

# Vigyan Ashram Status Report

Volume 41 Issue 05

May 2023

## In this issue

- Inauguration of Fab Lab @ Govardhan Skill Development Center, Palghar
- Atal Tinkering Lab (ATL) summer campus in 8 schools
- Introduction to Basic Technology (IBT) instructor's training program
- Swatch Technology -2023 award to technologies developed by Vigyan Ashram

## A] Inauguration of Fab Lab @ Govardhan Skill Development Center, Palghar

Fab Lab @ Palghar is formally inaugurated on 2<sup>nd</sup> May. This lab is established at Govardhan Skills Development Center at Palghar. Dept of Science & Technology (DST) supported the project with the aim to train tribal youth on emerging technologies. Prof Ramesh Panse inaugurated the facility in presence of senior functionaries of ISKON temple, Mr Ashok Kalbag and Dr. Yogesh Kulkarni. The Fab lab is equipped with Laser cutting, CNC engraver and router, 3D printers and other advanced tools. Lab will be used to train youth from surrounding schools, ITI's and Engineering colleges.



## B] Atal Tinkering Lab (ATL) summer campus in 8 schools

Vigyan Ashram is providing technical support to Atal Tinkering labs (ATLs) in Govt schools of Andhra Pradesh, Karnataka and Telangana. We have decided to use summer holidays to activate the ATLs. Total 8 summer camps of 4 days each were conducted. It was hands-on learning & tinkering activities while learning basics of designing (Canva, TinkerCAD, video editing, blogging), electronics (paper circuits,



breadboard, zero-PCB), 3D printing, programming (Arduino assembly, sensor application) etc skills. Participation of District science officers, school teachers for the entire duration of the workshop was one of condition for selection of schools. These camps helped in creating interest among other ATLS to make their lab active.

**ATLs in Telangana:** Zilla Parishad High school, Asifabad (17th to 20th May), Zilla Parishad High school, Kamareddy (23rd to 26th May), Zilla Parishad High school, Pedapalli (28th to 31st May)

**ATLs in Andhra-Pradesh:** Zilla Parishad High school Penamaluru (2<sup>nd</sup> to 5<sup>th</sup> May), Zilla Parishad High school IPUR (2<sup>nd</sup> to 5<sup>th</sup> May), Zilla Parishad High school Varadaih Palem (8<sup>th</sup> to 18<sup>th</sup> May), Government High School Kirlampundi (15<sup>th</sup> to 18<sup>th</sup> May), Government High School Korukonda (22<sup>nd</sup> to 25<sup>th</sup> May)

BOOT CAMPS IN 7 DISTRICTS		
District	ATL school name	Dates
Krishna	ZPHS Penamaluru	May 2-5
Palnadu	ZPHS Ipur	May 2-5
Tirupathi	ZPHS Varadaihpaalem	May 8-11
Kakinada	Govt High School, Kirlampundi	May 15-18
East Godavari	Govt High school, Korukonda	May 22-25
Srikakulam	ZPHS Ippili	June 1-4
Vizag	ZPHS Vepagunta	June 2-5



Students taking part in the four-day summer boot camp at Atal Tinkering Labs on Wednesday | EXPRESS

## 4-day summer boot camps kick off

As part of prog, students will be trained in CAD, 3D printing, paper origami, basic electronics

EXPRESS NEWS SERVICE  
@ Vijayawada

THE School Education Department's summer boot camps for students have commenced at two of the seven Atal Tinkering Labs (ATL) in select schools across the State. The department has taken the initiative to conduct camps from mid-April to last week of May so that students can get more time to learn at the ATLs.

Students of Classes VI to IX will attend the four-day camps. Currently, the boot camps are underway at ATLs in ZPHS Penamaluru (State Hub) in

Krishna district and ZPHS Ipur in Palnadu district. As many as 25 students each are attending both camps.

