

# Vigyan Ashram Status Report

Volume 37 Issue 1

Jan 2019

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### **A] Inauguration of New Hostel Building**

New hostel building was inaugurated at the hands on DBRT student Ajinkya , Rajesh and Parmeshwar. They earned maximum amount of community service while doing various work of construction as a part of their learning.

Asha for Education-Seattle chapter volunteer Jyoti Gawade joined inauguration ceremony via video conferencing. VA-MC members were present on the occasion.

New building has 16 rooms and each room will accommodate 2 students. Building has rain water harvesting, grey water recycling, solar DC fans and terrace.

Total cost of the project was Rs.47.9 lacs. We have received donation from following partners a) Asha for Education : Rs.34 lacs b) SPA Education Foundation : Rs.10 lacs c) Eaton India Foundation : Rs.3 lacs 4) Other individual donors : Rs.5 lacs

Thank you Asha for education, SPA education foundation, Eaton India foundation and many friends for their financial support.



### **B] Vigyan Ashram participated in Maker Mela 2019**

Maker mela was organized between 17<sup>th</sup> to 19<sup>th</sup> January 2019 at Somaiya Vidyavihar, Mumbai. We have demonstrated 5 technologies – Ragi roaster, CNC router, Digital fabrication & Textile, Composter and Braille printer. Two teachers, 4 DBRT and 3 DIC students participated from VA side. Hindustan Times 18<sup>th</sup> January made a full page story on our technologies at Maker Mela Here is link :

<https://goo.gl/dDYFqc>

### C] New batch of DIC and Fab Academy started

We have 16 students joined for 4 months Design Innovation Center internship joined on 1<sup>st</sup> January. They are mainly from Agriculture Engineering background. After orientation to basic skills, they have started working on their assignment and project work. Increasing number of girl students in DIC and Fab Academy, made us to designate one complete hostel building for girls Hostel. At present there are 16 girls in VA hostels.

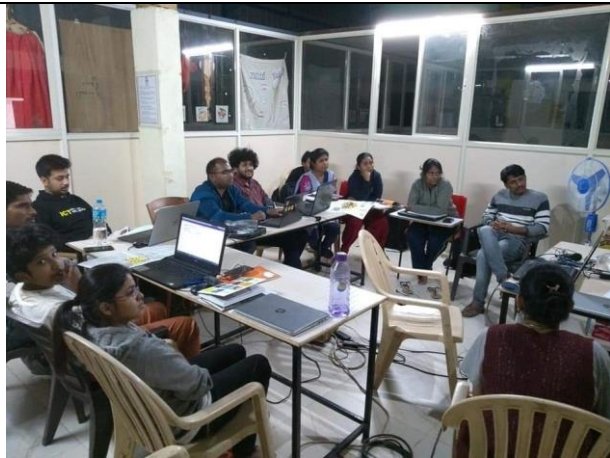


Shifting Bio Dome for DIC Project

Fab Academy course to train students in Digital Fabrication was started on 16<sup>th</sup> Jan. This is 6 months program to learn 'How to make almost anything !'. Total 8 students from 5 different states joined Fab Academy. They are from varied

background viz Engineering, Architecture, chemical engineering. Hemang who is 12 years old and have his own startup joined Fab Academy program. He will be staying in Pabal with his mother to persue Fab Academy. Stay tuned to <http://fabacademy.org/2019/labs/vigyanashram/> for updates.

We have 5 certified instructors for Fab Academy. Suhas and Supriya will remotely assist students of Fab labs in Chandigarh and Delhi as well.



Fab Academy class in progress



This team can make 'Almost anything !'

### D] IBT Update :

- i) IBT project 'Smart kit to stop water tank overflow' from Amboli school is selected for state level science exhibition.
- ii) The IBT students from Mukhai school demonstrated the silage making at farmer's farm. They have made 500 kg silage.
- iii) L&T infotech CSR - Employees volunteering activity was organized at Chinchwad IBT school on 19<sup>th</sup> Jan. Total 12 employees of L&T participated in it. They conducted session on smart internet search and making drips for plant and feeder for birds using scrap bottles.



