

Vigyan Ashram Status Report

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A] Guruvarya Achutrao Patwardhan Sewarhuti Award:

Vigyan ashram is felicitated by 'Guruvarya Achutrao Patwarthan Sewarhuti award 2019'. This award is given by 'Bharat Shikshan Mandals Patwardhan Highschool, Ratnagiri' for outstanding work in the educational field. Patwardhan high school is one of the oldest institute in the Konkan region. The award is given in the memory of Mr.Achyutrao Patwardhan, founder of the school. Mr.Ranajeet Shanbag accepted the award on behalf of Vigyan Ashram in a function held at Ratinagiri on 21st Sept. Award comprises of a memento and award money of Rs.25000. Vigyan Ashram is very thankful for the award and appreciation of work.



'Guruvarya Achutrao Patwarthan Sewarhuti Award

B] Ganesh festival celebration:

Ganesha festival is celebrated on campus with full of joy and enthusiasm. Highlights of this year's festival were making of eco-friendly Ganesha idol, a drama competition and street-play in pabal village by DBRT & DIC students. This year team of staff & students in textile lab made an eco-friendly Ganesha idol from wool, after 'pratishtapana and pooja for 10 days' 'visarjana' of this idol was also done in eco-friendly way by recycling its material. Students also conducted 'drama competition' and performed 'Ganesh band' in the village during Ganesha festival. On final 'visarjana' day students of DBRT & DIC performed 'a street-play' on a theme of eco-friendly Ganesh festival in Pabal village.

Being weekly market day, this play was enjoyed and appreciated by many pabal villagers.



C] Proposal on 'solar energy innovation' in collaboration with SELCO foundation

A proposal on 'solar energy innovation' is accepted by SELCO Foundation(<http://www.selcofoundation.org/>). Proposal aims to adopt, develop, demonstrate and disseminate, Solar energy Innovations for improving livelihood in rural areas. . We will adopt selected SELCO solar technologies to demonstrate and train rural youth through skill & entrepreneurship development programs. Proposal will also support piloting of three new innovations. SELCO foundation team visited pabal campus on 27th September to discuss project objective and its time lines.

D] Modifications of DIC hostel & bakery furnace

Interior modification work of DIC boys hostel was completed in September. This hostel was having 3 housing units with two room each and common WC unit. The hostel interior was modified to make 6 independent double occupancy room with separate WC units. Now 12 students can be accommodated in this hostel with better privacy and furniture facility. We also reconstructed fire wood bakery on campus. Old furnace was collapsed due to rusting of supporting roof structure. Bakery furnace is reconstructed with 6*3 ft furnace baking area to accommodate around 5-6 baking tray at one time. We used around 500 fir brick for reconstruction worth Rs.14000 and paid Rs.6000 as labour cost.

E] IBT Update :

IBT Schools in Maharashtra & Chhattisgarh state learnt various technologies applications while performing hand-on activities & community services. Following are some of the important highlights

- IBT students of Swami Vivekanand Vidyalaya, Asade And Sumati Balwan, Katraj Schools participated in an exhibition at LTI headquarter (Our CSR supporting organization) in Hijawadi. This exhibition was organized by LTI, to showcase various CSR initiative to their USA based client. Students exhibited various application of 3 D printing technology and other learning in IBT program along with some of the innovative project like solar fan-based cap. Students got motivated by interactions with guest in different corporate environment.



IBT students with 3 D printing exhibits @ LTI Hijwadi campus

- Students in Shri. Devi Shantadurga high school, Vadachapat school built a nursery unit with funding of Savitri Trust. Students of engineering section used square tubes & green shed net on 1500 sq.ft area while learning basic of metal fabrication & nursery technique. Total community service cost generated through this activity was Rs. 2.5 lacs Students are expecting to complete work by October end & start regular seedling production.
- Bhandari high school , Malvan schools started collection of bio-waste from weekly market to convert it into vermicompost. They have collaborated with municipal corporation to produce approximately 1-ton compost per month. A municipal corporation is providing segregated waste transportation facility while IBT students are processing waste to produce compost. This will be a unique waste management model set by School under Swatch Bharat Mission program.

