

Vigyan Ashram Status Report

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Meet our DBRT Student : Dinesh Waghe, At.Post.Tokachi Wadi, Tal.Panvel Dist.Thane

Dinesh is a son of farm laborer. He joined DBRT course through Yusuf Meherally Center, Panvel. Due to COVID, he had attended online classes and completed practical's at YMC. After relaxation of lockdown, he came to Pabal and completed the course. He had developed interest in goat farming and poultry. As part of their practical, they made all preparation to construct poultry shed. He believes that proximity to Mumbai market will be his advantage.

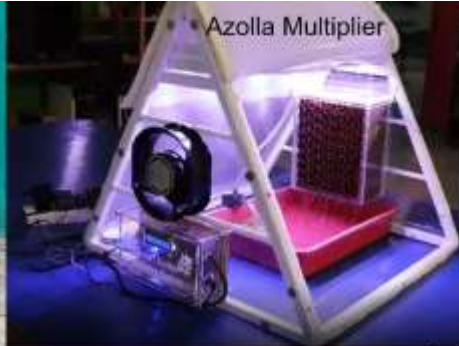
In this issue

- **FAB Academy 2021 batch completed their training.**
- **DBRT 2020-21 progressing towards completion**
- **Digital Fabrication training for Engineering college professors.**
- **Entrepreneurship Development program on Pickle Making**

A] Successful completion of FAB -academy 2021:



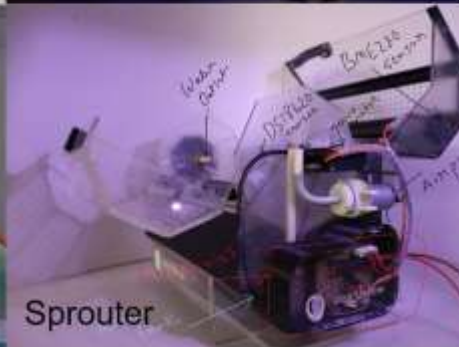
Smart Goat measurement



Azolla Multiplier



Smart Shegadi



Sprouter

Five students of Fab academy-2021 batch completed their course on 23rd June. Fab Academy is six months training on digital fabrication. Sant Gajanan Maharaj engineering College, Shegaon deputed three of their engineering faculty for the course. Projects done by students were based on community needs and we are very satisfied with the quality of projects.

DBRT student Pradeep also completed all assignments of Fab Academy though he is not formal student of Fab Academy course. You can visit his page at :

<https://vigyanashram.online/pradeep/>

Project and assignment of Fab Academy students are on : <https://fabacademy.org/2021/labs/vigyanashram/>

B] Concluding phase of DBRT 2020-21 batch :

Those students who went back to their home during COVID 2nd wave are started returning to campus. We are calling them in groups and putting them through mandatory quarantine period. We are using this period to complete on field activities like agriculture. All group activities like daily exercise and meditation are kept on hold. All theoretical topics were completed in online-offline mode. Hence our aim is to complete all mandatory practical's for each students before July end. We have made individual practical completion schedule for each of them. They are working on it.

16 students including seven out of state students completed their course work and returned home. They were on campus throughout the course period and hence completed the course as per the schedule.



Maintenance of Biogas

Agriculture & Animal husbandry section: On-set of monsoon season got back greenery & agricultural activities on campus. We got good 153 mm June showers allowing agricultural section to start new plantation. Students planted 20 Kg fodder maize, 5 kg fodder Bajara, 2 gunta of fodder mulberry this month. They have planted 200 seedlings of capsicum in polyhouse. Students learnt basic skills like seed treatment, land preparation, fertilizer application etc from these activities.

