

Vigyan Ashram Status Report

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August 2022

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A] Inauguration of Fab-Lab Narmadalaya:

Vigyan Ashram has established a Fab-Lab at Narmadalaya (Lepa punarvas, Madhya-Pradesh). The lab is established under project of 'Establishing of Fab-labs for appropriate technologies for innovation & training in tribal areas' supported by Science for Equity, Empowerment & Development (SEED) division of Department of Science & Technology (Govt of India).

Fab Lab at Narmadalaya was inaugurated on 23rd August at the hand of Padmashri Maheshji Sharma (Founder, Shivganga Project Zabua) and other guests. A small exhibition of Fab lab projects was displayed for visitors. We are starting training for college students and school children in this facility.



B] DBRT activities pick up the pace

New batch of DBRT students are settled down on campus. Students are busy in practical's and community service activities. From this year, we have decided to offer specific skills training sessions along with generic DBRT course. Students can opt to learn such courses along with DBRT. For e.g Training in washing machine repair, solar installation technician, dairy and poultry etc. We will be preparing students for certification exam conducted by Sector skills council.

Following are highlights of productive tasks done by DBRT students as part of their learning in Aug 22.

Engineering:

- i) Students did Coba flooring in front of recreation room.
- ii) Students did fabrication of furniture
- iii) Students took contract of erecting fencing of goat shed on farmers field in Pabal.
- iv) Students did construction of POC at bottom of agriculture classroom



❖ **Energy & Environment section:**

- i) Students learnt repairing of Direct On-Line (DOL) started while replacing starter in polyhouse.
- ii) Students installed 50-watt LED flood-lamp on volley-ball ground and fixed 3 new switch boards in the fab-lab.
- iii) Students also participated in installation of 'solar water heater' while learning basic repair-maintenance work.
- iv) Students learned cooler maintenance.



❖ **Home & Health section:**

- i) DBRT students are supplying healthy chikki & ladoo's to sahyadri School & Muktai Mahila Sahkari Gat (SHG) of Village- Vada (Rajgurunagar). In Aug, Students prepared and sold 54 Kg of Chikki (26 kg Moringa+ 28 kg Linseed chikki) worth Rs.19802.00.
- ii) Students learnt sugar syrup-based preservation while making Tamarind Sauce (5 Kg),
- iii) Students learnt baking skills while making bread (10 Kg).



❖ Agriculture & Animal Husbandry Section:

- i) We have received good rain fall so far. In August, we have received 145 mm rainfall.
- ii) From this year, all students will complete agri practicals during monsoon season. We have allocated one day per week for agri activities and each group got different plot to take one crop.
- iii) Students performed various activities like sowing of seeds (5 kg fenugreek), irrigating field (rain-gun installation for Soyabean), fertilizer application (cucumber crop in polyhouse) and weeding (weedicid spraying) etc.
- iv) Sonal cow delivered male calf on 13th Aug and milk production has re-started in dairy farm.



C] Other activities of DBRT students

- i) Computer skills – All new students got their e-mail ID's and personal blogs for maintaining daily learning activities.
- ii) Fab-lab – Group of 6 students, designed & fabricated Ganapati Makar, vertical lampshade for Ganapati festival while learning designing software (Inkscape, RD works, Fusion 360), lesser cutting skills in fab-lab.
- iii) **Independence Day Celebration** : 75th Independence Day was celebrated with full enthusiasm. Team of 90 + students-staff, proudly participated in [#HarGharTrianga](#) while uploading selfies with national flag. After flag hosting a short & crispy cultural program presented by students group. Athletic dance moves by students group led by Sahil (DBRT student) were real show stealer apart from folk songs, dances, speech etc represent their local culture & art.

On 14th August, everyone did Shramdaan and planted around 300 new samplings. This year we have pledged to protect & grow 1000+ sampling.



D] Distance Learning Library (ASTI project) updates:

- Bhakti & Vaishali completed script writing & screen-play completed for 'bio-floc fish farming' and 'solar water installation' course.
- On 26th & 27th August, video shooting was carried out at Pabal. Video Shooting for all 5 modules of solar water installation and first 3 modules of bio-floc fish farming were completed.