- iv) We have made 22 posters on various IBT technologies for display in IBT schools. It will help in conveying important principles behind practical's. Idea of the poster came from discussion about model school project with Praj foundation. Now these posters are made available to all IBT schools. Softcopy of posters is made available to all schools.
- v) Four video conference lectures were conducted in Jan 2019. Total 1052 students benefited from 42 schools. The details are : a) Use of Poster (Sachin Puneekar – 5<sup>th</sup> Jan, 12 schools) b) Estimating feed requirement of cow (Ranajeet Shanbag -12<sup>th</sup> Jan,14 schools,476 students) c) Plastering & Painting (Yogesh Kulkarni-16 schools,528 students)



Sample Poster for IBT

### E] Chattisgarh IBT :

- i) IBT instructors training program was conducted at Bijapur(Chattisgarh) on 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> Jan. Team of experts from VA visited Chattisgarh to conduct training. Total 34 instructors participated in the training.
- ii) Innovation Lab : DIC fellow Mahendra and Jaideep along with CG team conducted training between 4<sup>th</sup> to 8<sup>th</sup> January 2019. They had conducted activities to make Solar DC fan, Smart switch for toilets, Changeover circuit for AC + solar and Weather station. Approx. 110 students from 4 schools participated in these activities.
- iii) 15 teachers from Datewada district visited Innovation Lab Palnar on 21<sup>st</sup> Jan to see lab facility and projects done by students.
- iv) Team installed 3 micro solar done in Palnar village.



### F] Republic Day Celebration !

Team Vigyan Ashram did Shramdaan on 25<sup>th</sup> Jan in pabal village. One group of students cleaned crematorium in Pabal village. Bathroom and cloth changing area was not in use due to cleanliness and lack of maintenance. Students fill the gaps in the wall using cement, flooring, painted the place, fixed the pipeline work.

Similarly, other group of students, installed water tank, piping to stop waste water from RO filter system of Gram Panchayat. Waste water was flowing around the place. This water is now collected in the water tank. It will be useful for washing purpose or for drinking water for animals. Gram Panchayat provided all material for carrying out the activity.

26<sup>th</sup> Jan, Republic day was celebrated with enthusiasm. After flag hosting various cultural programs were organized.



RO filter waste water flowing on the ground



We made system for its collection and storage

### G] DBRT News :

i) Engineering students fabricated 25 cots for new hostel. All finishing work viz. painting, flooring, fixing tiles in front of the hostel, plumbing etc were done by DBRT students.

ii) A short course on basic skills was conducted from 31<sup>st</sup> Dec – 4<sup>th</sup> Jan for Tribal ashram shala co-ordinators. 13 co-ordinators from NGO - CYDA participated in the training. They learned basic skills viz plumbing, electric maintenance, repairing plaster or brickwork etc. They are expected to take care of basic maintenance themselves in their ashram schools.

iii) Engineering Dept fabricated Ragi roaster for 'Bhimashankar Self Help Group'. Equipment supplied is of capacity to roast flour of 7kg/hr. During trial of the machine, first feedback of ladies was '१० वर्षांच्या त्रासातून सुटले एकदाचे (Relief from drudgery after 10



DBRT Team - Fabricated Nachani Roaster

years of the work)'. This group is making and selling Ragi (Nachani) laddoo in Pune market. This machine was given on rent to SHG group on 19<sup>th</sup> Jan.

iv) Poultry farm update – Its found that egg production has suddenly dropped down probably due to lower temperature (exact reason unknow). We are making losses during December & January. We are planning to sold out birds and start fresh batch. Net loss by end of January was Rs.15000/-.

vi) Agri Projects : Haridas and Rajesh are taking crop of Papaya. They are also taking mix intercrop of cabbage, chilly and moringa. Another group of students (Vaibhav, Kaustubh, Santosh, Prashant) are growing fodder using grey water.

vii) DBRT section exam was conducted on 20<sup>th</sup>, 21<sup>st</sup> and 22<sup>nd</sup> Jan.

viii) Soil Health Card mission 2018-19: Soil health card printing was done for 11153 cards out of 13808 farmers (80 % of work complete). Now we are submitting reports to agriculture department. On 22<sup>nd</sup>



Jan, along with District agriculture department, a 'Soil Health Card distribution' program was organised in kendur village.