Elaborating on the reason to conduct the camps, commissioner of School Education Suresh Kumar said, "Students get to utilise the Atal Tinkering Labs only for the specific periods allotted in the timetable during the academic year. The boot camps will provide an opportunity

for the students to spend more time at these labs to learn different processes and technologies. ATL in-charge teachers will also get a chance to learn more about 'facilitation at the ATLs' during the boot camps. Vigyan Ashram, an NGO, and UNICEF (United Nations Children's Fund) will fund the programme." The official added that students participating in the camps will be provided mid-

day meals. As part of the programme, students will be trained in project documentation and mechanical tools on day one, CAD, 3D printing and paper origami on day two, basic electronics on day three, and advanced electronics on day four.

T Ram Charan Nath, a Class 9 student of ZPHS Penamaluru, expressed "The boot camp is very interesting and inspiring. Besides a regular mentor, a special mentor has also been training us. We usually do not get more time in Atal Labs during school hours. The camp has facilitated an opportunity for us to learn more."

The summer boot camps will provide an opportunity for the students to spend more time at these labs to learn different technologies. ATL in-charge teachers will get a chance to learn about facilitation

Suresh Kumar, Commissioner of School Education

### C] Swatch Technology -2023 award to technologies developed by DIC students

On the occasion of '1<sup>st</sup> May - Maharashtra Day' Pimpri Chinchwad Municipal Corporation (PCMC) organized an idea competition 'Swatch Technology challenge-2023' as a part of Swatch Bharat Abhiyan-2.0 (urban) initiative of Government. Vigyan Ashram submitted its "LPG base Sanitary Pad Incinerator" and 'Black Soldier Fly (BSF) based waste management' technologies for the challenge. 1<sup>st</sup> prize of Rs.41,000 was given to 'Sanitary pad incinerator' while 2<sup>nd</sup> prize of Rs.31000 to BSF waste management technology. Award was presented by Shri.Shekhar Sing (Commissioner ,PCMC) on the 'Maharashtra Day' at PCMC head office. We are very thankful to our partner La-Foundation (Dassault System India), Eaton India foundation, SPPU-Design Innovation Centre (DIC) for supporting us in the development of these technologies.



## D] Introduction to Basic Technology (IBT) instructor training program:

'Introduction of Basic Technology' (IBT) school instructors training was conducted during 23<sup>rd</sup> to 28<sup>th</sup> May. It was the 1<sup>st</sup> batch of annual-refresher training for 2023-24. Instructors from schools supported by Scheffler India attended the training. Total 33 instructors learned level-2 (10<sup>th</sup> class) activities in engineering, electrical, food processing & agriculture section. New technologies like fabrication of flat-bed solar dryer, H<sub>2</sub>S strip bottle making, Hand-wash making, Fibre Reinforce Plastic (FRP) sheet etc were introduced in the training. Effective program implementation methodologies like activity planning, community service, case-story documentation etc were also discussed with the instructors (Stars).



Instructors learning fabrication of dryers



Instructors learning soil testing

## E] Entrepreneurship Development Program (EDP) update (VATF):

i) Ice-cream & Kulfi making: A 2 days training on 'Ice-cream & Kulfi making' was conducted on 6<sup>th</sup> -7<sup>th</sup> May. The training was conducted at Suraj Ice Candy factory Jarkarwadi (Tal: Ambegaon, Pune) with 9 participants from Pune, Solapur, Ahmadnagar districts. Participants learnt recipe, ingredients, machinery setup, cost break-ups etc through hand-on activities on production floor of Suraj Ice Candy. Food technologist Mrs.Anita Pansare (Dairy Power Ltd.) and Mr.Suraj Kakade (Suraj Ice Candy) were resource person for the training.



ii) Poultry farming: Training on 'advanced poultry farming practices' was conducted on 15<sup>th</sup>-16<sup>th</sup> May for Community Resource Personals (CRPs) of Raintree Foundation (Velha). Total 10 CRPs participated in the training. They learned brooding, vaccination, feed-management, FCR calculation etc skills through hands-on activities. Mr. Bhanudas Daundkar, Mr. Yogesh Onkar,

Mr. Ranjeet Shanbhag conducted the sessions. These CRPs will work in 9 villages of Velha region to establish back-yard poultry farms for 100 farmers. VA has collaborated with Raintree Foundation for on-field technical support under EDP program.



