

Vigyan Ashram Status Report

Volume 38 Issue 02

February 2020

In this issue

- [Training Program for Electricians](#)
- [Hydroponic vegetable cultivation trials](#)
- [100% increase in Fees by NIOS and our futile protest](#)
- [Mr.Yogesh Lad , DBRT alumni got selected for award by NIOS](#)

A] Training of Electricians :

A training program for serving 'Electrician and Wireman' was organized from 29th Feb to 2nd March at DIY Lab, Pune. Training was supported by Meggar Pvt Ltd under its CSR initiative. We are surprised by the response received for online registration. We have over 70+ registration and 45 participant paid registration fees and attended the training.

Training covered topics like new business opportunities in electrical sector, Ideal electric service center, introduction to new electrical accessories and instruments, solar electric and pumping installation etc.

We have external resource person Mr.Vikas Chaitanya (Ya shika foundation), Mr.Rajiv Jatkar (ex. Chairman of Maharashtra electrical contractors association), Mr.Amar Patil (Chairman of Maharashtra electrical contractors association), Mr.Prasad Kulkarni (Technology Head, Gram-Oorja Pvt Ltd), Mr.P.P.Shah (Principal, Arn vidyut School, Pune), Mr.Suhas Ladabe.

Mr.Sanjay Yadav of M/S Megger (I) Pvt Ltd. Attended the concluding session of the workshop. Megger (I) Pvt Ltd has gifted multimeter for all participants of the training.



B] Solar Entrepreneurship Development Program (EDP) :

First batch of 15 students from C.T.Bora college (shirur) successfully completed Solar EDP program on 4th Feb. Certificate distribution & valedictory session was held on 4th Feb. It was attended by Ms.Sarah Alexander, Mr.Manjunatha H T and Mr.Prashant Sharma of SELCO foundation and Dr. K.C.Mohite (Principal, C.T. Bora college), Mr.Awati.



C] Staff training & capacity building : VA team members attended different training session in the month of February :

- Ms Aditi & Snehal attended 'e-Yantra' training workshop @ IIT,Powai during 31st Jan & 1st Feb. Workshop aimed at Training of teachers for establishing Embedded system & Robotics Lab in the institute. We will establish e-Yantra lab at DIY Lab, Pune. We have received one robotics kit for experimenting project.
- Amol attended 'Electric vehicle charging station Design workshop' on 1st & 2nd Feb. Training was organized by Institute for Design of Electrical Measuring Instruments (IDEMI) and MSME Technology Centre, Mumbai. He got many insights on emerging technologies & entrepreneurship opportunities in electric vehicle technology.
- Priyanka attended Wikipedia 'Train The Trainer (TTT)' program organized by CIS-A2K at Rambhua Mhalagi Prabodhi, Mumbai during 27th Feb to 1st March.



D] Technology development, DIC and Fab Lab update:

- Hydroponics vegetable cultivation trial started on campus with cultivation of cherry tomato, broccoli and other exotic salads. Aim of trial is to standardize nutrient dosing & water quality parameters for hydroponics cultivation mainly with DWC (Deep water culture) & NFT (Nutrient film technique) system. At present we are reducing cost of 'reverse osmosis' treatment of hard (200 ppm above hardness) irrigation water. The data will also help in extending trial for flood & drain based aeroponics farming system. DIC fellow Vipul is working on designing aeroponics system.



- Ranajeet & Tejas visited 'Landcraft agro' @ Hatkalangane (Kolhapur) on 7th Feb to study technical & commercial aspects of project from its promoter Mr.Mayank Gupta.
- Certification of 'Rice De-husking machine': We have applied to 'Farm Machinery testing centre' ICAR-CIAE, Coimbatore, Tamilnadu. This testing will help us in marketing of Rice machines through Govt scheme. Our partner M/S Climber Systems, Katraj (Pune) is manufacturing and selling this machine.
- Prasad conducted pyrolysis unit trial using tyre & foot wares waste. For 20 Kg of batch, he got 98 % oil , char & gas recovery. He is presently working on modifying water condenser & energy efficiency aspects of unit. He visited Mumbai to meet Dr.J.B Joshi (ICT) on 11th and 14th Feb to discuss results of trials.

