

Vigyan Ashram Status Report

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A] Commencement of academic year 2019-20

New academic year started with DBRT 2019-20 batch. It has 50 admissions including 10 girl students. This year we have students from Maharashtra, Chhattisgarh, Gujrat, Madhya-Pradesh and Telangana states. These students will stay in campus for next 1 year to learn various technologies in the area of metal fabrication, electrification, renewable energy, food processing, agriculture & animal husbandry sector. This year we have introduced new advanced technologies viz. tissue culture & soil microbiology, digital fabrication and advanced sewing technology as elective subjects. Based on feedback received from earlier batch, we have modified schedule for meditation & extra curriculum activities like 'Art & Craft'.

We are thankful to ASHA for Education, Eaton Foundation, SPA Education foundation and many individual supporters for providing financial assistance for DBRT 2019-20 batch.



DBRT Students joining for *skillful* career path.

B] TAP-RISE consultative workshop : Vigyan Ashram along with Development Alternatives are working on formalizing 'Technology Accelerator Platform' for DST supported core support organisation. Consultative Workshop on Technology Acceleration Platform for Rural Innovation and Social Entrepreneurship (TAP-RISE) was organized by Vigyan Ashram and Development Alternatives at BAIF Bhavan, Pune on 25th July 2019. Workshop was aimed to seek inputs from core groups regarding nature of the platform, expectations and overall design of the acceleration platform. Total 31 participants from 17 DST core support groups were actively taken part in this workshop and given their valuable inputs for the development of TAP-RISE platform proposal.



TAP-RISE workshop @ BAIF PUNE

C] 29th & 30th July Open House Exhibition : Open House Exhibition was held on 29th & 30th July on the occasion of 16th anniversary of Dr.S.S.Kalbag. We have decided to organise exhibition for two days for management of visitors. 29th July is for schools in and around Pabal village and 30th July is open for all visitors. This is we have 3450 visitors including schools-college students, makers, alumni's ,villagers and well-wishers. Following are the highlights of exhibition-

- This year's 'YUVA UDYOJAK' award was given to Mr.Sameer Bajrang Doke by the hand of Shri.Sanjay Nimbalkar (VA Ex-staff). Mr.Sameer is DBRT 2006-07 batch student. He has successfully established his enterprise in paver block & bricks making at his native place in Junnar (Pune)
- Highlight of the exhibition was : Plastic waste Pyrolysis unit, Bio-waste composting, Grey water recycling system, Drying apparatus & Dome dryer, Bamboo engraver, Cable-bot etc.
- CSMVS Museum on Wheels (Mumbai), a mobile exhibition based on theme of 'FOSSILS: Impressions of the past' visited the exhibition on both days. They exhibited their display and also conducted workshop for students. It was point of attraction for Schools students as they were able to learn about dinosaurs age fossils science.
- Nine IBT schools (80 Students and 20 instructors) also put up their stalls in the exhibition. They have demonstrated their innovate project demos on smart water level controlling system selected for state level science exhibition, room heater, agri tools, library card making mould machine, science projects various food products etc.
- Chairman, Board of Trustees of IIE Dr.A.D Adsool, Dr.J.N.Kalake, Dr.Nandkumar Kadam, Dr.Suhas Altekar, MC members of VA and many well known personalities visited ashram on 30th July.



29th & 30th July 'Open House Exhibition'

D] Inauguration of 'Tissue Culture' Lab facility: A new laboratory of 'Tissue culture & Soil Analysis' was inaugurated on 30th July. This facility is created with funding support of Bajaj Automobile CSR under ' Modernization of agriculture training centre' project. Laboratory facility was inaugurated by the hands of Mr.Swapnil Powar (DBRT students worked on electrification of lab), Mr.Avinash Dhobale (VA Alumni & Promoter of Mangalam Agrotech). This lab has modern for plant tissue culture, soil & water analysis facility to be used for training & advanced farming technology development.



Inauguration of 'Tissue Culture' Lab facility by DBRT student

E] IBT Update :

IBT Instructor Training : Two IBT instructors training program were conducted in the month of July. Total 107 instructors from 34 schools participated in the training.