Poultry training



Chikki and khakara making training

**iii) Chikki & Khakhra making:** A 2 days training on 'Chikki & Khakhra making' was conducted on 20<sup>th</sup>-21<sup>st</sup> May. Training was attended by 11 Women Self-Help Group (WSHG) member of Kharshinde & Kansewadi village (Tal-Sangamner) organised by Krushi Vikas organization. Participants learnt making of chikki (peanut, moringa, linseed), nutri-bar and hand-made khakhra through hand-on sessions. They have also learnt costing, machine setup, bank-proposal etc in the training. VA alumni entrepreneur Mr.Pramod Pansare (Speedy-B Foods), Mr. Yogesh Onkar, Mr. Ganesh Pingale, Mr. Ranjeet Shanbhag were resource person for the training.

iv) Technical support was provided to Mrs. Pratishtha Pokharkar (Well-done marketing) for 'making of dish-wash'. She visited ashram on 4<sup>th</sup> May for technical support.

v) Yogesh visited Sewalay (Hasegaon, Latur), Balgram (Georai, Beed), Infant India (Pali, Beed), Sewagram (Bramhanat Yedamb, Beed) and Shantiwan (Arvi, Beed). Visit was to create awareness about EDP support given by Vigyan ashram.

vi) Following entrepreneurs were provided with licensing support. Udyam certification (2) , FSSAI Licence (2) , Pan Card (1)

#### **Hero of the month:**

**Dada Zite** started a dairy farming enterprise at his native place (Rahu Pimpalgaon Tal-Daund Dist.-Pune). Dada is DBRT (batch 2019-20) student & working as part-time electrician and gym-instructors. After getting technical mentorship from EDP, he decided to venture dairy farming. He has invested in 6 cows.



Dada Zite @ his cow farm

**Mrs. Sapna Hulawale** started their Dairy &

Milk processing Business in the name of “Radhai Milk collection and Tatsam Foods” At-Karla (Tal-Maval Dist.-Pune). She is EDP-Dairy processing training beneficiary and getting product development, licencing, digital marketing support under support.

#### **F] Design Innovation Center (DIC) updates:**

i) Prasad & Ghansham started designing 50 kg capacity ‘Solar Dome Dryer’ for WSHG from Nasik. This dome shape dryer will have plastic cover with central vent & 2 layered drying trays.  
ii) Black Soldier Fly: Mahesh successfully produced 3.198 kg, 5 days old larvae (DOL) in the month of May with average production of 108 gm/day. Mahesh processed about 291 kg kitchen waste in 4 different trials on feeding rate, raring basket design.



**Setup for BSF eggs**

iii) Akshada was able to obtained 15 ml bio-diesel from 100 ml BSF larvae oil by using transesterification process. The yield was low due to poor quality methanol but she could standardize process of bio-diesel production.

iii) Nikita & Ashwini produced 350 bottles of H<sub>2</sub>S strip water-analysis bottles. They also tested 23 soil samples and produced 40 packets of waste composting bacterial culture.

iv) Divakar Kumar and Dinesh Karmakar both Agril B.Tech, Assam University (Silchar) students joined 2 months internship program under IIT-Mumbai Living-Lab project. They will be working on ‘fire-wood gasifier’ and ‘Polyhouse automation project respectively. Experts from



**Gasifier installation @ Pabal**

IIT Powai visited Pabal and trained interns on operation of gasifier. Pranay Yadav (Bsc food science) joined DIC fellowship program. He is working on ‘Gajar-Halwa ready-mix’ project in food processing unit.

v) Suhas was invited as resource person in AICTE-IDEA Lab faculty development workshop during 23<sup>rd</sup> to 31<sup>st</sup> May organized by AKGEC college, Ghaziabad. Training was focused on ‘advanced design thinking’ process and application of STEM learning process in higher education. He has also visited Maker-Space and RuTag department at IIT Delhi.