### H] Entrepreneurship Accelerator

- i) Poultry farming training workshop was conducted on 5<sup>th</sup> & 6<sup>th</sup> Jan. Total 15 farmers attended the training. Topic discussed were advanced poultry farming techniques & egg incubation skills.



**Training on Egg incubator**

- ii) Agrowon articles (Gramin Udyojak) – Marathi news paper 'Agrowon' published following articles on

our alumni : i)

Mangesh Jagzap (Nasik)- 'Brown rice making' enterprise published on 7<sup>th</sup> January  
ii) Anand Gosavi – Agri business using Polyhouse (21<sup>st</sup> Jan)

- iii) A meeting to finalize business plan was held with our alumni Swami and Pandurang at DIY Lab on 23rd Jan. Mr.Ashish of Paoolwat foundation was present. It is decided to go slow on SOW project due to poor response from the youth in Pasali for entrepreneurship program.

### I] Technology Development:

- i) Rice Dehusking Machine : Our partner M/S Climber Engineers launched Rice Dehusking machine using technology developed at VA. Article appeared in newspaper on 14<sup>th</sup> Jan. It got tremendous response from the market. Climbers has improved the design from engineering and manufacturing consideration. The machine is ready for sale.



**Rice Dehusking Machine**

- ii) Akshay completed fabrication of composter for domestic purpose. Its hexagonal shape provides easy mean of mixing. One side of hexagonal drum serves a purpose of door in order to allow the loading and unloading of the waste. Other sides are of punched mesh which allows ventilation. It's having internal baffles for homogenous mixing of waste. This drum has 30 liter capacity which can collect

20 days waste from one house. The domestic composter is so compact that it can be easily placed in the space below the basin.

iii) Society composter trail was given for 10 days at Woodland society, Kothurd. Now this composter is permanently installed at DIY Lab,Pune. It will be used for demonstration purpose. We have started marketing of both composters to housing societies in Pune as a wet waste recycling solution.



Composter for small family

iv) Dr. Sharad Kale, scientist and head of technology transfer & collaboration at BARC visited VA on 22<sup>nd</sup> January, 2019. He guided us on composting technologies and our grey water recycling system.

v) Sonal participated in symposium of TCTD

lab at IIT Mumbai from 10<sup>th</sup> Jan to 11<sup>th</sup> January, 2019.

vi) Ranajeet and Dr.Arun Dixit has a meeting with Dr.J B Joshi @ Agharkar Institute,Pune to review progress of projects on 9<sup>th</sup> January. DIC team attended talk of Dr.J.B Joshi on “Innovate to Transform (Prosperity through Science and Technology)” @ COEP Pune.

vii) Aquaponics update : We have concluded Aquaponics system on 4<sup>th</sup> Jan for this season. We will not operate it during summer due to drought. 30 Kg of fish were sold for sale @ Rs.200/Kg. We have also designed and fabricated a live display system for fish sale against order from vendor. It was first



Farmers Meet @ Kendur

attempt in Pune to sale live koi fish. We got double price than normal due to live display & sale.

viii) Fish tank fabrication: Fish tank fabrication work for Jaljivika (Aurangabad) has completed. It will be delivered on site by 1<sup>st</sup> week of February. We will also be providing on-site installation support to Jaljivika.

