

# Vigyan Ashram Status Report

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### A] State Level Workshop of ATLS in Andhra Pradesh at Vijaywada

A state level convention of all 600+ ATL School teachers was organized at Vijayawada on 22<sup>nd</sup> Nov. Vigyan Ashram mentored 33 ATL Hub schools displayed their projects. State Education Commissioner Mr S Suresh Kumar was the chief guest of the program. Experts from Atal Innovation Mission, Unicef and other Govt dept made presentations about 'Hot to make effective use of ATLS'. Engineering college volunteers from Board of Community Development through Education (BCDE) shared their experiences of volunteering with ATLS. Dr.Yogesh Kulkarni and Mr Sheshagiri (Unicef) explained hub and spoke model and ATL support system in Andhra Pradesh.



ATL teachers training: Training of 26 ATL hub teachers was conducted during 8<sup>th</sup> to 10<sup>th</sup> November, at KPS Narsapura for the hub ATL lab. Objective of the training was to give teachers practical experience of tinkering and prepare annual calender of ATL activities.

**B] Make-a-thon for selected IBT students:** A 5 days Make-a-thon was conducted for IBT students. Total 33 students from 6 IBT schools participated in the Make-a-thon at Pabal during 20<sup>th</sup> to 24<sup>th</sup> November. Students & instructors learned to use Design thinking methodology while working on their projects. They learnt to use various design software, traditional & digital fabrication tools for prototyping. They also learnt using *canva* poster designing software and prepared marketing pitch. These students are expected to make projects for various competitions.



### C] DIY Lab got permission to work with PMC school

Vigyan Ashram's Do-It-Yourself (DIY lab) is conducting various workshops for school children and ATIs in Pune city. We have got permission from State Council of Educational Research & Training (SCERT) for conducting tinkering classes in 20 Pune Municipal Corporation (PMC) schools. These activities will be based on digital fabrication; basic electronics & sensor applications. The activities will be conducted with 9<sup>th</sup> Grade students. We are in process of scheduling activities with all 20 schools.



Sky lanterns made @ DIY lab

### D] Technology development [Design Innovation Centre (DIC) and DST-SUNIL ] updates:

#### i) Black-Soldier-Fly (BSF) based composting & poultry farming:

- Abhishek started design & fabrication work for BSF-larvae separator. BSF-larvae need to be separated from compost for further processing. Abhishek is designing a motorized rotating drum with 10 \*10 mm sieve it will help in scaling up of operations.
- Mael Mouhoub (EPFL, Switzerland intern) has finalized PCB design with Lora &GSM module with battery-backup for temperature-humidity monitoring in BSF-breeding chamber. He is field testing new unit for accuracy.
- Mahesh processed 4.20 ton of waste through BSF based composting at Rajgurunagar dumping ground & Rainbow Janki Society (Aundh).
- Ranajeet & Ganesh visited Bhimashankar (Mhatbachhi-wadi) and Krishi Vigyan Kendra (Narayangaon) on 23<sup>rd</sup> November to conduct base-line study of poultry BSF feeding & polyhouse pest prediction projects.



BSF setup at Rainbow society

#### ii) Red-Chilly dryer:

- Ritesh Solanki (intern from Narmadalaya) & Raghav conducted trial-experiment on red-chilly drying in flat-bed dryer. They found on an average 8 % per day moisture reduction during 7 days trial.
- On 8<sup>th</sup> November, Mahesh visited Maa Annapurna Enterprises, Ozar (Nashik) to modify ventilation openings and exhaust fan timings of Solar Dome Dryer for better efficiency & quality output.



### iii) Polyhouse climate control system development:

Suhas & Nikita installed new fogger line in polyhouse for controlling polyhouse temperature & humidity. They found out that average 1000 lit/day water was required for fan-pad & foggers systems. In the month of November; for capsicum crop 1 spray of pesticide was taken for every 4.44 days (average temperature of 30.85 °C & 60.86 % RH) against 1 spray per 2.81 days (average temperature of 31.59 °C & 55.80 % RH) in October month. It shows almost 50 % lower spray for controlling pest (mainly thrips & yellow-mite) required with higher humidity & lower temperature. The trend will be further studied with actual pest count to study relationship of pest incidence Vs climatic pattern in the polyhouse.



**Juice chiller of e-Rikshaw**

iv) Sahil, Rahul and Abhijit completed fabrication for juice chiller unit for E-Rickshaw sugarcane juicer. They also completed mounting of battery pack DC juicer, cane storage & cover-roof structure of vehicle.

v) Ms Anjani Ghadage (Msc food-processing) joined DIC program. She has started working on 'recipe standardization of idli batter fermentation'. Project aimed in preparation of ready-mix idli-recipe with controlled fermentation & drying of batter. During November she tested effect of incubation temperature (30°C, 35°C, 40°C, and 45°C @ 2-5 Hrs) on pH & titratable acidity of batter.

vi) Suhas conducted session on 'Design Innovation Centre'(DIC) internship opportunities at Orchid College of Engineering (Solapur) on 2nd & 3rd November.