- Pilot testing of Auto Farm : Autofarm is a device made in the Fab lab to measure temp, humidity and control pumps in polyhouse. With the financial support from Mr. V.K Magapu (Pune), Suhas has started fabrication of 5 units of Auto-farm sensor device. These units will be installed at 5 different polyhouse farmers as field demonstration & testing.
- New 3D Printer : We have purchased new 3D printer with the support of SPA Education foundation. Its of 'Fracktal Works' make Julia series model.
- Fab academy students learnt & practiced CAD design, Laser cutting, 3d printing ,Scanning and basic electronics programming in this month.
- Fab-academy students visited Dassault system 3D experience lab @ Hinjewadi (Pune) on 27th Feb (<https://3dexperienclab.3ds.com>) to learn advance techniques & applications of 3D printing technology.



- Updates on Agricultural B.Tech college interns internship projects –

Name of student	Project title	Present status
Makarand Ghotane	Designing & fabrication of manual chilli picking & storing device	3 D printing is done , chili cutting blade fixed to the thumb cap , Cut resisting gloves procured, Chili collection system holders 3D printing is done.
Pradip Shirtode	Designing & fabrication Tamarind de-seeder	Tamarind pulp and seed separating punch fabricated and tested on tamarind.
Shubham Kadam	Designing Vibro Thermal De-infector for food grains.	Manufacturing drawings are ready.
Mauli Fartade	Testing of performance of azolla on artificial light & vertical beds domes structure.	Two-layer tray structure fabrication is completed, Azolla growth study started.
Rushikesh Pathare	Optimizing evaporative cooling system in Polyhouse	Readings of temperatures and humidity data collected, water distribution on honey-comb structure improved.

- Ambulance Stretcher project : We have started new project under guidance of Mr.M V Kotwal. This stretcher will be useful for shifting patient on two wheeler and minimize the vibration during travel. Mr Pratik Gajare will be main lead for the project along with Mr.Prasad Patil. They visited Thane on 7th Feb to get idea of the previous work done by Mr.Kotwal and their fabrication team.
- A 2 days advanced Goat farming technique EDP was conducted during 27th & 28th Feb. Training was attended by 5 tribal youth from Faloda village of Ambegaon block. These students prepared their individual business plan & bankable project reports for starting goat farm.



- Hydroponics fodder cultivation & silage bag press delivered to village kurd, Tal-Khed, Pune. These units made as part of technology support to MPCCT 'livestock improvement program'.

E] DBRT Updates:

DBRT activities are geared-up with new skills training, community work and projects. Following are highlights of their learning activities as –

- Agricultural department students made silage from 3 ton green maize fodder for Mr.Ganesh Jadhav (farmer in Pabal). They learnt to make silage in larger quantity.
- Students installed sprinkler & drip irrigation system at fodder plot & new hydroponics vegetable system in polyhouse.
- Students of Energy & Environment student restructured electrical fittings in animal husbandry section. They did new earthing for 4 new electrical poles and repaired electrical water pump. Total value of community service for their work was Rs.17238/-.
- In workshop department, student Rahul & Hrushikesh completed contract of wall painting work in kitchen & food processing unit. They earned Rs.4770/- for their work. They also practiced basic of plumbing, Arc welding skill while doing various maintains work.
- Home & Health students exhibited & sold various food processing products like chikki, biscuits, ready-mixes, chatt in Pabal during Pabal Yatra on 8th & 9th February. They learned community service of Rs.5700 for their communitive sales during month.
- Team of DBRT students participated in 'Annual Science Exhibition' at GMRT- Khodad on 28th & 29th February. They exhibited kitchen waste composter, Dryer, automated temperature-humidity sensor etc. Stall was visited by more than 3000+ visitors.



