

Vigyan Ashram Status Report

Volume 41 Issue 09

September 2024

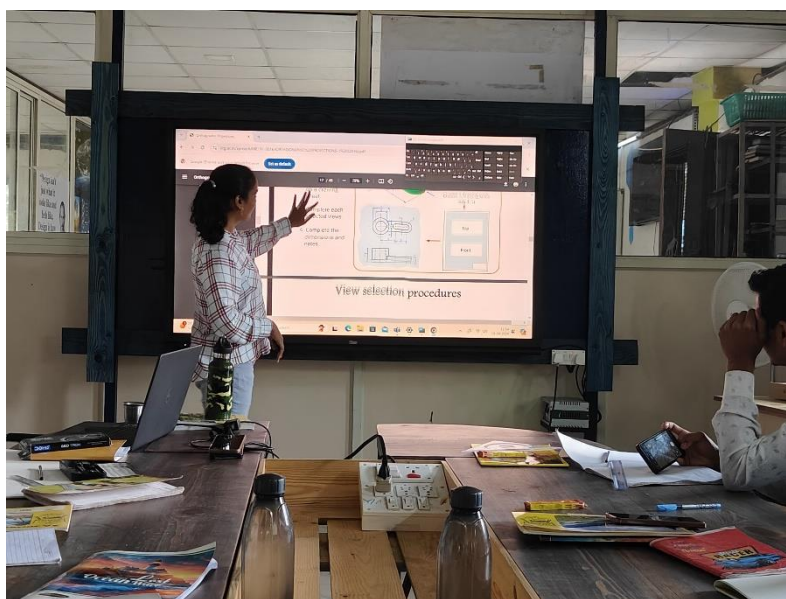
In this issue

- **DBRT course upgradation and updates**
- **14.47 tons of wet garbage processed through BSF larvae at Rajgurunagar dumping ground**
- **Director -SCERT visited Vigyan Ashram**
- **ATL curriculum development workshop @ Hyderabad**

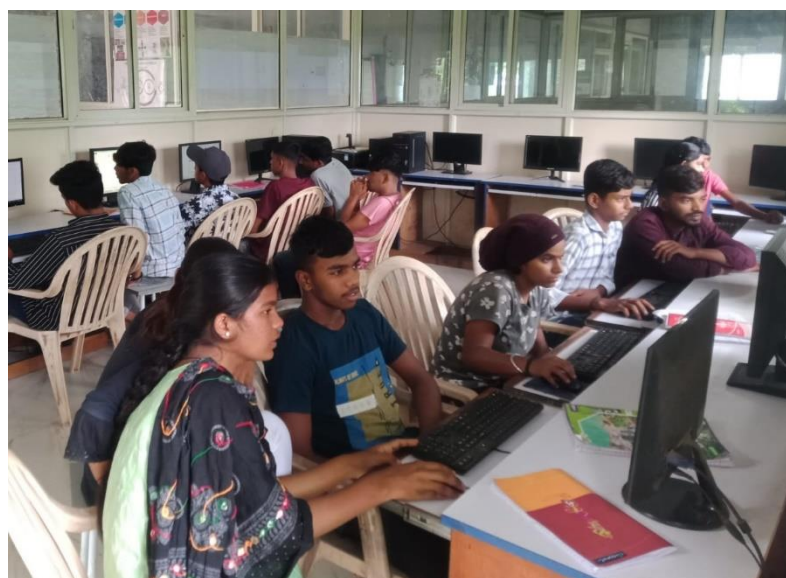
A] DBRT Updates: Up gradation of DBRT course and methodology

DBRT course is getting implemented since 1987. Its curriculum and methodology got evolved from time to time. We have made following changes in Teaching - Learning Methodology and content. We have introduced these changes from the current batch and fine tuning our internal practices.

- Use of Smart Screen: Now we have 75" interactive screen. Teachers will conduct discussion in the classroom and use Audio-visual methods for training.
- Workshop Dept: CNC machine, powder cutting, TIG-MIG welding and carpentry will be part of the course.
- Electrical section: It will have electronics and basic programming as a part of the training.
- Computers and AI: Use of AI tools will be introduced to students. They can use 'Voice to Text' 'Translate' features for their assignments. In Sept, Students learned basic application of ChatGpt, designing a poster using Canva, typing and blog publication skills in computer lab.