### **E] DBRT activities:**

**i) Green Fire Cracker for Diwali :** Student made electrical fire-cracker by using LED trips, sound & Arduino programming. The concept is based green-fire-cracker & student learn it from YouTube video. Students learnt soldering, series wiring, Arduino programming etc skills. Total cost of project was Rs.2995.00. As a part of regular learning activities students prepared earthing-pit for kitchen, changed a service cable in food processing unit and replaced CCTV camera wire for workshop department.



**ii) Workshop section:** Students of workshop department constructed brick wall of 1500 Ft<sup>2</sup> for new painting booth. Students also worked for fabrication of foundation structure and tilling work for 600 Ft<sup>2</sup> area. The total cost of construction was Rs. 2,22,861.00. Students earned community service of Rs.42000.00 through this work. As part of wall painting learning activity team of students completed internal wall painting work of workshop & classroom building. They earned a community service of Rs.23451.00 on total material cost of Rs.60971.00

**iii) Home & Health section:** Students learnt to make Diwali sweets & Namkeens. They had prepared Chakali (4.5 Kg), Chiwada (2 Kg), Besan Ladoo (5.3 kg), Shankar Pali & Burfi (3.5 kg). Apart from recipe flow, students learnt product standardization, packaging skills. They sold their products while arranging a stall in Pabal market. Students also processed 46 kg bread-flour for making bread for breakfast and 17.160 kg peanut-millet laddoo for daily distribution. Total value of community service was Rs. 10376.00



**iv) Agriculture & Animal husbandry section:** Practicals and project work is in progress as per schedule. Students learnt basics of land measurement, seed treatment, plant population and fertilizer dose calculation for field crops. While working in polyhouse they learnt pest identification & management for capsicum crop. Students harvested 51 kg capsicum and 6 kg spinach from polyhouse & sold to Kitchen and Pabal market.



**Gouri with her new born calf**

Gauri cow delivered calf (she) on 17<sup>th</sup> Nov. We are anticipating fodder & water shortage this summer. In order to minimize the losses and to maintain health of Sonal cow, we have decided to sell it. Sonal cow was sold to our DBRT student Omkar for Rs.55,000/-. Omkar calculated profit/loss statement of the cow and decided to invest into it.

**v) Modernization of engineering & electrical section:**

The installation of powder-coating booth with recovery system & powder-coating gun is completed. Similarly, installation of new modular welding table with 3D welding attachments and exhaust blower is also completed in the workshop section. DBRT student had completed wall-painting work in the workshop & electrical section. Work for partition wall is started for new audio-visual classroom facility. (Mahle)

vi) DBRT students were on Diwali holiday from 10<sup>th</sup> – 18<sup>th</sup> Nov. Vigyan Ashram was on holiday from 12-15<sup>th</sup> Nov.

**F] IBT Maharashtra & Uttar-Pradesh updates:**

**IBT Maharashtra updates:** IBT schools celebrated Diwali by selling food items & other community service activities. They are also preparing for Technovation competition & 'Seed the future Entrepreneur' competition. Following are some of the highlights -

**i) IBT instructor's training program**

Training of newly appointed 24 IBT instructors was conducted during 29<sup>th</sup> to November to 2<sup>nd</sup> December at Pabal (stars).

ii) Visit of Mahale Engineering-CSR team: Mr. Chaitanya Halbe (Manager Corporate Communication), Mr. Prashant Shinde (Deputy Manager), Mr. Swanand



Dhanawade (Senior designer engineer) Ms. Gitanjali Adsule (Senior designer engineer) and Mr. Shrikant Goyal (Senior designer engineer) visited Hiware IBT school on 22nd November. Visit was planned to understand program activities & guide students on various carrier opportunities. Team also visited Pabal campus to check progress on workshop & electrical section upgradation work.

Students learning activities:

- IBT Students from 10 schools of Talegaon (Pune) region celebrated Diwali festival by preparing traditional Diwali sweets (faral), decorated lamps (Diya), sky-lantern while learning basic craft & food-processing skills. They did community service of Rs.58737.00 through this activity.
- IBT Students in Chikhali school helped fabricator to install 120 units of sliding-windows in their new school building. Students learnt to use meter tape, metal cutting, glass fixation etc through these activities. Students showcased their various learning activities to Mr. Shekhar Singh (commissioner of Pimpri Chinchwad Municipal Corporation) on his visit to school.
- IBT students of Kohinde School started fabrication of ‘coconut breaking & water collecting device’ for village temple. Every Sunday around 50 to 60 devotees visit village temple with coconut, but its water get wastes due to lack of proper coconut breaking & water collection system. Students identified its need & received order form Grampanchayat. After ideation students started fabrication of unit while learning metal fabrication skills in engineering section.
- Students of engineering section fabricated 12 units of dust-bin required for school premises. Students used scrap metal rod and plastic bucket to making hanging dustbin baskets.