DBRT E & E section students installing chaff cutter in Dairy unit



F] 100% increase in Fees by NIOS and our futile protest :

NIOS has increased DBRT course enrollment fees by 100% for the academic year 2019 as compared to 2018. In the past (2018), we were paying NIOS Rs.1600/- per student. Now revised fees is Rs.3200/- per student. This brings additional burden on VA for 56+ students. We have lobbied hard and send various letters to NIOS. But other than accepting few demands like paying in installation etc. They have not budged on the fees. Last of application was on 17th Feb. We were following up till 16th evening but finally we have to pay fees as per the new structure.

G] Mr. Yogesh Lad : NIOS informed us that DBRT alumni Mr. YOGESH LAD has been selected to receive award on the occasion of NIOS Foundation Day on 19th Feb at the hands of Hon Vice President of India.

Unfortunately, the event got post-pond and will be held at later date. Here is brief about Yogesh Lad :

Yogesh Lad is from small village in konkan region of Maharashtra. After 12th standard he has joined accredited vocational institute AVI Vigyan Ashram for doing Diploma in basic rural technology. Yogesh is from farming background. He did various apprenticeship jobs electrician and welder in 2013 while doing the course. He has started his own Enterprise in 2014 with Rs. 25000 taken from his mother. Started his fabrication shop in 2014. Last year he has purchased a tempo to transport the material to his customer. Yogesh is now employees two youth from his village. He is earning rupees 30 to 35000 per month. When many youth from his village are migrating to Mumbai for jobs. Yogesh is inspiration for many to stay back in own village and earn good living. Today Yogesh is staying with his parents and also look after their farm. We are proud of Yogesh!

H] VA DBRT alumni visit :Yogesh and Mahendra visited Bhakti Vedant Kaushalya Vikas Kendra at Galtare (Palghar) on 6th Feb. We have invited Our DBRT alumni for discussion. Eleven DBRT alumni came for discussion. Many of them are doing some business. We have discussed new ideas, business plan with them.

Yogesh also visited Gram Mangal , Aina along with Mr.Ramesh Panase on 5th and 6th Feb. We had meeting with Gram Mangal volunteers to discuss possible collaboration. We are planning to organise Entrepreneurship Development Program for youths at Aina in the month of April 2020.

I] IBT Update :

IBT Schools & students were busy in completing their curriculum & activities before end of the academic year. Following are the highlighted activities of IBT program during this month-

- IBT students of Shri Kulswami Khandaray Vidyalaya, Hiware (Pune) and Guruvarya Eknath Govinda Dev Prashala, Bori (Pune) conducted H₂S water testing drive in their respected villages on 14th Feb. Total of 20 samples were collected from drinking water sources, out of 5 found +ve for E.coli presence. These test benefited around 130 families in village.
- Students of Energy & Environment section in Indiraji Madhyamik Vidyalay, Moi (Pune), fabricated LDR (Light Dependent Circuit) for street lights. They got initial order for 5 LDRs from village Grampanchayat and 7 more units from private workshop in village. Students earned community service of Rs.9500 & also got appreciation from school staff & community.
- Home & Health department students in New English school, Dhamari (Pune) dried around 100 Kg leafy vegetables. It will be used in non-lean period for 'mid-day meal' program.
- Students of Shri. Devi Shantadurga high school, Vadachapath (Sindhudurg), fabricated a 'sprouting machine' in schools.
- 3 D printing workshops were conducted in Indiraji Madhyamik Vidyalay, Moi (11 & 13th Feb), Punarutthan Samarasta Gurukulam, Chinchwad (17-18 Feb) and PKDMN, Vidhyalaya, Chikhali (19 & 20 Feb) benefiting total 48 IBT students. Students learnt 3D designing, operation & maintains of 3 D printer while printing various objects from their school's curriculum.
- Video conferencing sessions on 'Food adulteration' and 'Grey water recycling' was conducted on 1st & 8th February. It was attended by 840 students from 13 schools.