DBRT classes in Smart classroom become a regular activity.



- v) Service Sector: We have decided to give attention to the skills required in the service sectors. We are exploring to include various skills like Beauty and wellness, nursing, hospitality and finance, fashion. We are introducing some of them from this year. Beauty Parlour training started from 17th Sept. Every week, 7 hrs. will be allotted for the same.
- vi) We have started conducting 'Self-study session' in the evening. A dedicated mentor is appointed to guide students. This session is scheduled every day after dinner timing from 8.15pm to 9.30pm.
- vii) Counselling: We have found many cases of mental health and addiction among students. We have decided to proactively handle such cases. We have engaged professional counsellor to talk to three students. We have conducted session of 'De-addiction' and found four students having some kind of addiction. They were given necessary treatment from Mukhtangan de-addiction OPD. There is positive improvement in all of them. We have also planned soft skills sessions in systematic way.

DBRT Training and Community Service updates:

DBRT students completed their 1st section (July – Sept) of the course. Following are some of the highlights of their learning & community service earnings –

i) Construction of Asmita Shed: Students completed work of 9.9m³ brick-wall construction of Asmita project shed. They learned basics of brick laying and wall plastering work. Students also fixed patrician boards for 14.15 m³ area and started work of wall painting. Total cost of work was Rs. 62,630/- that includes Rs. 11,991/- as students' labour charges.

ii) Other work done by students: Fabrication of ladder, fixing tin sheets to painting booths and Fibre Reinforced Plastic (FRP) sheets. Total cost of their community service work was Rs.72,075/- (Rs.13,431/- students' earnings).

iii) Food Lab students processed 25 kg Amla to make candy & juice. They prepared Food items like peanut & coconut burfi, shira, cookies etc. for Ganesh-Chaturti festival. The value of total community service was Rs.21,535/-

iv) Students made 2 units of LED running light strip and 10 units of switchboards for an electrical shop in Pabal village. Students also carried out regular maintenance of Solar system, installed a new power-



inverter in soil-analysis lab, an earthing pit for on-grid solar PV system and electrical wiring repair work in staff quarters.

v) In agriculture section, students have harvested 15 kg cowpea, 10 kg Black-gram, 5 kg Rajma beans from the farming plot. They have planted Jowar seeds in a fodder plot & tested 6 soil samples in the soil-analysis lab.

vi) In polyhouse farming, students finished harvesting of hydroponics lettuce and regular fertigation & pest management for Capsicum crop.



Sorghum plantation

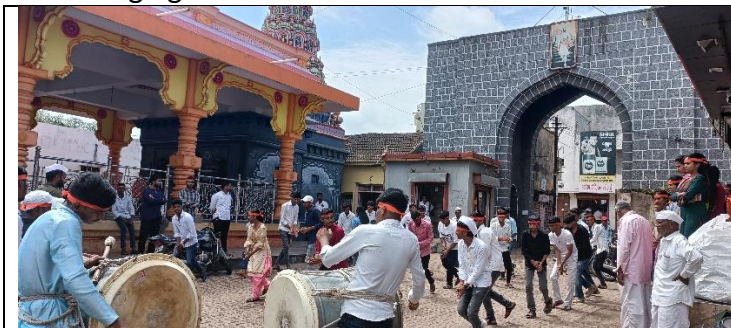
Cultural Activities on campus:

i) Ganesh Festival: Students learned

making of *Ganapati idols*, they learn playing Dhol – Tasha and perform Barchhi dance during *Ganesh festival*. They earned Rs.7,000/- from their performance during procession of local *Ganesh-Mandal*.

ii) Students celebrated Teacher's Day on 5th September. They felicitated their instructors.

iii) DBRT student Janvhi is good in signing. One of our well-wisher Mrs. Prajakta Jahagirdar is conducting online singing classes. We have enrolled Janvhi for online singing class.