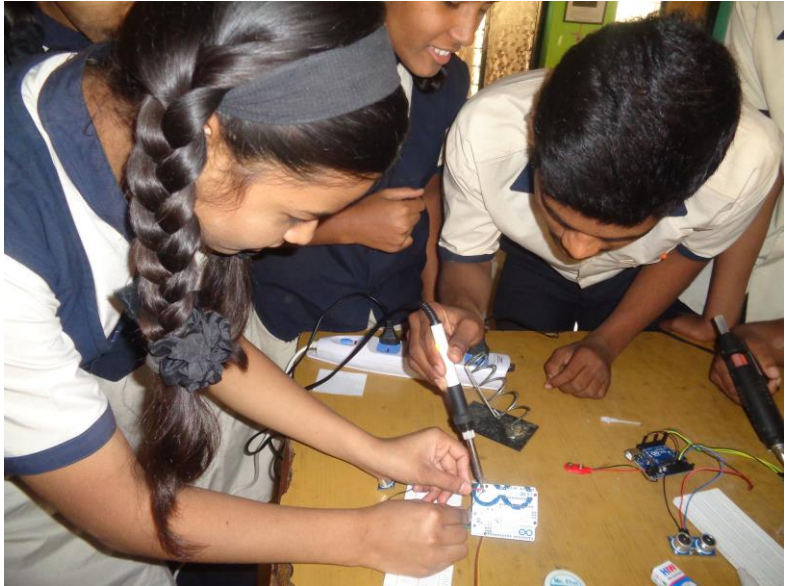


**J] Agriculture Modernization :** Bajaj Auto CSR agreed to support modernization of agricultural facility at Pabal. We have decided to install lift irrigation system from Thitewadi Dam. We have joined farmer's group water lift irrigation system. We have entered into registered agreement with Mr.Dadabhau Sampat Jadhav on 22<sup>nd</sup> Jan.

We have also started designing of grey water recycling system and tissue culture lab.

**K] DIY Lab :** Following workshops were conducted at DIY Lab.

Arduino workshop for Engineers (5<sup>th</sup> Jan); Hutatma Balveer Shirishkumar High School (9<sup>th</sup> & 10<sup>th</sup> Jan – 20 students); Vasantdada Patil Vidyaniketan High School (16<sup>th</sup> & 17<sup>th</sup> Jan - 20 students); Baburaoji Sanas high School (22<sup>nd</sup> & 23<sup>rd</sup> Jan- 20 students); Guidance for students of science Exhibition for PMC schools.



**L] Other tit-bits –**

i) Ranajeet gave talk @ Arts and Commerce College, Talegaon Dhamdhere on 11<sup>th</sup> January on 'New opportunities in rural entrepreneurship'.

ii) **Management committee meeting (MC)** of VA was held on 13<sup>th</sup> Jan. Proposals on Pipeline agreement, execution of modernisation of agriculture, Net metering of electricity were discussed and decisions were taken. Mr.Ashok Kalbag, Mr.Vijay Kumar, Dr.Kambale (IIE), Me.Sunil Kulkarni(Video conferencing), Mrs Pallavi shanbag and other members were present.

iii)Komal attended 'Courage to Lead; workshop by Disha,India from 1<sup>st</sup> – 8<sup>th</sup> Jan at Gurgaon, Delhi

iv)We are thankful Mr. Mr.Krishna Kranthi Ganagalla for his donation this month. We are thankful to Ms Alka Hingorani and RangDe for sponsoring two students for Fab Academy course.

v)Vigyan Ashram is featured in the Fab Guide published by University of Bristol. It is available on

:

[https://issuu.com/j\\_johns/docs/bu\\_fablabs\\_document\\_final?e=35968760/66510214](https://issuu.com/j_johns/docs/bu_fablabs_document_final?e=35968760/66510214)

vi)Weather record – Rainfall – 0 mm : Total 350mm (June to Jan) ,Max temp- 31 °C, Min Temp – 13°C , Humidity – 49 % , Water height in well – 7.56 mtr. vi) Energy consumption record- Electricity unit – III



**Bag using Bio-plastic : Fabricademy**

Phase- 1103 unit, I Phase- 828 unit. Quality of power: Number of interruptions: 79, No power: 36.53 hrs. Normal voltage: 84.9 %, Low voltage : 10.11 %, No supply : 4.96 %, No data : 0 %

vii) Biogas consumption – Dung used- 136.5 kg, Gas produced- 23.11 m<sup>3</sup>

viii) Two wheeler usage : 663 kms

ix) Online visitors : [www.dstattara.org](http://www.dstattara.org) - 870(New visitor –741 Repeated- 129) , [www.vigyanashram.com](http://www.vigyanashram.com) – 1405(New visitor – 1134 Repeated-271) , [www.vigyanashram.wordpress.com](http://www.vigyanashram.wordpress.com) – 986(Visitor-823 Viewers-363)