Food stall for stall at Scheffler company

iv) Learning by doing (LBD) @ Uttar-Pradesh updates (STARs):

- A ‘Smart-Shoe’ project prepared by Zoya Fatima, 8<sup>th</sup> class student at Naubasta (Lucknow) school was selected for “Innovate for equality” exhibition organized by UNICEF at New Delhi on 20<sup>th</sup> Nov. Zoya used skills & tools provided in LBD program to design IR sensor-based shoe for visually impaired person.
- All 50 schools implementing LBD program organized ‘Diwali-Mela’ in school to showcase various hand-crafted decorative items, food product prepared by them in school. It was much appreciated by parents & administration staff for their work.
- LBD field team helped state educational department in finalizing tool-list for scaling up of program in 1732 schools in state.



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

**Training on millet processing enterprise:** A hands-on training workshop on millet-processing enterprise was conducted on 25<sup>th</sup> & 26<sup>th</sup> November. Training was conducted in collaboration with Agro-zee-organics Pvt Ltd Urali Kanchan (Pune). Training was attended by 12 participants to learn importance of millet-diet, type of millet & their processing value, primary processing including making of making cookies, premixes, crackers, Nutri bar and traditional snacks items. They used processing equipment while preparing recipes, packaging & labelling them along with marketing plan. Agro-zee-organics founding entrepreneur Mr. Mahesh Londhe, nutritionist Dr. Jagtap and Mr. Ganesh Pingale from Vigyan Ashram guided the participants.



### Field visits & mentoring support:

- Ganesh Pingle & Kiran Inamdar visited Khadi Gram Udyog (Pune) office on 22<sup>nd</sup> Nov to meet Mr. Satish Kharat (Director, Hath-Kadad, Institute) to discuss various schemes & support structure for rural enterprises under Khadi-Gram-Udyog initiative.
- Yogesh Onkar visited social organisations & EDP alumni in Amaravati region of Maharashtra during 8<sup>th</sup> to 11<sup>th</sup> November. He met Mr. Baba Janorkar (Sarita Foundation), Mr. Chaudhari (District Resource Person, PMFME Scheme) and Mr. Avinash Saoji (Prayas Sevankur) to discuss about skill training & incubation support for local entrepreneurs. He also visited Mrs. Hrushali Gadage (Cake Shop A/p- Mozari, Amravati) to provide on-field mentoring support.
- On 23<sup>rd</sup> November, Ranajeet & Ganesh visited Goat farm of Yogesh Mansukh & Organic fertilizer (Jivamrut) unit of Mr. Kuldeep Chavan for on-field mentoring support.
- Yogesh, Vishal & Suhas visited IBT school in Madaj IBT school (Omarga, Dharashiv); Jnana-Praphidhani, Harali on 2<sup>nd</sup> November for understanding their work and future collaborations. On 3<sup>rd</sup> November they met MKCL Samjivak-Swamlambi-Sheti group farmers at Shetfal village in Solapur.



### Hero of the month:

**Mrs. Ashwini Pawar** started 'Kalyani Cake shop & Ice-cream parlour' At-Wadner-Budruk, Tal-Parner, Dist.-Ahmednagar. She is student of short-term skill training & receiving on-field mentoring & market linkage support in EDP.

**Mrs. Pallavi Nanekar** started 'MESI Gyanset' day-care & pre-school enterprise At-Wadgaon, Tal-Daund, Dist-Pune. We are giving on-field mentoring, graphics designing and digital marketing support through EDP program.

## H] Atal-Tinkering-Lab (ATL) & DIY lab update:

- i) Yogesh kulkarni visited KGBV, Laveru and KGBV Ranasthalam school on 23<sup>rd</sup> Nov. We have established a low-cost maker space facility in these school. We have placed order for 20 sets of Low-cost Maker kits to deploy in Karnataka and Telangana.
- ii) A weekly online session was conducted on 'Making cardboard loom for weaving friendship band' published on Diksha YouTube channel (<https://www.youtube.com/live/nF2M3FkbNYM?si=MiPFdDfPkmA00vId>) with total 675 views.



## I] Do-It-Yourself (DIY):

Following workshops for Grade 3 to 9 students were conducted at DIY lab during Diwali vacations.