- Prasad completed bio-floc tank CAD drawing & assembly video (animation) using Solidworks Composter. Draft can be viewed on - <https://drive.google.com/file/d/1lyM5X2dMym4gQIWUp0BEMDhPGC2I5rLd/view?usp=sharing>
- Curriki studio (<https://www.currikistudio.org/>) team provided training on video-editing during 23rd to 26th August. Prasad, Bhakti & Priyanka attended training to learn advance editing tools like Column Layout, Dialog Cards, Image Hotspot, Drag and Drop, Flash Cards etc to make interactive video.

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

- As a part of 'Living Lab (CTARA, IIT Pawai) project an automated 'weather data monitoring' console is installed in polyhouse on 17th August. The system ('Fasal' <https://fasal.co/about.html> make) has temperature, humidity, soil moisture data sensing & recording facilities with cloud-based storage & weather prediction facility. The recorded weather data will be useful for automation of fan-pad system, pest-prediction etc. Data for August month available on <https://drive.google.com/file/d/1QbpjU6dz1P3dCsAPsToKOr61vFOus4K1/view?usp=sharing>
- Somnath installed an 'Ammonia' (NH₃) based exhaust-fan unit in men's-toilets (urinal) at Pabal campus. A prototype unit will sense cleanliness level of urinals, automate exhausts & provide monitoring data on smart-phone dashboard. Project will be useful project for IBT schools & ATL labs.
- Mahesh, Nimesh & Pavan successfully replicated two cycles of Black-Soldier-Fly (BSF) life-cycle. Now they are working on incorporation of BFS larva's (5 days old) with compost culture in waste composter. Experiment aims to reduce man-power requirement for turning of compost piles & total cycle time by use of BSF larvae.
- Arun & Ranajeet visited 'Khaire Geranium Farm (Mhanshe Bk village) to study issues in 'oil extraction unit'. Sonal started trial on preparation of 'mother plant culture' of Geranium (Pelargonium graveolens). Trials aims to explore standardization of nursery management & tissue culture of geranium plants.
- Five new students joined Design Innovation Centre (DIC) program. They are Basile Pasquale (from Swizerland engineering school EPFL), Bhagvan & Roshani (K. R. T. Arts, B.H. Commerce, A. M. Science. College, Nashik) and Choturam & Nandni (Barefoot college, Tilonia). They will be work in their respected department for 2 to 6 months internship program.



Weather data monitoring Console @polyhouse

F] Entrepreneurship Development Program (EDP) update:

- Yogesh Kulkarni & Ranajeet presented 'Technology Acceleration Platform for Rural Innovation & Social Entrepreneurship (TAP-RISE) project to trustees of PRAJ Foundation on 9th Aug at Praj house. We have similar discussion with trustees of Eaton India foundation on 24th Aug. We also had preliminary meeting with both the funding partners on 2nd Aug.
- One day awareness training camp of 'advanced practices in goat farming' was conducted on 18th August for WSHG members of Chaitanya foundation, Rajgurunagar (Pune). Total



42 women farmers participated in the training to learn feed management, vaccination schedule, deworming etc farming practices. Trainees will get on-field mentoring support under EDP program.

- On 29th August, an awareness camp on 'opportunities in rural enterprises' were organized for WSHG members of Midmulwadi, Kendur (Shirur block, Pune) villages. Camp was attended by 22 SHG members to learn different livelihood-based technologies, training programs, EDP support structure. Camp was organised in association with Raindrop foundation (Latur).
- Sachine & Vishal visited 'Vrinda Academy' (Asade, Mulshi) on 24th August to discuss collaborative opportunities in skill training & rural entrepreneurship development.
- Yogesh & Ganesh visited 5 budding entrepreneurs in Shirur, Ambegaon and Kopargaon (Ahmadnagar) to provide on-field mentoring support under EDP program.
- In this month- Udyam Certificate-2, FSSAI Licence-1, GST-1, were issued.

Hero of month:

Mr. Akshay Dhumal: Akshay started a goat farming enterprise with a name of "Daa Goat Farm" At -Khadakwadi Tal-Ambegaon (Pune). He is beneficiary of goat farming EDP training program. At he is getting on-field technical & mentoring support.

