office. MC members Mr. Ashok Kalbag, Mr. Vijay Kumar, Mr. Mahendra Rajgude and Dr. Yogesh Kulkarni, Ms. Pallavi Shanbhag and invitee Mr. Ranajeet Shanbhag & Dr. Arun Dixit attended meeting to discuss various administrative & technical issues.
- ii. Water pumping from Thitewadi reservoir started after almost 2 yrs gap (due to drought conditions). In December we stored approx.. 10 lacs lit water (capacity 40 lacs lit) in the farm-tank.
- iii. A Public Distribution System (PDS) rationing started for DBRT students at Pabal campus. We stopped getting subsidised wheat & rice through PDS during COVID pandemic.
- iv. Weather record – Rainfall of the month – 0 mm (Total: 935.77 mm), Max temp-31.00° C, Min Temp – 13.00° C, Humidity – 55%, Water height in well– 5.90 M.
- v. Energy consumption record- Electricity unit – III Phase -1669 unit, I Phase import- 138, Solar generation-1963.00. DG used – 04.10 Hrs.
- vi. Animal Husbandry section update – Milk production –980.9 Kg, Poultry FCR- 4.33 (74 birds of Kaveri breed).
- vii. Biogas produced-48.0 M<sup>3</sup> (Dung used- 976.0 Kg)
- viii. Online visitors: [www.dsttara.org](http://www.dsttara.org) – 963 (New visitor-849, Repeated-114), [www.vigyanashram.com](http://www.vigyanashram.com) – 938 (New visitor-756 Repeated-182). Campus tour visitors – 350.



DBRT students @ Kisan

**K] Data Report:** <https://t.ly/pA4T>

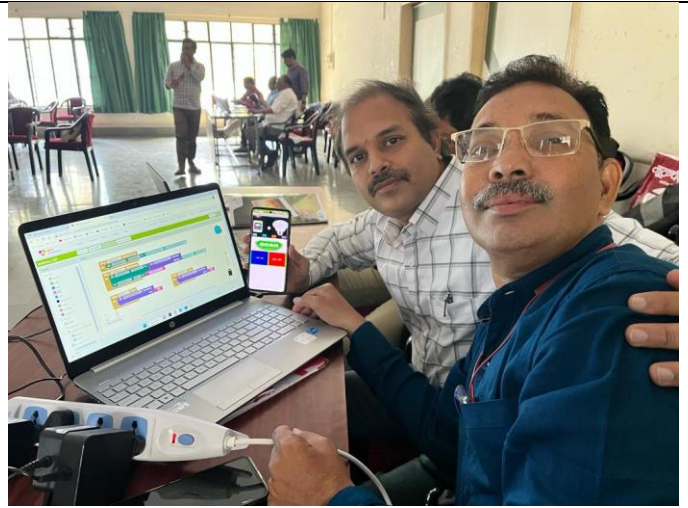
(Work of VA is supported by Asha for Education, Praj foundation, EATON Foundation, LTI-Mindtree, SPA Education Foundation, UNICEF, TATA Technologies Pvt Ltd, Mahle Engineering Services Pvt Ltd, Schaeffler India,

INDUSA Endowment, Savitribai Phule Pune University, Dept of Science & Technology, La-foundation, Prabhu trust and many individuals and foundations)

**Photo Gallery:**



ATL teachers training @ Pabal



ATL teachers training @ DIY lab



DIC students field visit : Geranium farm



Experiment for effect of organic carbon on plants



Stars forum meeting at DIY Lab



Chikki production by DBRT students

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