- a. 1st batch of training was conducted during 4th to 6th July. Total 44 instructors from 13 IBT schools had participated in the training. This training was aimed at training instructors to improve the teaching methodology and conducting hands on activity.
- b. 2nd training was held during 8th to 12th July. This training was attended by 63 instructors from 21 IBT Schools. The training was aimed to introduce instructors on L-2 (10th Std) syllabus to as per new guidelines.

We are thankful to Praj Foundation, L & T Infotech and Suzlon foundation for their support & guidance in instructor training & program implantation.

- Sachin & Mahendra attended IBT School committee meet for 4 IBT Schools @ Narayangaon (Pune). This meeting was conducted to understand difficulties faced by Schools in implantation. As these schools doesn't have any funding support its been decided that Schools & parents will leverage their local network to get funding for program continuation.

- Students of Engineering section @ Adarsh Vidyalay, Amboli (Dist:Pune) made a rain-gauge from scrap material. Students learnt fabrication skills & able to relate mathematical calculation of area, unit conversion through this activity. As Amboli Schools is in high rainfall zone, School has planned to fabricate & distribute such simple rain-gauges to nearby villages.

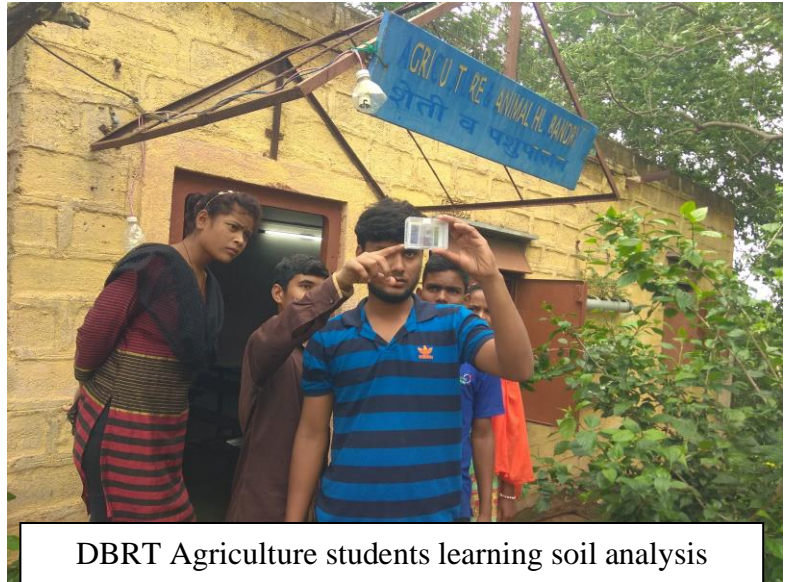
- Bijapur (Chhattisgarh) IBT program has re-started after summer vacation. IBT Porta cabins are gearing up their activities. All Schools started agricultural activities with on-set of monsoon. Students in agricultural section of Bijapur Porta cabin, trying to adopt 'Akshay-Chakra' a traditional farming methodology with circular landscape with composting pit at centre.



IBT instructors learning new skills & technologies

F] DBRT Updates: New DBRT students are getting acquainted to new system, food habits & day schedule. Following are some of the heights for July month-

- Swapnil Powar & Pratik Borse (Both DBRT 2018-19) batch students did electrical fitting work for new tissue culture & soil analysis lab. They teamed up with new students to complete this work while earning Rs.3430.00 as labour charge.
- Agricultural students learnt basics of aquaponics farming while constructing vegetable beds, banana, papaya & vegetable seedling and learnt plumbing work of water circulation.
- Agricultural section students learnt vaccination of poultry birds by vaccinating 120 birds of Kaveri breed in poultry farming unit.
- Students of workshop department fabricated a relaxing chair while learning basic metal fabrication skill.
- In home & health department student learnt basics of food preservation while preparing peanut chikki, cookies. They earned Rs.6870.00 through sale of various food products on 30th July open house exhibition.



DBRT Agriculture students learning soil analysis

G] Technology development & DIC Update:

I. Dassault system La-Foundation supported composter development project-

- New composter & compost bags – New ‘Society composter’ designed & fabricated. This composter is of 200 Kg / batch waste processing capacity with automated reverse-forward mixing arrangement. Bio-waste & composting culture is mixed in this composter for 10 min and then filled in ‘compost bags’ for further processing. The compost bags are specially designed for maximum aeration, easy of rotation for moisture maintains, collapsible design for easy transport & stacking and low cost.
- One unit of newly designed ‘Society composter’ is installed at ‘Ashray’ housing society (Wadhu, Pune).
- Technical assistance to Greeny-the-Great: A compost mixture (modified motorised cement mixture) was installed at Bhor municipal corporation dumping ground. Its coated with FRP and tested for bio-waste processing of 500 Kg of waste.