Mr. Prasad Kshirsagar: Prasad started a 'Swami Samarth agro industries', a agro-tools fabrication enterprises at at Kashti (Ahmednagar). He is manufacturing chaff-cutter machines, hand wheel hoe etc tools. We are providing mentoring, product development and market linkages support under EDP program.



Akshay Dhumal



Prasad Kshirsagar

G] IBT Maharashtra & Uttar-Pradesh updates:

IBT Maharashtra updates:

- 1) Instructor training (Stars forum): A 5 days 'IBT Instructor training program' was conducted between 17th to 21st August 2022 at Pabal campus. Its was 3rd annual training program for IBT schools. Training was attended by 67 instructors from 19 schools under Schaeffler India, TATA technology and L & T Infotech CSR support. IBT instructor learnt various basic technologies, 'Design Thinking' and 'Learning While Doing' teaching methodology. Mr. Akshay Mudholkar (CSR consultant, Schaeffler India) and Siddharth Yawalkar (CSR, TATA technologies) visited training and interacted with instructors regarding their role & expectations from program.



Instructors training @ Pabal



IBT co-ordinator teachers training @ JPNC

IBT Coordinator training: Training workshop for IBT school coordinator was conducted on 29th August 2022 at DIY Lab, Pune. Coordinators from 32 LTI supported schools attended the training to discuss role of coordinator, the NEP 2020 policy, IBT syllabus and project implementation plan etc. Dr. Yogesh Kulkarni and Mr. Wasim Shaikh (CSR Manager, LTI-Pune region) interacted and guided participants in the training.

Egg incubator to IBT schools: Poultry-egg incubator (180 egg capacity) installed at 5 IBT schools - Gavadevadi, Asade, Amboli, Malegaon (from Pune district) and Nagaj (Sangli districts). Units are financially supported by L & T Infotech CSR. Schools will use it for students training & providing community service to farmers in agriculture section. A machine installation, operations & enterprise incubation support will be provided to agriculture instructors under EDP program.



IBT Uttar-Pradesh updates (Stars forum):

- Dr. Yogesh Kulkarni visited UP-IBT program during 16th to 18th August to take review of program. He met UNICEF & Rashtriya Samagra Shiksha Abhiyan (RSSA, Educational department) officials. He gave presentation of IBT program to educational commissioner.
- Review meeting of field officers was taken on 18th Aug.
- We have taken 'Farewell activities' in all school before change of sections in schools.
- We are working with Unicef to resolve fund disbursement issues.



H] DIY and Atal Tinkering lab (ATL) support program

i] 'Tech-Ganesha' @ DIY Lab:

Eight Students of 'Do-It-Yourself' (DIY) lab Pune, designed & 3D printed Ganesha idol, a lithophone based art-works, robot coinbox and *arti-arm* robot for Ganesha decoration. Here is a demo video link of their work – https://www.youtube.com/watch?v=-8k_aVJiVPY



ii) Mr.Kishor Gaiwad (M.Tech) joined ATL team as project co-ordinator from August. Kishor is having 25 Yrs industrial experience in engineering design and has also completed Fab-Academy program. He will be heading tinkering lab projects @ Vigyan Ashram.

iii) Suhas & Indrajit has given presentation @ DIY lab facility & students activities at District Institute of Education & Training (DIET, Pune) on 4th August. We have proposed to conduct training in 10 PMC schools.

iii] ATL @ Andhra Pradesh

- Team conducted, district level training workshop for ATL School administrators in 18th August at SVP ZPHS Nambur School. It was 2nd training workshop for 20 ATL schools in Krishna, Guntur and West Godavari districts. Workshop was attended by 13 ATL lab administrators to learn AIM dashboard management & some basics of electronics-programming. Officials from educational department (SCERT) and UNICEF guided trainees in importance of ATL activates & support offered by various institutes.
- Rajesh & Vipul visited 19 ATL labs to provide training support to students & ATL lab incharge. They help students in their projects, completing ATL dashboard formalities etc during visit.