लोकमत

साळवाडी गावातील पाण्याचे परीक्षण

लोकमत न्यूज नेटवर्क

खोडद : भक्ती-शक्ती फाउंडेशन आणि विज्ञान आश्रम, पावळ यांच्या संयुक्त विद्यमाने गुरुवारी एकनाथ गोविंद देव प्रशालेत विद्यार्थ्यांनी येथील ५५ कुटुंबांतील पिण्याच्या पाण्याचे परीक्षण केले. या परीक्षणाचा ३९२ व्यक्तींना फायदा होणार आहे. परीक्षण केलेल्या १० नमुन्यांपैकी फक्त ३ नमुने पिण्यायोग्य आढळून आले. या पाण्याचा तपासणी अहवाल

विद्यार्थ्यांसंबंधित कुटुंबांना देणार आहेत, अशी माहिती प्रशालेचे मुख्याध्यापक महेंद्र गणपुते यांनी दिली. साळवाडी गाव आणि पंचक्रोशीतील वाड्या-रस्त्या विज्ञान आश्रम पावळ यांच्या तांत्रिक सहकार्याने गुरुवारी एकनाथ गोविंद देव प्रशालेत आय.बी.टी. मूलभूत तंत्रज्ञानाची ओळख हा पुर्व व्यावसायिक अभ्यासक्रम सुरू आहे. यात विद्यार्थ्यांना विविध जीवोत्पत्तीयोगी कोशाल्य प्रात्यक्षिकांच्या माध्यमातून शिकविली

जातात. भक्ती-शक्ती फाउंडेशन आणि पावळ येथील विज्ञान आश्रम यांच्या माध्यमातून विद्यालयीय पाणी परीक्षण करण्यात आले. यामध्ये विद्यार्थ्यांनी साळवाडी गाव आणि आसपासच्या वाड्या-रस्त्या येथील पिण्याच्या पाण्याचे १० नमुने आणले व त्याचे एच.टी.एस बॅक्टेरिओलॉजीच्या सहाय्याने पाणी परीक्षण केले. या कार्यक्रमासाठी विज्ञान आश्रमचे सचिन पुणेकर, महेंद्र भोरे, मुख्याध्यापक महेंद्र गणपुते उपस्थित होते.



गुरुवारी एकनाथ गोविंद देव प्रशालेत विद्यार्थ्यांनी येथील ५५ कुटुंबांतील पिण्याच्या पाण्याचे परीक्षण केले.

IBT Chhattisgarh updates:

- 3rd quarterly assessment report (September to November 2019) was submitted to district educational department. During this period IBT program has benefited to 1457 students (Girls- 944 & Boys-514). Total value of community service earned during this period was Rs.97500/-
- Chhattisgarh Schools highlights for February month:

➤ Students from 10 porta cabin school of Bijapur district participated in 'Science Day Exhibition' on 28th Feb. Total of 35 students & 20 instructor presented various activities & demo models made in IBT program. Exhibition was visited schools students, government officials & villagers. IBT students demonstrated use of blood group & haemoglobin testing kit while testing blood sample of honourable district collector of Bijapur district Shri. K.D.Kunjam & other officials.



IBT Science Day Exhibition , Bijapur, Chhattisgarh

- Students of Kutaru & Matwada porta cabin school fabricated shoe stand for their hostels by using UPVC pipes costing around Rs.1800.
- Girl students in Jangla porta cabin schools harvested 80 Kg of brinjal and 30 kg radish from their kitchen garden. They have planted these plants in the month of November by using mulching paper & organic fertilizer technique.

J] DIY & wiki updates

- A photothone session was conducted at Fab Lab on 29th Feb. Photos made available on wikki-commons @ https://commons.wikimedia.org/wiki/Category:Photathon_at_Vigyan_Ashram_Fab_Lab
- A team of Andhashraddha Nirmulan Samiti (Pune) visited Pabal campus Wikipedia center @ 5th February to know details about wiki-publications. Team also conducted small demo session on various superstitious magic shows for DBRT session.
- Wiki team scanned 13 books comprising 2536 pages and converted in to OER. Similarly new articles on [हर्मेटिया इलुसेन्स](#), [ताप-विघटन](#), [हरितगृह वायू](#) were published by girls volunteer team.
- DIY Lab : DIY camp at PMC School – Karmveer bhaurao patil, Yerwada on 4 Feb 2020. Twenty students participated in the workshop and made Solar Mobile Charger.
- 28 Feb (Science day) : Vasundhara secondary School and The Red Apple pre School Kothrud visited to DIY lab. We introduced our lab and Projects and small DIY activities on solar.
- Regular activities of students of Door step School and Anubhuti home schooling are progressing well.