**Data Report** : For Regular update: [www.facebook.com/vigyan.ashram.pabal](https://www.facebook.com/vigyan.ashram.pabal)  
[https://drive.google.com/open?id=1SWJM3GK\\_0IFLO53QihN0wQBe6T19YfGv](https://drive.google.com/open?id=1SWJM3GK_0IFLO53QihN0wQBe6T19YfGv)

Our sites : [www.learningwhiledoing.in](http://www.learningwhiledoing.in) , [www.dstattara.in](http://www.dstattara.in) , [www.vigyanashram.wordpress.com](http://www.vigyanashram.wordpress.com) , [www.vadic.wordpress.com](http://www.vadic.wordpress.com) , <https://ruralstartup.wordpress.com/>

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

**Photo Gallery :**



IBT Instructors Training @ Bijapur(Chattisgarh)



Field visit : CYDA coordinators training @ Pabal



VA team @ Maker Mela



Visit of Dr.Sharad Kale to VA





L&T volunteers at IBT school



Culture Program : 26<sup>th</sup> Jan

## Sneak peak into innovations from Vigyan Ashram

**DEVELOPERS AT WORK** Six students from Vigyan Ashram are showcasing their products at the Maker Mela in Mumbai.

**INNOVATION** Our focus has always been on encouraging innovation. We believe when you create platforms for collaboration and innovation, the barriers of age, language, country melt away and the power of the Idea shines through.

**NEW AGE 'YUVAKUNA'** Vigyan Ashram is a leading organization in the field of science education. We have been organizing various programs for students across the country. Our focus is on providing a platform for students to showcase their innovative ideas and projects.

**ENWELL - EDUCATION, ENGAGEMENT, ENTERTAINMENT** Enwell is a platform that aims to provide a comprehensive learning experience. It combines education, engagement, and entertainment to make learning fun and effective.

**DIY MILLING MACHINE** This is a custom-built machine used for milling various materials. It is a great example of practical application of engineering principles.

**BRIDGE PRINTER** A unique printing solution that allows for high-quality prints on a variety of materials. It is a testament to the students' technical skills.

**COMPOSTER** An eco-friendly device that helps in the process of composting organic waste. It is a practical solution for environmental sustainability.

**FABRICADMY ASSIGNMENTS** A series of assignments designed to teach students about fabric and its various uses. It includes projects like creating a bag, a lamp, and a chair.

News in Hindustan Times

## देशी वाणाचा चवदार हातसडी तांदूळ

**ग्रामीण उपयोजक**

**रणजित शानबाग, विकी चौधरी**

पांढऱ्या रंगीत तोंडाला हातसडीचा हातसडीचा फायद्याचा असल्याचे मानले जाते. या लालसर तोंडालासाठी वाजारात एक विशिष्ट ग्राहक वर्ग असतो. त्याही भाताच्या देशी जातीच्या तांदूळाला जास्त मागणी असते. सातपुड्याचा परिसर भाताच्या विजेले, दौड, रायभोग, कोळ्यां इत्यादी देशी वाणांसाठी प्रसिद्ध आहे. पण कमी उत्पादन आणि बाजारभाव यामुळे या जातीची लागवड खूप कमी प्रमाणात होते. परंतु देशी वाणांपासून हातसडीचा तांदूळ बनवून त्याचे नाविन्यपूर्ण पध्दतीने मार्केटिंग केल्यास चांगली बाजारपेठ उपलब्ध होऊ शकते हे नाशिकच्या मनोज जगझापने दाखवून दिले आहे.