Barchhi Dance in Pabal village



Teachers Day Celebration

B] Make-a-thon for Industrial Training Institute (ITI) students:

A 2nd batch of ITI students Make-a-thon was conducted at Pabal campus during 11th to 15th September. Training was attended by 21 ITI students from Lokpanchayat Rural Technical Institute, Ghargaon (Ahmednagar). During 5 days residential training, students fabricated a French-door, exhaust fan frame louvers while learning skills of TIG welding, sheet metal cutting & bending, CNC plasma cutting, powder-coating etc. Students worked in teams to learn 'Design-Thinking' methodology of identifying need (empathy), ideation, prototyping and fabricating of selected projects.



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

DST-SUNIL project updates:

1] Red-Chilly dryer:

- Abhijit & Prasad conducted 3 trials of a solar-dome dryer unit to test its drying efficiency. Trials were conducted using soaked sawdust showed drying rate of 2.6 kg/hr (without automated exhaust fan) & 5.3 kg/hr (with sensor based automated exhaust fans). It is observed that drying efficiency can be further increased by improving air flows in the drying trays. They are working to improve efficiency through perforated cotton sheets, distributed air flow etc.



Testing of Chilly Dryer

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

- Mahesh processed 14.47 tons of bio-waste through BSF larvae at Rajgurunagar Municipal Council (RMC) dumping ground. RMC officials appreciated project activities & helped in cleaning plastic waste segregation section. We have fixed tin-sheets for rat control, started using automated compost sieving machine. In the September month, approximate 83.4 kg larvae were loaded to the breeding chamber to produce eggs for increasing waste processing.



Production of Larvae

Polyhouse climate control system development:

- Ganesh met 15 polyhouse farmers at Kharpuj (Tal- Rajgurunagar, Dist- Pune) on 10th and 11th Sept to conduct a base-line survey on climate control system, pesticide use pattern and fertigation. Farmers need on-field support on soil analysis-based fertilizer application, temperature control in summer (April to June) and reduction in pesticide expenses. Based on the farmers' feedback, an on-field training program in collaboration with Krushi Vigyan Kendra (KVK), Narayangaon (Pune) will be planned for the farmers.
- Tejaswini conducted experiments on cooling efficiency of fan-pad and fogger systems in polyhouse. She found a 10.86°C temperature drop (42.06°C to 31.20°C) & 57.72 % Relative Humidity (RH) rise for 3 min foggers (40 lit/min discharge) operations.

- A one-day training of selected 12 backyard poultry farmers from Sakhar region (Velha block) was organised on 13th Sept. Farmers met progressive poultry farmers at Sanaswadi, Shikrapur and Ranjangaon for learning their experience in free-stall poultry farming, feed-management & marketing of *desi-birds* during the visit.
- Ranajeet & Ganesh conducted a field-demonstration training on 'domestic egg incubator' at Sakhar village (Tal- Velha, Dist- Pune) on 26th September. Field demonstration was attended by 15 backyard poultry farmers.



Farmers from Velha @ Vigyan Ashram

Other research-fellow projects:

- Shrutika & Pranit prepared 170 H₂S strip test bottles for IBT schools and farmers. Shrutika also conducted trials on Moringa tissue culture, but due to sustained contamination, trials failed. She is taking guidance from Savitribai Phule University (SPPU) Botany department.
- Siddhant started fabrication of LPG based Sanitary Pad Incinerator. He has received order of 6 pad/batch incinerator from Jana Prabhodhani, Harali school (Dist - Solapur).
- Manas Chaudhary completed his 4-month internship program. He worked on the refurbishment of a solar convection dryer.
- Aaman Momin (BE Mech), Raj Rajawat (BA Design) & Akash Farade (Bsc Agri) joined internship program. They will work on Polyhouse automation, Kitchen work-flow and Photosynthetic efficiency project respectively.



Manas completed his internship

TAP-RISE project update:

An online meeting for the DST-SEED division supported organizations was organized for the **Technology Acceleration Platform for Rural Innovations & Social Innovation (TAP-RISE)** program on 24th September. Based on response received from the organizations, 40 new potential social innovations are shortlisted. We are assessing these technologies for their Technology Readiness Level (TRL).