Composting unit trail at Ashray Housing society wadhu

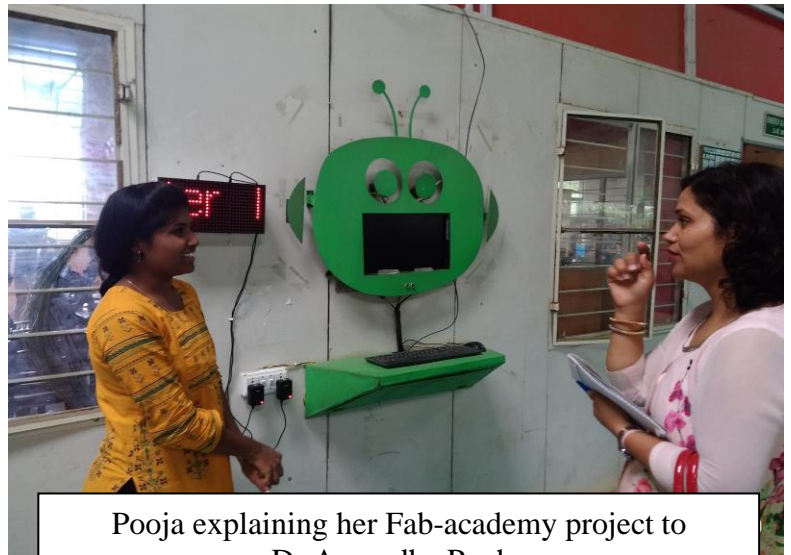
- II. Aquaponics new trial is started at Pabal & IBT Chikhali School on on 12th July. At Pabal aquaponics system is loaded with Carp (Silver carp- *Hypophthalmichthys molitrix* and Cyprinus - *Cyprinus carpio*), while in Chikhali, we are experimenting with Vietnams Koi (*Anabus cobojius*). Both systems have flood & siphon based vegetable beds & separate aerator for DO management. We will be recording fish growth, FCR and water quality parameters during next 6-7 months trial.
- III. Plastic waste pyrolysis unit is received from Jaipur on 25th June. This unit is developed as joint project between Vigyan ashram, Marathi Vigyan Parishad and Manipal University (Jaipur). This unit has electrically operated furnace (118 Lit) and can convert plastic into oil. We will be conducting trials on various plastic waste to analysis its performance for yield output & energy balance under guidance of Dr.J.B.Joshi.



Plastic pyrolysis unit installation on campus

- IV. Five DIC student attended Ministry of Human Resource Development (MHRD) initiated Institutions Innovation Council (IIC) conducted Proof of Concept (PoC) training workshop on 26th July. Training was aimed to encourage DIC students to convert their innovative prototype to marketable product. Our students presented Bamboo engraver, Curd maker, Azolla cultivation, Nachani (Rahi) roaster project developed in DIC.

- V. Dr.Anuradha Pughat (Scientist from DST SEED division) , Dr.Lal Singh (Director, Himalayan Research Group) , Shashtant Patara (Development Alternative, Delhi) visited VA campus on 26th July. Dr. Lal Singh conducted a session on 'Silage making' & guided us on designing a hand operated 'silage bag press' project.



Pooja explaining her Fab-academy project to Dr.Anuradha Pughat

- VI. **Entrepreneurship News** : In July month, 3 success stories of our alumni entrepreneur were published in 'Gramin Udyojak' series of Agrowon newspaper. Articles of Vaibhav Pasalkar (2009-10 Batch DBRT Student) on 1st July , Avinash Gavari (2008-09 Batch DBRT Student) on 15th July and Ramsign Kasdekar (2007-07 Batch DBRT student) on 29th July 2019 were published.

H] Fab Lab, Fabric academy, Wiki-Marathi & DIY lab updates:

- I. **Fab 15 Conference:** Suhas Labade and Tushar Kukreja (Fab Academy student) attended Fab15 conference held at El Gouna & Cairo Fablab, Egypt during 28th July to 4th August. Suhas conducted workshop on 'make your personalized power bank' for 14 participants from various labs and also participated in 'make a machine' challenge with an Egyptian School students.