- IBT students from Sumati Balwan, Katraj & Narsinh Vidyalaya, Tathwade school learnt 3 D printing technique on date 13 & 14 Sep and 3 and 4 Sep respectively. These workshops were conducted with the help of our Pune based Do-it-Yourself (DIY) lab. Total of 52, 9th standard student attended training to learn 3 D designing & printing skills while making various education models like cell structure of amoeba, Yeast cells, NH₃ and CO₂ molecule, DNA, Solar system and bracelet, etc.
- An Induction training was organized for instructors newly started IBT schools supported by LTI foundation. The training was organized in Asade school. Total 8 instructors from 3 schools attended training to learn hand-on skill & teaching methodology in L1 level IBT practical.
- IBT Chhattisgarh: Students of Pusnar Porat cabin prepared garden pots while learning skills of ferro-cement technique. They are also preparing various Diwali decorative articles from wool, candles, LED lamps. They are planning to have common selling stall during Diwali vacations



Students in Asade (Pune) school preparing compost from waste

F] DBRT Updates: DBRT students were in festival & celebration mode during September. They enjoyed Ganesha festival, Dahi Handi while doing their regular classes & project works. Following are some of the highlighted activities as –

- On 26th & 27th September, well-wisher & friend of VA Dr. Ashok Mathur conducted a designing & making of 'Diwali Lantern' training workshop for DBRT students. Dr. Mathur is an expert in 'geodesic design' and teaches it through very innovative & simple way. Student made 4 different type of lantern while learning various geometrical shapes.
- DBRT agricultural students planted 'Lucerne Grass' on newly levelled 4000 Ft² fodder plot. As a study tour they visited goat & poultry farm and learnt grafting technique while visiting 'Onion & Garlic Research Institute' at Rajgurunagar.
- Student in workshop department learned basic of PVC fitting and plumbing work while fixing drainage & water supply line in DIC hostel. They also fabricated a tetrahedral dryer (ARTI model) Colonel M.S. Naik at Mumdwā (Pune).
- Energy & Environment section students designed a control panel & installed exhaust fans in Polyhouse. They also installed 10 KVA stabilizer in soil microbiology lab and did regular maintenance work for investors in campus.
- Home & Health section conducted training workshop on 'chocolates making' on 11th September for DBRT & Pabal IBT School 10th class students. Apart from this H & H section students made products like Linseed fortified chikki (Rs.3560), Cake & Bread (Rs.1400), Tomato sauce (Rs.300) during September.



DBRT electrical department student repairing water pump to learn motor-rewinding skills

G] Technology development & DIC Update:

- i) Ganesh conducted Three field training sessions for farmers on 14th, 21st & 28th September in Pait area of Rajgurunagar. Training was organized by MPCCT, to give hand-on session & demonstration of advanced fodder technologies like azolla cultivation, silage making & dry fodder treatment. Training were attended by more than 120 farmers from nearby villages.
- ii) Amol conducted trial of making of 'domestic water filter' by using polysulfone membrane technology developed by BARC. This filter is installed in new boys hostel complex as a trial run and we are testing filter water samples to conduct microbial tests.
- iii) Dassault system's La-Foundation supported composter development project –

- 30 Units of 'Akshay' home composter were fabricated and transported to Pune for selling in Pune city. A detailed fabrication manual is prepared in the form of DIY kit (download link - <http://www.vigyanastram.blog/green-technology/diy-home-composter/>).



- A new version (hexagonal shape) society composter is fabricated and installed at 'Kumar Padmalaya' housing society, Aundh (Pune). We are making necessary aesthetic & functional changes based on field trial feedback. Work initiated to introduce this model at 6 different housing societies in Pune.

- iv) Aquaponics trial at Chikhali school is progressing well with average fish weight gain of 37 Gm with 0.9 FCR. We have installed a 'water flow counter' sensor on the site to monitor water circulation system remotely. This system counts water circulation motor on & off frequency & save data on cloud storage. Fab Academy student Jaydip fabricated this system as a part of his project assignment. It will help aquaponics farmers in monitoring & maintaining ammonia levels in system by ensuring proper water circulation system.