D] Entrepreneurship Development Program (EDP) update:

i) Training on sliding window fabrication & door lamination: A hands-on training on the sliding window fabrication & door-lamination enterprise opportunities was conducted on 21st & 22nd September at Pabal. Training was attended by 7 participants. VA alumni entrepreneur Mr. Vaibhav Rahne was the resource person. Participants fabricated 3 units of widows as part of their practical. Participants also made laminated-door by using epoxy resin.



Training on Sliding Window

ii) Training on milk-processing enterprise: On 28th & 29th September hands-on training on milk-processing enterprise was conducted at Kunjir Dairy, Uruli - Kanchan (Pune). Training was attended by 8 participants. They learned milk collection, quality checking, storage, and distribution. They were also trained on preparation of dairy products such as curd, buttermilk, lassi, khawa, ghee, paneer, shrikhand etc. Participants worked on a dairy shop-floor to learn the process flow of recipes. Owner of Kunjir Dairy Mr. Dada Kunjir & Mrs. Sharada Kunjir guided participants on dairy business model, marketing etc.



Training on milk processing

iii) Backyard poultry farming: A 2 days training on 'backyard poultry farming' was conducted at Bheloshi village (Tal- Mahad, Dist- Raigad) during 22nd to 24th September. Training was conducted in collaboration with Pride India NGO. Training was attended by 22 beneficiaries including WSHG members & village youth to learn making a bamboo-cage for poultry, brooding & vaccination of chicks, feed management etc. skills. A model backyard poultry unit was established with 25 chicks during the training.



Poultry farming training

Webinar of event-management: A webinar on 'Event Management' business opportunities was organised on 14th September 2024. Webinar was attended by 50 participants to know various aspects of this growing industry viz. market demand, skills requirement, cost, benefit ration etc. Mrs. Purva Pawar (Principal, Times and Trends Academy, Chinchwad) shared her experience with participants.

For video recording please visit:

<https://youtu.be/xCOvZOuYg4s?si=mr9rVBy4r3jbvsi1>

Marketing linkage & mentoring support:

- 1st to 4th September, Ganesh & Anil Gade visited 6 grassroot organizations in Jahwar region of Palghar district. They visited Arohan organization to provide technical support for rice-dehusking and flour mills established by them. A field demonstration of portable solar powered pump by Rural Roots Renew Solution was arranged by us at BAIF, Pragati Pratishthan, TNS, Keshav-Shristi & ISKON at Jawhar.
- Yogesh & Saurabh visited Savitribai Phule Mahila Ekatmik Samaj Mandal (SPMESM) at Chatrapati Sambhaji Nagar (Aurangabad) and Nagar Foundation, Ravalgoan,



Solar Pump Demo @ BAIF, Jawhar

Ahmednagar on 16th & 17th September. Visit was aimed to establish collaboration for skills training & EDP.

- Suarabh visited a food entrepreneur Ms. Khushi Dhariwal (Shukravarpeth, Pune) for on-field mentoring support.
- Enterprise registration & licensing support provided to 5 new enterprises. (Udyam Certificate-3, FSSAI License-2)



Hero of the month: Sushila Shirke

Hero of the month:

Mrs. Sushila Shirke started a pickle manufacturing enterprise "Swamini Lonache", At-Shikrapur Tal-Shirur, Dist.-Pune. Mrs. Sushila had participated in 'food-processing enterprise' skills training program.

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

i) **Director -SCERT visited Vigyan Ashram:** Director-SCERT Mr. Rahul Rekhawar (IAS) visited Vigyan Ashram and IBT program at Dhamari school on 15th Sept. Objective of the visit was to understand vocational program at school. Team also visited Karigar of Lend-a-hand-India and Hunar Gurukul. The details of Grade 6-8th program, tool list etc. are shared to SCERT for their consideration for State Curriculum Framework (SCF).

ii) **Three new schools joined IBT family:** Following schools joined IBT program: School @ Moi (Tal-Khed, Pune), Madaj (Tal- Omarga, Dist-Dharashiv) and Dhondegaon (Tal & Dist -Nashik). Suyog visited all 3 schools to help them in tools & equipment purchase, lab setup and time-table adjustment.