విద్యార్థుల్లో శాస్త్రీయ దృక్పథం పెరగాలి

విద్యార్థుల అభివృద్ధి సుబ్బారావు

పెరవారం విద్యార్థులలో శాస్త్రీయ దృక్పథాన్ని పెంచేందుకు ప్రయోగాలు, వ్యవస్థాత్మక కార్యక్రమాలు చేపడవడతాయని విద్యార్థుల గుంటూరు జిల్లా అభివృద్ధి సుబ్బారావు తెలిపారు. పెరవారం మంచు సంఘం క్రీడలను జిల్లా కమిషన్ సౌకర్యాలలో గుంటూరు విద్యార్థులు, యువ సి.పి. విజ్ఞాన ఆశ్రమం సంఘాధికారి కార్యక్రమం 20-21వ తేదీలకు శాస్త్రీయ దృక్పథాన్ని అలరించేందుకు ల్యాబ్ వెబ్ కార్యక్రమం నిర్వహించారు. అభివృద్ధి సుబ్బారావు మాట్లాడుతూ తనది గదిలో ప్రయోగం నుంచి వివరణ వారి కార్యక్రమం తీర్చిదిద్దవచ్చు వచ్చు వారు సాధ్యమైన ప్రయోగాల ద్వారానే వివరణించే అవకాశాలు కనీసం ఉండాలన్నారు. కీలక శ్రమ మాట్లాడుతూ విద్యార్థుల ప్రయోగాలలో పాల్గొని కీలక శ్రమ తయారు చేయవచ్చు.

కార్యక్రమంలో పాల్గొన్న అధికారి సుబ్బారావు, కీలక శ్రమ తదితరులు

వారు కార్యక్రమంలో యువ సి.పి. కార్యక్రమం నిర్వహించారు. అభివృద్ధి సుబ్బారావు మాట్లాడుతూ తనది గదిలో ప్రయోగం నుంచి వివరణ వారి కార్యక్రమం తీర్చిదిద్దవచ్చు వచ్చు వారు సాధ్యమైన ప్రయోగాల ద్వారానే వివరణించే అవకాశాలు కనీసం ఉండాలన్నారు. కీలక శ్రమ మాట్లాడుతూ విద్యార్థుల ప్రయోగాలలో పాల్గొని కీలక శ్రమ తయారు చేయవచ్చు.

I] Other Tit-bit:

- Students of DBRT & DIC celebrated of 'Dahi-Handi' on 19th August & 'Ganesh Festival' during 30th August to 5th September.
- Yogesh gave presentation of 'Modelling self-sufficient villages' in Expression of Interest series by La fondation on 25th Aug.
- Marathi Wikipedia team completed scanning of 3 books of Mr.Ravindra Kelkar covering 775 pages and 2 books of social activist Krantiveer Nagnath Naikwadi (509 pages).
- Prathmesh Darwade (project coordinator ATL labs) resigned from his position for seeking industrial job experience. He was working with us from past 2 years, we wish him best luck for future endeavours.
- Sewing and embroidery class: Students are learning sewing and stitching different jobs and designs. Nikita (11 blouse), Rupali (8 blouse), Akansha (10 blouse), Ishwari (3 blouse).



- vi. Weather record – Rainfall of the month – 145.23 mm (Total: 496.27 mm), Max temp-34.00° C, Min Temp –19.00° C, Humidity – 61%, Water height in well– 4.25 M.
- vii. Energy consumption record- Electricity unit – III Phase -602 unit, I Phase import- 55, Solar generation- 2495.00. DG used – 06.30 Hrs.
- viii. Animal Husbandry section update – Milk production –266.4 Kg, Goat farming- Average weight gain on bucks 74 gm/day (moderate)
- ix. Biogas produced-27.94 M³ (Dung used- 698.5Kg), E-rikshwa uses- NA (EV's are under maintenance)
- x. Online visitors: www.dsttara.org – 804 (New visitor-733, Repeated-99), www.vigyanashram.com – 950 (New visitor-749 Repeated-201)

KJ Data Report: <https://bit.ly/3yMrssb>

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Photo Gallery:



IBT Training : Mulching technique



Lathe machine : DBRT students



IBT instructors training



IBT instructors training

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