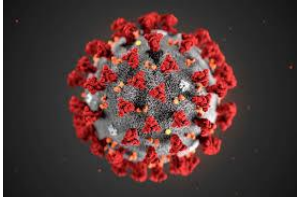


Vigyan Ashram Status Report

Volume 38 Issue 06

June 2020

In this issue



Vigyan Ashram in Action under COVID Lockdown

- Online Entrepreneurship Development Program in progress
- Online course on 'Designing a Solution' for college students
- Online IBT instructors training
- Completed Order for UV disinfection box
- Solar illuminated 'Vigyan Ashram' Sign Board

[We are under lockdown. Limited staff and students are staying on campus. Many of our team members are working from home. We are trying our best to contribute in fight against COVID pandemic. We thank you for your support in this challenging time]

A] Online Entrepreneurship Development (EDP) Program in progress :

We are reaching out to youth willing to start technology-based business in their village. We are using social media platform to reach out to them. The EDP programs include online session on particular technologies, personal mentoring and our plan is to conduct hands on training after lockdown is over. Following important training programs were conducted during June :

- Food processing technology: First batch of food processing EDP course was concluded on 7th June. Total 34 participants completed 1 month program (30 hrs) of 15 online sessions on technologies like drying, sugar syrup preservation, baking, extruded products, picking and various soft-skills. We are providing mentoring sessions for their enterprise & also planning to host hand-on training sessions at pabal post-lockdown period.

- Hydroponics & Aquaponics farming in India:

An online training program on 'Prospect of hydroponics & aquaponics farming in Indian context' was started on 24th June with 36 registered participants. Aim of the training was to share experimental learnings from hydroponics / aquaponics farming at Vigyan Ashram. Training will have 8 sessions

(20 hrs) on basic concept, science & economics of hydroponics & aquaponics farming.

- Computer based business opportunities:

A training session on 'computer-based business opportunities' was held during 17th to 26th June. This training was organized on request from many participants of introductory EDP webinar conducted in the month of May2020.

Training was conducted in four sessions and participants were introduced to services in lokseva kendra, freelancing opportunities, wiki-publication, application of solar energy in computer service etc. We are also offering mentoring & seed money support to selected participants for adoption of solar powered computer enterprise under SELCO foundation's support program. 13 students participated in the training.

IV. Training on development of 'Kitchen garden'

Food security and nutritional diet become necessary to fight COVID pandemic. In collaboration with STARs forum, Vigyan Ashram started promoting kitchen garden among rural communities. We have started training of NGO volunteers as 'Train the Trainer' program. First two sessions were conducted on 1st and 15th June. We have covered 'land preparation & layout of kitchen garden' and 'Vertical bag farming method'. Session were attended by 52 participants from 6 NGO representatives & individuals. There will be total 8 sessions and participants are expected to develop their own kitchen garden. Many of them started their kitchen garden and they are submitting their learnings through online submission.

- V. 17th June : Suhas, Mahendra & Sachin hosted a webinar on 'solar energy based entrepreneurship opportunity'. Webinar was co-hosted with 'SELCO foundation' to demonstrate innovative solar technologies. Beneficiaries of various technologies like solar milking machine, sewing machine, solar refrigerator, solar computer etc shared their experience & economic advantage of technology to 39 participants. We are providing technology adoption support to interested participants.

VI. Training on 2D-3D designing

Training session on 2D & 3D designing was conducted on 10th, 12th and 15th June by DIY Lab. Total 6 high students participated in the course to learn designing software's viz Inkscape, google SketchUp.

- VII. 'Designing a Solution': We have launched a one-month duration 'Designing a Solution' online program. This course will train students in methodology to identify a problem and design a solution from 'Idea to Prototype' stage. The course was started on 15th June with 12 participants. They are from varied background like BE students (Agriculture B.Tech, Mechanical, Civil engineering), Science graduates etc. There will be 10 sessions of 'Design thinking' methodology. Each session will be followed by assignments and mentoring session with every student. Each student will submit their learning assignments through 'Google class room' and on VA blog. In the month of June, we have conducted 5 training & 4 mentoring session



Designing a Solution

फ्रेजर इंजिनियर / M. Sc. साठी एक महीन्याचा ऑनलाईन कोर्स !