Mr. Rekhawar interacting with Dhamari school students

Dr. Yogesh Kulkarni visited Dhondegaon and Waghere school on 10th Sept. Our well-wisher Mrs. Anita Dandekar provided financial assistance to upgrade infrastructure @ Madaj IBT program.

iii) STEM program in West Bengal: UNICEF and STARS Forum have initiated a STEM program in 100 schools of Murshidabad district. Dr. Yogesh Kulkarni visited Murshidabad on 2nd – 4th Sept to visit schools and understand the needs on the ground.

Dr. Yogesh visited Kolkatta as a resource person to conduct 'STEM curricular Concept mapping workshop with school teachers' from 18th – 20th Sept. at UNNICEF office, Kolkatta. We have identified priority STEM concepts with science & mathematics teachers deputed by SCERT. We will be designing STEM activities based on this mapping.



STEM concept mapping workshop @ Kolkatta

Students Activity Highlights

- Technology @ Ganesh-festival: IBT schools participated in the '*Ganesh Decoration competition*'. Students from 7 schools made innovative decoration with *makhar* design, LED running lights, sensor & electronics application etc. Following are top 3 winners of the competition -
Winner: Dadamaharaj Natekar Panchkoshadharit Vidyalay, Chikhali (Pune) (https://youtu.be/lj7EIM_C3BQ?si=f3ZUTwGGyITvwCLL)
2nd runner up: Hon. Vitthalrao Patvardhan Utkarsh Ashramshala, Waghera (Nasik) (<https://youtu.be/2Rc7NDz9s18?si=RGmvenlrg4fMbmU9>)
3rd runner up: Sumati Balvan, Pune (https://youtu.be/TG_t3-w3gCU?si=RI-yEChhnLkFE01z)
- IBT Students of Shivali & Vahangaon School (Pune) installed 13 CCTV.
- The 10th class workshop section students in Kohinde (Pune) IBT school installed 10 units of exhaust-fan for boys hostel WC units.
- Shivali IBT School installed a Solar PV on-grid electrical system in the school. IBT students participated in the installation.
- As a part of testing Vocational activities for Grade 6-8th; Vigyan Ashram team conducted 16 hands-on training sessions in 4 schools.



CCTV installation

Learning-By-Doing (LBD) @ Uttar-Pradesh (STARS Forum):

- The pre-training preparation for training of 2400 teachers is in progress viz. communication with school administration, arranging tools & finalization of curriculum etc.

- Ms. Nimrat Kaur (Education expert, Azim Premji University) visited LBD program at Naubasta School (Lucknow) on 28th September.

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

- A District Science Officer (DSO's) training was conducted at State Level Hub ATL Lab, Kamanghat (Dist- Ranga-Reddy) during 10th to 13th September. Total of 16 DSO's from the region attended training.



Curriculum workshop @ Hyderabad

- 'ATL curriculum development' workshop was organized by UNICEF at Hyderabad during 18th to 21st Sept. Objective of the workshop was to develop the activity manual for ATL schools across AP, Telangana and Karnataka. These activities are linked to the state curriculum.

Workshop was attended by 21 teachers from Karnataka, Telangana & Andhra-Pradesh state along with 6 team members from Vigyan Ashram ATL team, 6 experts from UNICEF and 4 members of SCERT and Samagra Shiksha

- **Online sessions:** Following online training session were conducted during September month for ATL school students in Andhra-Pradesh & Karnataka.

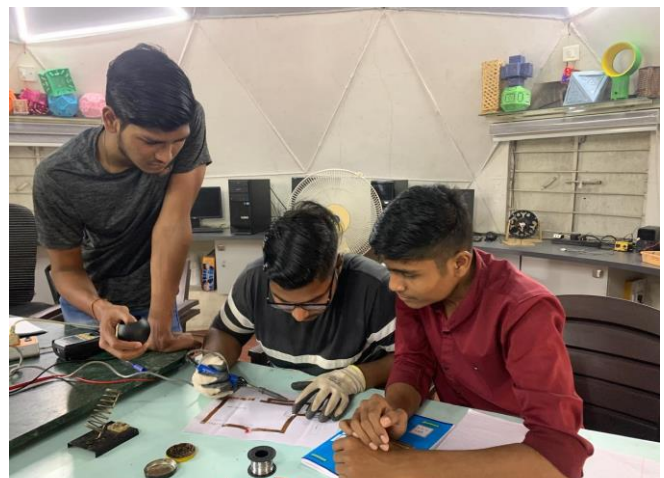
Introduction to Scratch Programming (17th Sept); Lets code in Scratch (24th Sept); Input and Output devices (13th Sept); Basics of Electronics and Tinker cad (20th Aug)

Recordings are available on Nirmaan Channel and Vigyan Ashram you tube channel.