V) Fab-academy updates: Fab academy students completed their assignments on interface and application programming. As a final project Sanjay is working on liquid consistency (viscosity) measurement device while Pushkar is designing 'smart suspension load back-pack'.

### G] DBRT student learning updates (VATF):

i) **Admissions for 2023-24 batch:** Admissions has been started for Diploma in Basic Rural Technology (DBRT) 2023-24 batch. Vishal and Yogesh onkar conducted awareness camps with various NGOs in tribal & rural areas. They visited Pune (Bhimashakar, Mulashi, Velha), Raigad (Alibag, Mangaon, Karjat), Latur (Hasegaon, Gubal), Beed (Geora, Pali, Yedamb, Arvi) districts of Maharashtra state. We are thankful to all grassroot organizations & our alumni network for spreading words about DBRT & helping us to reach eligible candidates.



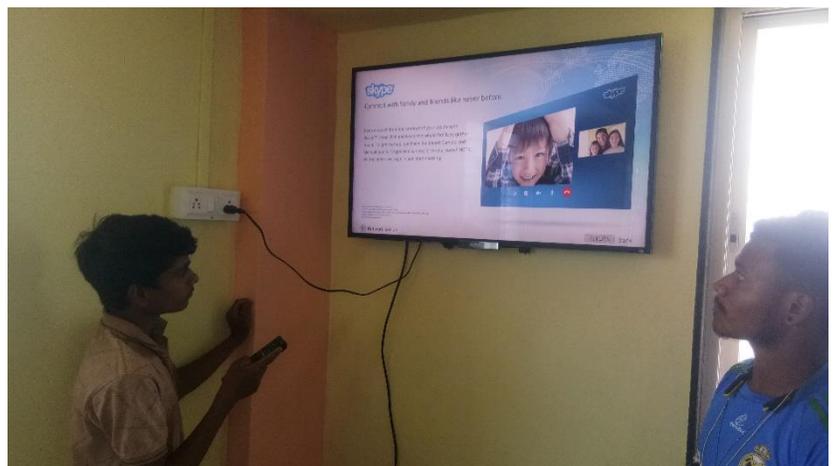
Please watch DBRT promotional video film on <https://youtu.be/54NPiNDdqKk>

ii) **National Institute of Education (NIOS) examination:** Final NIOS board examination of Batch 2020-21 & 2021-22 was conducted by NIOS during 16<sup>th</sup> to 29<sup>th</sup> May. Total 34 students appeared for examination. Examination was delayed for 2 years due to COVID pandemic and hence there was lower students' turnout. We had taken this opportunity to interact with our alumni and discussed their career plans.

### iii) Pabal campus highlights:

Present batch of DBRT (2022-23) students are in the last phase of their course. They are completing their 2 months internships. Following are some of the highlights of campus:

Electrical section: Students have installed 2 ceiling & 2 table fans in the new guest rooms. Our friend Ms Shilpa Ballal donated smart TV for agriculture section. It is installed in the new agri classroom. New flour mill (atta-chakki) is installed in food-processing section. Total value of community service was Rs.24604/- during month of May.



Workshop section: Prathmesh & Laxman fabricated a 456 Ft<sup>2</sup> shed for 'polyhouse cooling pad tanks' by using angles & tin sheets from scrap material. They earned labor charges of Rs.7624.00 & total cost of work was Rs.38120/-. Vaibhav & Abhishek started 'sliding window' fabrication for hostel building. Total

estimated cost is Rs.70253/-. Yadnesh & Ghanshyam refurbished scraped table with SS top & storage space for food-processing section. Total value of work was Rs.10127 with Rs.1051.00 labor charges.