Eligibility /पात्रता : कुठल्याही क्षेत्राचा फ्रेजर पदवीधर किंवा Gap year घेतलेला. Preferably from BE (any stream), M. Sc., B. Tech (Engineering / Food / Agriculture)

Course Content : Selecting a problem, Design thinking, Learning new skills in Digital design, digital fabrication, new softwares, Designing a solution, prototype design (ग्रामीण प्रश्नावर उत्तरे कशी शोधायची व त्याचे व्यवसायात रूपांतर कसे करायचे त्याचे प्रशिक्षण)

Methodology : Online lectures, Assignments and online support

Language /माध्यम : मराठी / हिंदी / English (Mix संमिश्र)

Benefits of the course :

1. Fellowship on Technology
2. Development project at Vigyan Ashram
3. Access to Fab lab at Pabal and Pune
4. Creation of own portfolio
5. Guidance by mentors, Certification by Vigyan Ashram

Seats : 10 Fees : Rs.2500/-

B] Webinar and Talks :

- 15th June : Ranajeet & Sachin gave a talk on 'Technology based rural entrepreneurship opportunity for rural youth'. This talk was organized in collaboration with 'Vanrai' (<https://www.vanarai.org/>) for 20 village youth & field staff of Hokawane village (Taluka-Bhor, District-Pune).

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Send resume on: vapabal@gmail.com

- 18th June : Dr. Yogesh presented Vigyan ashram's response to COVID19 in #FabDoesNotWait – South Asia talk organized by Fab-foundation. (Video link: <https://www.youtube.com/watch?v=va6ekJgVYeM&feature=youtu.be>)

C] IBT instructor training : Due to lockdown, it was not possible to conduct residential training at Pabal. Therefore, we have organised online training program for IBT instructors from 6th to 27th June. Training was planned after detailed 'need assessment survey' on the background of COVID19. Training was planned using mixed approach of online training plus hands on activities by providing material support. Training content, list of material, safety precautions, fabrication flow etc were shared with participants during pre-training sessions. Instructors were asked to procure material locally and practical's were conducted. Total 740 participant (including instructors & students) participated in this training from 55 IBT schools of Maharashtra state to learn new skills & technologies.

They learned to make hand sanitizer, fabrication of pedal operated handwashing station and sanitiser dispenser, how to make sodium hypochlorite solution using simple electrolysis process, fabrication of UV disinfection box, preparing immunity boosting food recipes, Designing using simulation software i.e. Tinker Cad, CAD etc.

We are delighted by the response from school administration & instructors in arranging training material, adjusting with online training platform & methodology and conducting training activities. We are also thankful to L&T infotech, Praj Foundation and other partner agencies for their financial & technical support in designing & implantation of these training sessions.

D] Design Innovation Centre (DIC) and Fab Academy update:

COVID19 technologies:

- Prasad Patil has fabricated and supplied 3 units of UV cabinets against order from Maharashtra Police Academy (MPA), Nasik. They will use these cabinets for disinfecting their saloon tools. These cabinets uses UV-C type (22 Watt, 254 nm wave length)



and useful for disinfection of various non-living surfaces, fruits vegetables etc. for more details please visit <http://vadic.vigyanashram.blog/2020/05/16/uv-cabinet-prevention-from-covid-19/>

आय. बी. टी निदेशक ऑनलाइन प्रशिक्षण कार्यक्रम २०२०

हॅड सॅनीटायझर बनविणे. ६ जून (स. १० ते १०:३०)	सुरक्षित हात घुण्याचे यंत्र बनविणे. ६ जून (स. १०:३० ते ११)	अतिनील (UV) निर्जंतुकीकरण बॉक्स बनविणे. १३ जून (स. १०:३० ते ११)
बैसिक आणि अॅडव्हान्स इलेक्ट्रॉनिक्स शिक्षणाच्या ऑनलाईन साधनाची ओळख. १० / १२ जून (स. १० ते ११)	भाजीपाटा निर्जंतुक करण्यासाठी सोडीयम हायपोक्लोराईटचे मशीन बनविणे. १३ जून (स. १० ते १०:३०)	
रोम प्रतिकारशक्ती वाढविण्यासाठी खाद्यपदार्थ तयार करण्याची कुची - मोसवळा डिस्टिंग्गिनि सी. २० जून (स. १० ते ११)	लोणचे तयार करणे- फुलकोबी, कोबी, कांदा २७ जून (स. १० ते १०:३०)	
परसवानेसाठी व्हॉर्टिकल वॅग फार्मिंग तंत्रज्ञान. २७ जून (स. १०:३० ते ११)	औषध वनस्पती बाग तयार करणे. ४ जुलै (स. १० ते १०:३०)	मुखवटा (Mask) बनविणे. ४ जुलै (स. १०:३० ते ११)

प्रशिक्षणात सहभागी होण्यासाठी खालील मेसेज मधील लिंकवर जाऊन आपली नाव नोंदणी करा.