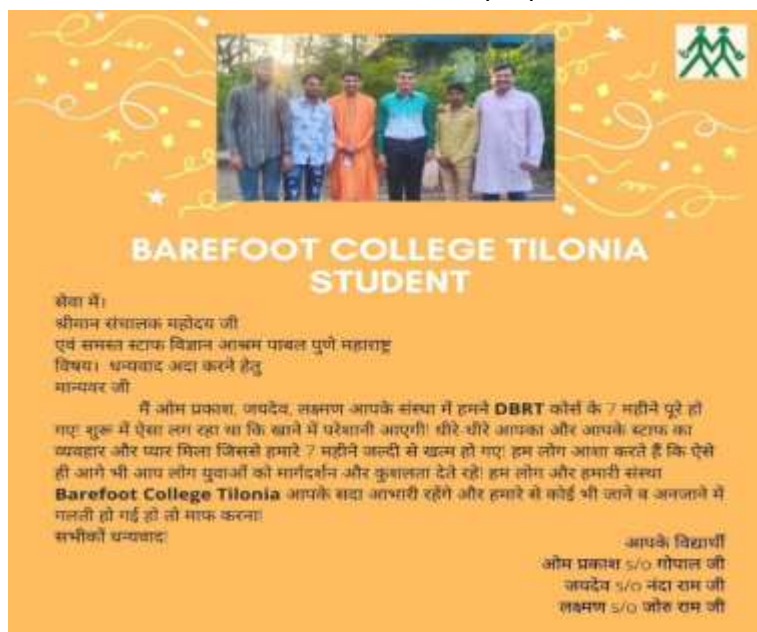
Our cow 'Gouri' delivered a calf (male).

Students have supplied fresh vegetables - shepu (2 kg), methi (5 kg) and chilli (1kg) apart from 106 dozens of eggs & 172 lit of milk to kitchen.

Energy & Environment section: As a part of their practical, students carried out maintenance of Biogas plant. They removed the dome, repainted it , welded it and fixed it again. Students also fabricated 10 units of rain gauge for 'kendur' villages and earned community service of Rs.2500.

Home & Health section: In H & H section, students learnt baking skills while preparing bread from 20 kg dough. They also learnt making of tamarind sauce (4 kg), peanut chikki (2 kg), dried methi leaves (5kg).

Workshop department: Students fabricated a working table, shoe rack, benches for workshop and a Ferro-cement lid for water tank. Laxman & Jaydev repaired & re-painted dining tables in kitchen. Students earned community service of Rs.11424.00 through this work in June month.



Letter from outgoing students from campus

C] Admissions for DBRT-2021-22 batch:

Admission for DBRT 2021-22 batch is started. We are reaching out to deserving needy students through social media, network NGOs, rural schools. Due to delay in completion of outgoing batch, we have extended admission deadline by 1 month. New batch will join from 1st of August. Depending on Govt advisory, we will plan strategy for conducting blended approach of training in online-offline mode.

We have conducted introductory online webinar for interested students and parents on 27th July. It was attended by 100+ participants. We have informed DBRT course structure, learning methodology, admission process and addresses parents' concerns etc. through this webinar.

D] Design Innovation Centre (DIC) & Fab Academy update:

- Oxy-kit: We have completed fabrication of oxygen concentrator unit. Prathmesh had conducted first trial and got 30-40 % oxygen concentration at 10 LPM flowrate. It's less than expected 90 – 93 % concentration. We have identified the problem areas viz. removing moisture content in the air, capacity of compressor and quality of zeolite. Now Prathmesh is working to resolve these issues. We are taking help of other makers, who are working on developing oxygen concentrator.
- Workshop team fabricated a 'jackfruit cutter', useful for cutting of jackfruit, raw mango, lemon etc for cottage scale processing unit/fruit vendors. We have adopted the design from 'Mitrani Ketan' (Kerala). Vigyan ashram is planning to promote 'Jack-fruit' value addition technologies @ Konkan in collaboration with Mitrani Ketan & jack-fruit farmers. Its available for sale against order with price of Rs.2500/- video link - [Jack-fruit cutter / फणस कटर - YouTube](#)
- Sunny completed fabrication of polycarbonate sheet-based dome dryer unit. We are planning to test its capacity of capturing solar radiations (heat) and comparing it with mild steel-based dome cover.
- Suhas fabricated a new version of solar powered UV portable water filter. New version has in-built ceramic candle for removing organic particulate matter from water. Presently he is testing its efficiency and also planning to conduct multi-location field trials for different user feedback.
- Suhas demonstrated application of 'NEER' water controller unit to water pump dealers at Manchar, Junnar. He got positive feedback from dealers for its applicability. He is planning to mass manufacture it for large scale distribution.
- Sanket successfully fabricated & tested a Chemical Oxygen Demand (COD) apparatus for chemistry lab. This unit can test 12 sample / batch with precise temperature controls for hot-oil batch. Sanket has also completed a prototype model for plastic bailing machine. Presently he is facing some issues on gear ratio and working on it.