Agriculture section: Sanjay started new poultry farming batch with 102 birds of Satpuda breed. Sunny & Pranali milked 653 kg of cow milk and look after feeding of goat farm.

Home & health section: Team of 8 girl students in home & health section processed 63 kg bread flour to prepare bread. They also prepared 8 kg Tamarind, dried 16 kg fresh Onion & 12 Kg Methi leaves and worked on sorting & grading 400 kg grape raisins. Total community service earned during May was Rs.18720.00



## H] Introduction to Basic Technology (IBT) updates:

i) Summer camps for IBT students: Twelve IBT schools conducted summer camp for six days for students of class 5<sup>th</sup> to 10<sup>th</sup> std. Students learned basic electronics, craft making, video-reels making, cooking etc through hands-on activities. These camps helped to create awareness among community towards 'learning while doing' methodology of education in IBT program.

ii) **Online workshop on entrepreneurship** development for instructors was organized for



IBT school instructors on 2<sup>nd</sup> May. Total 23 instructors attended the workshop to know various entrepreneurship opportunities. Many instructors showed interest in starting their enterprise while two instructors registered themselves for business registration & licensing support.

iii) Sachine & Mahendra visited Director of Vocational Education & Training (DVET, Mumbai) on 16th May. They met with DVET officials Mr. Digambar Dalvi (Director, DVET) & Mr. Nitin Nikam (Deputy Director) to discussed process for new IBT/MFSC registrations, application status etc. (Stars)

## IBT Uttar-Pradesh

- U.P field staff of Stars forum underwent instructors training from 19<sup>th</sup> to 30<sup>th</sup> May at Pabal. They learnt basic skills in engineering, electrical, food processing & agricultural section as per new 'Learning-By-Doing' (LBD) curriculum. Total 7 field staff participated in the training.
- First draft of 'Learning-By-Doing: Teacher's handbook' (लर्निंग बाय डुइंग: कार्यक्रम के अंतर्गत शिक्षको लिये उपयोगी पुस्तिका) for 6<sup>th</sup> to 8<sup>th</sup> standard was submitted to 'Educational department' for proof reading. (Stars)



UP team @ Vigyan Ashram

## **I] Do-It-Yourself (DIY) Lab update :**

- Aeromodelling workshop: 1 day workshop on designing & making of Aeroplan was conducted on 5<sup>th</sup> May in association with Pune based startup 'Droneacharya'. 15 students attended the workshop. They designed and made a glider toy Aeroplan using laser cutter.
- Membership students did follow activities: String art activity (6-May-23, 11-May-23), Mobile App making with MIT app Inventor (13-May-2023), Arduino programming (20-May-23), Plot preparation and chili plantation with students (24 - May -23), Bird feeder activity blog writing (24 - May - 23)
- Two architectural students used 3D printing and laser cutting facility for their academic project.





**KJ Data Report:** <https://shorturl.at/hjCNS>

(Work of VA is supported by Asha for Education, Praj foundation, EATON Foundation, LTI-Mindtree, SPA Education Foundation, UNICEF, TATA Technologies Pvt Ltd, Mahle Engineering Services Pvt Ltd, Schaeffler India, INDUSIA Endowment, Savitribai Phule Pune University, Dept of Science & Technology, La-foundation, Prabhu trust and many individuals and foundations)

**Photo Gallery:**



Hotel started by DBRT alumni Bipin Bhirangi



IBT Instructors training



DBRT social media campaign



Students dried 500kg of onion

For Regular update: [www.facebook.com/vigyan.ashram.pabal](http://www.facebook.com/vigyan.ashram.pabal) ; [www.vigyanashram.blog](http://www.vigyanashram.blog)  
[www.vigyanashram.com](http://www.vigyanashram.com) ; <https://vigyanashram.online/>