**हातसडीचा तांदूळ बनविण्यासाठी यंत्र**

मनोज फार्मसी शेवट आठ वर्षे काय करताना २०१६ साली काहीतरी वेगळे करण्याचा विचारत होता. त्याच वेळेला मनोजला पावळच्या विधान आग्रहात विकसित करण्यात आलेल्या हातसडीचा तांदूळ बनविण्याच्या यंत्राची माहिती मिळाली. हे यंत्र साधारणपणे भारतीय रिझर्व बँक (राज्य) या अकराव्या मेली मोटरीच्या साहाय्याने चालते. याची यंत्र खमता तारी १५-२०/ किलो आहे. तसेच ८० ते ९० % साठ्याची प्रक्रिया होते. या यंत्रामध्ये स्वरू जतविलेले प्रकारे बसवले आहेत. त्यामुळे भाताच्या कोळ्याची बेगळीही हानी न होता साठ फक्त वेगळी करण्यात येते. तांदूळच्या तुकड्या फक्त १ ते २ टक्के आढळून येते. सालीचे दरमळ व तांदूळ आणेआपे वेगळी होते. हे यंत्र खास करून ग्रामीण भागातील युवा उद्योजक आणि महिला बचत गट यांना डोक्यासमोर ठेवून विकसित करण्यात आले आहे. या यंत्राची किंमत साधारणपणे ६० हजार रुपये इतकी आहे. (या यंत्राची अधिक माहिती पावळच्या विज्ञान आग्रहामात मिळेल.)

मनोजने सुरुवातीस सातपुड्याचा डोंगरी भाग फिरवून भाताचे विविध देशी वाण गोळा केले. त्यांमधून विज्ञान आग्रहामात हातसडी तांदूळ बनवण्याचे यंत्र घेऊन या साठ्यापासून तांदूळ बनवण्याचा निर-मंडळीमध्ये वाट घेतले. सुरुवातीस अर्थसहानंतर, रायभोग आणि आंबेगोदर जातीस जास्त मागणी असल्याचे मनोजच्या

**उत्पादन, विक्री आणि दर**

सातपुड आणि भंडारा येथील आर्विद्या शेतकऱ्यांकडून विजेले, आंबेगोदर, दौड, रायभोग, कोळ्यां हे देशी वाणाची साठ २, ५ ते ३० र. किलो दराने विकत घेतली जाते. शेतकऱ्यांकडून थेट खोदिलेले चालत्या प्राचीची साठ मिळते. शिवाय शेतकऱ्यांना बाजारभावापेक्षा जास्त पैसे मिळतात. मनोज दहा महिन्यास साधारणतः ९०० ते १५०० किलो हातसडीच्या तांदूळाचे उत्पादन घेऊन ६० ते १५० र. किलोग्रामाची विक्री करतात. नारिक शहरामध्ये थेट ग्राहकांपर्यंत धरपेच सेवा दिल्यामुळे ग्राहक करण्याकरची बौध्दाल गेली आहे.

**अडचणी**

आजच्याल गेली अनेक दशके काळिस केलेल पांढरा सुख भात शिकवण्याची व खाण्याची सवय लागली आहे. त्यामुळे ग्राहकांच्या मनात हातसडीच्या तांदूळाविषयी बरेच गैरसमज असत. ग्राहकांना 'भात शिकवण्याची' नीट माहिती दिली तर बचकऱ्यांकडून ग्राहक मिळू शकतो. त्याचमध्ये हातसडीच्या तांदूळात पोषक मूल्ये आणि कोळ्यातील तेलचे प्रमाण जास्त असल्याने त्याच्याकडे किडे आकर्षित होण्याची शक्यता असते. त्यामुळे एकदा मनोजला प्रमाणगत तांदूळ न भरता, ग्राहकांच्या मागणीनुसार साठ्यात प्रक्रिया करून विक्री करावी लागते. पण हीच छोटीया उद्योगासाठी संधी असल्याचेही मनोज सांगतो.

सध्या मनोज मुख्य करून नारिक शहरामधील बाजारपेठेत लक्ष केंद्रित करत असून, भविष्यामध्ये इतर शहरांमध्येही व्यवसाय विस्तारण्याची त्याची इच्छा आहे. त्यासाठी भाताच्या साठ्याची बांधणी उदरगता करण्यासाठी तो काय करत आहे. या कामामध्ये बांधक संस्थेतील संजय पाटील यांची मोठ्या मर्याद मिळता असल्याचे त्याने नमूद केले.

मनोज जगझाप ९०१९९९३६०, विकी चौधरी ८८०८६३८१९९

Article about our alumni entrepreneur in Agrowon