K] Other tit-bit –

- i) 'Core Group & Change Makers – Empowering communities through Scalable Technologies for Rural Transformation' – This book edited by Dr.Yogesh Kulkarni, Dr.Sunil Agarwal and Mrs Bhakti Talwelkar got printed. It will be available online on : <https://www.slideshare.net/yogeshkulkarni106/core-groups-change-makers-230462575>
- ii) Purchasing new agriculture land- We started formalities in purchasing of new agriculture land adjoining to Pabal campus. Its 19.62 Gunta (0.1984 Hector) agriculture land belonging to Pabal farmer. VA has made plantation & taking care of it from last 35 years. Formal legal process has been initiated & we are expecting to close deal by end of March.
- iii) Team of volunteers from Vivekanand Jivanjyoti Sanstha visited Pabal campus on 24th February to formally donate bicycle to VA. This institutes along with housing societies of Pune has donated 25 bicycles for DBRT students.
- iv) Yogesh participated as a speaker at 'Industry Conclave & Panel Discussion' during e-Yantra Ideas Competition (eYIC) Regional Finals on 29th Feb.2020 at MMCOE, Karvenagar. (<https://www.youtube.com/watch?v=MwY99iM8VZg&feature=youtu.be>)
- v) Yogesh and Rahul attended annual Budget planning exercise at IIE on 24th Feb.
- vi) Mrs.Amrita Patel (Waste management expert) and board member of Ghardia chemicals and Dr. Ranga visited VA pabal @ 25th Feb. We have discussed various new proposals and ideas for collaborations.
- vii) Team of Jankidevi Bajaj Gramvikas Vikas Santha (JBGVS) And Centre for Applied Research & People's (CARPE) visited Pabal campus on 14th Feb to study waste management & other rural technologies. Ranajeet & Amol visited JBGVS Rajgurunagar office to know about its work & possibilities of collaboration.
- viii) Weather record – Rainfall of the month -00 mm (Total – 945.28 mm) ,Max temp-38.00 °C, Min Temp – 12.00 °C , Humidity – 89 % , Water height in well – 7.22 Mtr.
- ix) Energy consumption record- Electricity unit – III Phase -1081 units , I Phase Export- 140 units, Import- 789 units. DG used – 4.48 Hrs. Quality of power : Number of interruptions :54, Normal voltage : 79.47% No supply : 3.06 % , low voltage : 17.47%, No data: 0 % , Diesel Generator use – 5.2 Hrs
- x) Animal Husbandry section update – Milk production – 195 Kg (FCR-9.57), Goat- Weight gain - NA, New kids- 2 , Poultry Egg production – 184.33 dozens(FCR – 1.88)
- xi) Biogas consumption – Dung used- 504 Kg, Gas produced- 0.5 M³) Two wheeler – 435 Km, petrol consumption – 6.22 lit
- xii) www.dstattara.org – 1120 (New visitor –1042 Repeated- 178) , www.vigyanashram.com – 1105(New visitor – 1024 Repeated-281)



Data Report: https://drive.google.com/open?id=1Zhh4EarA4KVjEnWaoKk9C_eG-4WlYo5m

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

Photo Gallery:



DBRT workshop section student learning welding



Vertical farming of 'Azolla' in dome structure



IBT Chinchwad school students learning 3D printing



IBT Bijapur students performing 'blood group' testing at district level science exhibition



Dr.Amrita Patel visit to Pabal campus



Mrs.Bhupali & Mr.Dattatrye from Bajaj Auto CSR team visit to Pabal campus