- a) 3<sup>rd</sup> Nov : Working with paper, popsicle stick, bamboo stick etc ( 20 students)
- b) 4<sup>th</sup> Nov : Workshop Khelghar, Palakneeti parivar, Pune (19 students)
- c) 7<sup>th</sup> Nov : Paper craft activities (12 students)
- d) 8<sup>th</sup> Nov : Sky lantern making workshop



## J] Distance Learning Library (DLL) update:

- Video courses Water-pump installation & Wall-painting are uploaded on SkillsGuru website.
- Total 6 technical courses and 2 soft skills modules are made available on <https://www.theskillsguru.in/>

## K] Other Tit-Bits:

- i. Yogesh visited New Delhi on 8<sup>th</sup> and 9<sup>th</sup> Nov to participate in Curricular Area Group meeting at NCERT. The meeting was to design syllabus for Grade 6-12<sup>th</sup> as per New Education Policy.
- ii. **Felicitation program of Padma-Vibhushan Dr.Anil Kakodkar:**

Dr.Arun Dixit & team of DIC students participated in felicitation program of Eminent Scientist Padmavibhushan Dr. Anil Kakodkar on 28th November at the Institute of Chemical Technology (ICT) on the occasion of 80th birthday of Dr.Kakodkar. Dr.Arun Dixit presented important research & skill-training initiatives of Vigyan Ashram in the program. On this occasion, Marathi Vidnyan Parishad (MVP) donated 80 Marathi books to Vigyan Ashram. It was great opportunity for DIC students to meet great scientist & learn from their experiences.



VA team with Dr.Kakodkar

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iii. Vigyan Ashram received 'Swargiya Subhas Ravji Shah Smruti Purskar' given by Precision Foundation on 3<sup>rd</sup> November. Award was given at the hands of Dr.Abhay Bang Founder of SEARCH organization. Mr.Vivek Sawant & Mrs.Mukta Puntambekar (Muktangan) were present on the occasion.



iv. Wikipedia update: Priyanka, Anushka & Chandrakant completed proof-reading work of 19 books comprising 1906 pages.

v. DASARA & DIWALI festival celebrated on Pabal campus with full of joy & enthuse. Students cleaned tools & machine in workshop, worshiped cows and distributed sweets on festival.

vi. Ranajeet participated in TATA Proengage (<https://www.tataengage.com/>) NGO meet on 8<sup>th</sup> November at Taj Tree Vikhroli, Mumbai. Meet was aimed at introducing impact employee engagement initiatives along with feedback from NGO partners.

vii. Weather record – Rainfall of the month –53.99 mm (Total: 465.41 mm), Max temp-33.00°C, Min Temp –16.00°C, Humidity –88%, Water height in well– 3.80 M.

viii. Energy consumption record- Electricity unit – III Phase-589 units, I Phase import-90 units, Solar generation-626 units. DG used – 6:00 Hrs.

ix. Animal Husbandry section update – Milk production –266Kg (Gross / loss: Rs: -10546.00). One cow sold to Rs.55000 due to drought conditions. Poultry- 100 birds sold (Rs.5500.00), 60 eggs sold (Rs.680.00)

x. Biogas produced- 47.25 M<sup>3</sup> (Dung used-945 kg)

xi. Online visitors: www.dsttara.org – 1082(Organic search-596, Direct search-486),  
www.vigyanashram.com – 1037 (Organic search-596, Direct search-441). Campus tour visitors –245.

**K] Data Report:** <https://shorturl.at/EMW12>

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## Photo Gallery:



New welding table for VA workshop



Installation of powder coating machine



Vigyan Ashram  
Startup Sarathi

## SUCCESS STORY

### आदित्य बोन्हाडे

“आदित्यने अर्धवट माहितीच्या आधारे पोल्ट्री व्यवसायाला सुरुवात केली होती आणि अचानक पक्षांची मर सुरू झाली. अतिशय योग्य वेळी त्याला विज्ञान आश्रम च्या उद्योजकता विकास केंद्राविषयी माहिती मिळाली, संपर्क केला, तज्ञांच्या माहिती प्रमाणे उपाययोजना केली आणि संकटावर मात केली. तेथपासून आजपर्यंत खाद्यव्यवस्थापन, लसीकरण, विक्री अशा सर्वच बाबींचे नियमित मार्गदर्शनाने व्यवसायात प्रगती करत आहे. आज ५००० पक्षांची पोल्ट्री अत्यंत यशस्वी रित्या सांभाळतो!”



### आदित्य बोन्हाडे (आदित्य पोल्ट्री फार्म)

पत्ता : बोन्हाडे मळा, ता- शिरूर, पुणे



www.vigyanashram.com  
www.startupsarathi.com  
7774073902



Diwali exhibition @ Kanpur by LBD schools



Dome constructed during 1993 Latur Earthquake at Village Gubal. Yogesh Kulkarni visited Gubal on 2nd Nov.



Meeting with Farmers group at Shetfal on 3<sup>rd</sup> Nov (MKCL)

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