Do-It-Yourself (DIY) lab update:

- 10 students from Advika Welfare foundation (Pune) are undergoing training at DIY Lab. Six students are coming to DIY on every Wednesday and four students on every Thursday.

- Following are important 'tinkering' workshops at DIY lab: Making basket using woollen threads and paper cup (14th Sept); Tinker cad & 3D printing (21st & 28th September); Piezoelectric sensor experiment making mister (21st Sept); Making digital calculator 6th, 13th & 20th September; 3D printed natural light dependent *Diya* (27th Sept).



DIY Lab activities

G] Other tit-bits:

- i. The Wikipedia team completed scanning & proof-reading of 5 volumes of 'O Bharat- Newspaper' comprising 2459 pages. Its Wikipedia publication link - https://commons.wikimedia.org/wiki/Category:O_Bharat
- ii. The construction work under a women-led tailoring unit (ASMITA) project, fabrication of roof & wall construction work is completed. Trainee WSHG members completed an order of 10 units of kitchen-apron & head-caps, learned stitching of frock & pouches.
- iii. Management committee meeting of Vigyan Ashram was held on 1st Sept in online mode. Various decisions are taken for project implementation.
- iv. Dr. Yogesh Kulkarni and Mr. Ranajeet Shanbag are invited to write text book of Grade 7 on Vocational Education by NCERT. Dr. Yogesh will lead the writing team of experts.
- v. Mrs. Bhakti Talwelkar attended Samagam 2024 conference at Delhi on 27-28 Sept. The topic of the conference was 'Climate change – Managing the Present and Gearing up for the Future.' PRADAN was the host for the conference.
- vi. Weather record – Rainfall of the month – 81.50 mm (Total: 534.06 mm), Max temp-32.00° C, Min Temp –19.00° C, Humidity –85%, Water height in well– 4.70 M.
- vii. Energy consumption record- Electricity unit – III Phase-668 units, I Phase import- 2116 units, Export- 63.7, Solar generation (off-grid)-78 units, DG used – 10:20 Hrs, Biogas- 54m³ (dung used 1108 kg).
- viii. Animal Husbandry section update – Milk production – 240 Kg (Gross loss Rs: 3338.00).
- ix. Online visitors: www.dsttara.org – 372 (Organic search-288, Direct search-84), www.vigyanashram.com –1427 (Organic search- 912, Direct search- 506). Campus tour visitors – 495.



H] Data Report: <https://shorturl.at/9z02B>

((Work at Vigyan Ashram 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, Texol Engineering Pvt Ltd, INDUSA Endowment, Savitribai Phule Pune University, Dept. of Science & Technology, La-Foundation, The Prabhu Trust, STARS Forum and many individuals and foundations).

Photo Gallery:



La foundation volunteers interactive DBRT girl students



DBRT students doing Solar Earthing



Plantation @ Polyhouse @ Vigyan Ashram



Asmita Project Product : Child Frock

उपवास मिक्स
Upwas Mix

One Flour Five Recipes

Idli इडली	Dosa डोसा	Appe आप्पे	Thalipeeth थालीपीठ	Dhokla दोकळा
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Ingredients: Barnyard Millet (Bhagar), Sabudana, Salt

Manufactured By: Vigyan Ashram, Pabal, Pune 412403
Marketed By: Annapurna Gramin Krishi Prasthanya Udhyog,
Gulunchewadi, Belha, Tal: Junnar, Pune 412410
Contact : +91 9080613585

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21512188000537

Manufactured by Vigyan Ashram students



Beauty Parlor training is started at Vigyan Ashram.

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www.vigyanashram.com