- Digital Fabrication Camp : A 'digital fabrication' orientation camp was conducted for 3 faculty members of for Sanjeevani college engineering, Kopargaon (Ahmadnagar) during 21st to 25th June. They are planning to establish a 'FabLab' on their campus. During this 5 days training, faculties learned use of various fab lab tools , basic of electronics , basics of programming etc through hands-on project activities.
- Mukesh Basvekar and Kalyani Chavli completed their DIC fellowship tenure. Kalyani had worked on 'fortified traditional snacks' project and wish to continue the same work with her start-up. Mukesh had completed image recognition-based attendance system & now enrolling for higher studies.
- Spreading rural innovation through DIY designs project: Prasad & Pooja completed design manual work for Solar powerd UV water filter ([Solar UV- Water Filter | DESIGN INNOVATION CENTER \(vigyanashram.blog\)](https://www.vigyanashram.org/blog/solar-uv-water-filter) and Automated Bell ([Automatic Bell](#)).



E] Technology Based EDP:

Pickle manufacturing enterprise: Entrepreneurship Development Program was conducted during 10th to 14th June. Training was conducted through online mode with live demonstration sessions followed by hand-on learning activities. Participants were asked to collect required material for pickling and perform task under the instructor guidance of successful food entrepreneur & pickle manufacturer Mr.Sachin Gade. Training was attended by 29 participants. Students learned three different pickle recipes and its enterprise model. We are providing incubation support to interested candidates.

Mentoring sessions: As a part of incubation support, EDP team provided business mentoring support including technical guidance, business registration, marketing & networking support etc. During June month, Sai Priya Group Mumbai, Mr. Azhar, Mr. Sachin Gade, Mr. Akshya Kajrekar, Ms. Sanika Gawade, Ms. Ratna Kulkarni, Ms. Sarika Jagtap, Mr. Santosh Khedekar were benefited by mentoring sessions.

Hero of the month:

Mr. Suraj Ukirde: Suraj has started his fabrication business in the name of 'Suraj Fabrication' at Sanaswadi. He is offering his services mainly in fabrication of shed, Vehicle body building, Agri tools, Trolley, etc. Suraj has done his DBRT course during 2019-20 batch. He is getting hand-holding support under EDP program.



Suraj Fabrication

F] IBT schools online training & classes (activities under COVID - school lockdown):

- Team of IBT students & instructors of Katraj school celebrated World Environmental Day (5th June), while distributing 500 sampling of Neem, Gulmohar, Jackfruit, Tulsi etc plants. Students prepared these plants in

their polyhouse nursery as part of learning activity. They earned community service of Rs.5000 through this activity.

- Students of Energy & Environment students in Nande school fabricated a rain gauge for measuring rain fall in schools. They used scraped plastic bottles for this activity while learning use of basic tools, measurement, unit conversion etc.
- Hydroponics spinach cultivation @ Katraj IBT school- Students of Katraj IBT school fabricated a Nutrient Film Technique (NFT) based hydroponics system. This system holds 60 cups in PVC pipe with 100 lit fertigation tank & automated water circulation- air blowing system. They used D-i-Y designs made under La foundation project.



Katraj School : Hydroponics

- Students of Marunji School repaired inverter of villager.
- Sachine, Mahendra and Priyanka visited Chinchwad, Chikhali, Moi and Nimgaon Bhogi schools during June month to monitor ongoing activities and guide schools administration for upcoming academic year activities.