Suhas conducting workshop @ Fab15 conference

- II. Ms Pooja Jadhav, Ms Aditi Kharade graduated in Fab Academy Graduation ceremony. Ms Harsha Raut graduated as a Fabrik Academy graduate. Suhas collected Fab-academy & fabric academy graduate certificate on their behalf.



Graduation certificates of Fab-academy & Fabric academy students

- III. In Wiki-Marathi 27 marathi books from various writers were scanned and converted into text format for online publication.
- IV. DIY lab conducted 1 day training workshop for Dr. Babasaheb Ambedkar School on 18th July 2019. Total of 10 students attended this workshop to learn basics of digital fabrication and agricultural activities.

I] Other tit-bit –

i) **Soft Skills Training for VA staff** : Team building & communication skills training program was conducted for VA staff team on 1st & 2nd of July. This 2 days training was conducted by 'Swati Institute for Learning & Development Pvt Ltd'. Training workshop helped us to understand personal shortcoming, improvement required in attitude, expectations management from other team members and align our career growth in line with organization's mission. It was first session in the series of 3 training workshop as a part of VA team development efforts.



Staff training workshop on management & communication skill

ii) Yogesh attended ISBA Conference @ Kochi on 18th and 19th July. He was a panellist in a pre-conference workshop on 'Setting up of Makerspaces and fab labs' at Kerala Startup Mission, Kochi.

iii) Ranajeet visited Paoolwatt Foundation , Pasli (Velha) on 6th July to install poultry egg incubator. Its 300 egg capacity incubator manufactured by our alumni Mr. Anil Gadhe. Paoolwatt will adopted technology as probable livelihood source for tribal youth.

iv) Suhas participated in Smart India Hackathon @ NIT Trichy in between 7th July to 12th July. He was mentor for 'product design' challenge. Team mentored by him won first prize in hackathon under agriculture development theme.

v) Govt of India (MHRD) made it mandatory to report all expenses under Govt funded project on PFMS system. Rahul attended training workshop for implementation of EAT module in the PFMS under the scheme National Initiative for Design Innovation NIDI @ SPA, New Delhi on 20th July.

vi) Yogesh visited project field area of SELCO Foundation in Dharwad (Karnataka) on 3rd and 4th July. Objective of the visit is to understand work of SELCO in solar energy sector. We have submitted proposal to SELCO for funding. Field visit is to discuss the proposal with SELCO team.

vii) Shubham Shembade, Komal Raut & Prashant Kamble resigned from Vigyan Ashram for better prospects. We wish them all the best for future endeavors.

viii) We have submitted proposal 'Intensified agriculture systems for increasing farm income' to Millennium Alliance funding call.

ix) Weather record – rainfall of the month -255.33 mm (Total – 406.39) ,Max temp-20.96 °C, Min Temp – 16.76 °C , Humidity – 57.34 % , Water height in well – 5.29 Meter.

x) Energy consumption record- Electricity unit – III Phase -1072 units , I Phase Export- 140 units, Import- 943 units. Quality of power : Number of interruptions :181, Normal voltage : 70.87 % No supply : 9.49 %, low voltage : 8.35 %, No data: 11.29 %.

xi) Biogas consumption – Dung used- 00 Kg, Gas produced- NIL xii) Two wheeler – 275 Km, petrol consumption – 3.90 Lit

xiii) Total visitors to www.vigyanashram.com – 1467 (New visitor – 1194 Repeated-273) www.dsttara.in : 1377 (New visitor –1207 Repeated- 170)

Data Report:

https://drive.google.com/file/d/0B_Jk2xLqAXjcdnNYMS1vNXg3Y28ta0ZuV0FVSDJXel9yY1Jn/view

(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, INDUSA Endowment, UNICEF, Govt of Chhattisgarh, Savitribai Phule Pune University, Suzlon foundation, Dept of Science & Technology, and many individuals and foundations)

Photo Gallery:



DBRT Workshop department students learning welding



DBRT Home & Health students learning chikki making



IBT Amboli School students with rain gauge



IBT Bijapur porat cabin students with learning farming



Smart India Hackathon @ NIT Trichy.



IBT Instructors training program

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