H] DIY Lab, Wiki & Digital Textile lab :

- Basic of electronics & programming training workshop was conducted at Rafi Ahmed Kidwai Urdu High School and Savitribai Phule Madhyamik Vidyalay on 17-18th September & 24-25th September respectively. Students of 8th class made 'smart dust bin' & 'Smart Samai' while learning basic of soldering, Arduino programming, sensors etc.
- A training workshop on Wikipedia & Wikisouce was conducted for Master of Arts (MA) students at Krantijyoti Savitribai Phule Women's Studies Centre, Savitribai Phule Pune University @ 3rd, 4th and 11th September. MA Part 1 & 2 students learned open source web publication skills like text scanning, OCR conversion, editing, wiki commence publication etc. For more details please follow link :- https://meta.m.wikimedia.org/wiki/User:QueerEcofeminist/WSC_Pune_workshop_Series

- Under *Titali* project, students learned making of 'soft toys' from waste cloth and various patterns of hand sticking. These students also made 60 composting bags from green shed net for 'hosing society composting'.

I] Other tit-bit –

- i) Trip to Science park Nigadi- As a part of ART club activity, students conducted 'Oon-the – Spot' drama competition during Ganesha festival. The competition winner 'Group No 6' won a trip to 'Science & Technology' park Nigadi on 14th September.
- ii) DIC student & staff team visited Sangamner & Ahmadnagar to study Bamboo construction technology developed by Amrutvahini Engineering College on 1st September 2019. Visit was organized for studying 'green building' construction concept using Bamboo as structural material.
- iii) Tree plantation drive was conducted at campus on 6th September in association with BAJAJ Electrical CSR (Ranjangaon) and Kulswamini Pratisthan, Pabal. Total of 200 plants sampling with tree guards were planted by VA students-staff, BAJAJ employees & Pabal villagers. The occasion coincides with Sakura Peace tree plantation drive worldwide.
- iv) Vishal & Sonal participated in the program of 'Ranjangaon Industrial Association (RIA) on 11th Sept. We have presented our work in partnership with Eaton foundation. Our activities with Eaton foundation won CSR award.
- v) Mr.Parag Raut (Mahindra & Mahindra R & D) visited Pabal campus to on 18th September to explore possibilities of collaborative work in innovative agricultural tools/ equipment's development.
- vi) Vishal attended a NGO meet at Rajgurunagar on 15th September for networking of NGO's & social institutes of Rajgurunagar, Shirur, Ambegaon block.
- vii) Mr.Suyog Warghade resigned from his job for better prospective. He was working with us as DBRT Energy & Environment section instructor since 2014. We wish him best for his future endeavors.
- viii) Weather record – Rainfall of the month -190.46 mm (Total – 729.61mm) ,Max temp-25.57 °C, Min Temp – 24.47 °C , Humidity – 89.29 % , Water height in well – 3.86 Meter.
- ix) Energy consumption record- Electricity unit – III Phase -836 units , I Phase Export- 158 units, Import-860 units. Quality of power : Number of interruptions :110, Normal voltage : 63.66 % No supply : 17.48 % , low voltage : 18.86 % , No data: 0 %.
- x) Biogas consumption – Dung used- 00 Kg, Gas produced- NIL xii) Two wheeler – 656 Km, petrol consumption – 7.33 Lit
- xi) Total visitors to www.vigyanashram.com – 1188 (New visitor – 981 Repeated-207) www.dsttara.in : 1196 (New visitor –1046 Repeated- 150)



Tree plantation drive in association with BAJAJ Electrical (Ranjangaon) & Pabal villagers

Data Report:

<https://drive.google.com/open?id=1CC9tBKtx6FT4yQWdBJdui3G4mLZcjzsp>

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Photo Gallery:



DBRT students learning composting



Study tour to science park Pimpri (Pune)



Students in Marunji (Pune) learning 3 D designing & printing technology



Students of Pusnar Porta Cabin (Bijapur, Chhatisgarh) making fero-cement gardening pots



DBRT ART Club students with various sky lantern



Students of RAKU School learning smart sensors