G] 'Fun with Family' program @ DIY lab & ATL (Chhattisgarh) updates-

i) During June, we got an overwhelming response to 'Fun with Family' program. Total 4 sessions were conducted with collective participation of 261 families (student & parent teams). Sessions were hosted through online meeting platform & Facebook live streaming. Following are the participation details –

Date	Topic	Resource person	No. of families
6 th June	Book mark	Shwetha Kamath	48
13 th June	Natural colour making	Reshma Inamdar	35
20 th June	Bucket in bucket	Priyanka gharat	63
27 th June	Water colour Painting	Neela Punchhpurkar-Kulkarni (Volunteer – Eaton foundation)	115

ii) Priyanka Gharat conducted online session on “स्वतः ची खेळणी स्वतः तयार करू आणि विज्ञान शिकू ” (learning science through toy making) on 26 June for Domari Gurukool @ Beed.

iii) Training session ATL instructor @ Chhattisgarh labs:

Following sessions were conducted for school teachers in chhattisgarh. The sessions were collectively viewed by 6373 viewers on YouTube, on following links-

Date of session	Topic	YouTube link
3 rd June	बारिश और पानी की धारा का प्रवाह नापना सीखे	https://youtu.be/bNr-KqV2X8k
17 th June	आओ बनाएँ दही बनाने की मशीन	https://youtu.be/1W5jHe2c-As
24 th June	वाँटर पंप कैसे काम करता है, यह जाने	https://youtu.be/Cu5BVMHz_NM

iv) **Urban Farming at JPNC** - A group of 6 ladies started experimenting the Urban Farming Model at DIY Lab.

H] Other tit-bit –

i) **Construction of 'boys hostel recreation center' :**

Construction work of 'boys hostel recreation center' was started . It is supported by Asha for Education. We have completed work of foundation layout, base preparation & foundation column.

ii) Wikipedia Marathi updates- Komal scanned 1050 pages to convert them into OCR for books of बिंदुमाधव खिरे (5 books) and राकेश शर्मा (11 books). Overall work log can be viewed

on-

<https://docs.google.com/spreadsheets/d/1RdyFyIU1cEd2vFHRTJM5kT7skAwFmihNmAEeQOeRXE/edit?ts=5de8a8b2#gid=1804519950>

iii) We have advertised for new fellows & interns for Design Innovation Center.

iv) We are thankful to Mr. Atul Kulkarni, Mr. Anil Date, Mrs Nirmala Kulkarni for their valuable donations for work of Vigyan Ashram.

v) Weather record – Rainfall of the month -153.05 mm (Total –153.05 mm) ,Max temp-38.00°C, Min Temp – 10.00°C , Humidity – 77% , Water height in well–5.80 Mtr.

vii) Energy consumption record- Electricity unit – III Phase -1233 units , I Phase Export-1051 units, Import- 147 units. DG used – 01.30 Hrs. Quality of power : Number of interruption- 56 , Normal voltage : 86.14%, No supply :7.46%, low voltage :0.0 % , No data:0.00%

viii) Animal Husbandry section update – Milk production – 172.00 Kg , Poultry Egg production – 107.33 dozens (FCR – 2.09/ dozen)

ix) Biogas consumption – Dung used-875 Kg, Gas produced-11.77 M3

x) Online visitors: www.dstattara.org –912 (New visitor –811 Repeated-101) , www.vigyanashram.com – 1224 (New visitor-989 Repeated- 235)



Recreation Center Boys Hostel

K] Data Report:

https://docs.google.com/spreadsheets/d/1WItSWJF_PUH7iUNROZNeBGysFyz_BPF7/edit?usp=sharing&oid=101141840668207826730&rtpof=true&sd=true

(Work of VA is supported by Asha for Education, Praj foundation, EATON Foundation, L & T infotech, SPA Education Foundation, Megger (I) Pvt Ltd, SELCO India foundation, INDUSA Endowment, Govt of Chhattisgarh, Savitribai Phule Pune University, Suzlon foundation, Dept of Science & Technology, and many individuals and foundations)

Photo Gallery:



COD apparatus trial



Shop-bot assignment



IBT : Nursery plants



Urban farming



Seedling tray nursery



Cement hollow block

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