विज्ञान आश्रम गु. पो. पावळ, जि. पुणे
 फोन नं: ९६६७७७४४९२, ९७६६२०८३९६, ९९२१७७०५८९
ibt@vigyanashram.com / www.vigyanashram.com

- Aditi designed & fabricated a prototype of “mobile hand wash unit and mobile bathing unit”. She has submitted her project to ‘Fablab international conference’ (www.fabxlive.fabevent.org).
- IBT school network has joined hands in dissemination of various COVID safety tools, sanitizers etc. for e.g Team of instructors & students of Swami Vivekanand Vidyalaya (Asade, Pune) prepared sanitiser dispenser unit and got order for 17 stands. They also supplied two stand to LTI, Shivajinagar office.
- Aditi had completed DIY manual on instructable for-Key security system. Link : <https://www.instructables.com/id/DIY-Fingerprint-Key-Security-System>
- Pooja completed order for metal cutting work on plasma machine.
- Pooja made design files of Wheel barrow and Tractor fanni.

Other technology updates:

- Solar illuminated Vigyan Ashram Sign Board : Sanket fabricated & installed a solar electricity based (200 Watt LED, 300 Watt solar generation with 120 AH batteries for 6-8 hrs lightning) sign-board at entry point of Pabal campus. Our alumni Mr.Nitin Pansare helped us in material procurement & installation of this system.
- Priyanka Gharad installed ‘polysulfone membrane filter’ drinking water filter at campus. She is working on for converting it on DC powered source.
- Under ‘Women Scientist Scheme B’ (WOS-B) project

Sonal prepared agro-waste composting bed at 6 farmers in Gulani & Masewadi village.

- Priyanka Gawade conducted successfully tested sprouted gram flour for making of ‘dhokla ready-mix’ preparation. Her initial 6 out of 8 trials failed while deciding right recipe mix & fermentation levels.
- Bailing machine: Prasad completed fabrication of 2.5lit capacity steam based plastic waste compacting (bailing) machine. He found that for PET bottle he needs 145.5 Kcal to got 0.3 g/ cm³ density of plastic. It gives around 3 times volume reduction of waste garbage. He is now working on 50 lit capacity compression press as working prototype model for field trials.
- A review meeting of progress of different projects with

Dr. J.B. Joshi was held on 11th June. We are getting guidance from Dr.J.B.Joshi on plastic pyrolysis, Urban farming, Aquaponics, Azolla for composting and incinerator.

- Auto Farm : Suhas has completed production of 10 units of Auto farm device to install on nearby village farms. This device will give data log of temperature and humidity data in different locations.



Board at Entrance of Ashram



Bailing machine prototype

On 21st June, we have recorded temperature and humidity variations during solar eclipse in open atmosphere using Auto Farm.

- DIY lab conducted online on Tinkercad for IBT School Teachers on 10th & 12th June. In this session 66 Participants joined. We had also conducted online Game making workshop on Scratch programming for IBT School Teacher on 17th & 19th June. In this session 103 teachers participated.



Fab-academy update :

- Make a Machine : As a part of their group assignment, Fab-academy students designed & digitally fabricated a 'AjraKh - block printing machine' printing machine. They had given presentation of machine on 17th June. Details are available-<http://fab.academany.org/2020/labs/vigyanashram/machine/index.html>.
- Vikram Ingole and Snehal Gawali presented their final projects on 27th June. Project details are here : <http://fabacademy.org/2020/labs/vigyanashram/students/vikram-ingole/> <http://fabacademy.org/2020/labs/vigyanashram/students/snehal-gawali/>

E] DBRT course & Pabal Campus update:

In the normal time, June is the month of DBRT admission. Due to COVID19 Pandemic, results of 10th /12th std are delayed. Parent & students are confused about the situation. But we have decided to start our academic year from July. We have decided to explore new innovative way to conduct the session.

DBRT team has started communicating DBRT admission notice. We have put posters in nearby villages and shared via social media messages.

Following are some of the important happenings on campus :

- During June, we had received 208.1 mm rainfall. Its really a good start as greenery is back and we have started agricultural field operations. We had sown 30 Kg of sun hemp (Tag), 25 Kg of Jawar, 10 Kg of Maize as a green manure & fodder crop. Seedlings of mulberry (240) & Dashrath grass (150), Shevri (35) were also prepped & planted as fodder.
- Animal husbandry department sold 2 goat bucks as a regular sale for Rs.10500/-.
- Five DBRT girl students from Madhya Pradesh could not go back due to lockdown. They continued to learn new things :
 - Team of 5 girls & instructor prepared 20 Kg pooran mix, 7 Kg moringa fortified & peanut ladoo's, 12 Kg tomato-tamarind sauce. They also supplied breakfast bread (12 kg flour) for kitchen.
 - M.P girls did experimental processing of Kodo & Kutki millet. Kodo & Kutki is minor millet of MP, know for its reach source of carbohydrates & iron. These girls sourced these millets for MP by courier & tried varies recipes like cookies, ladoo, chikki etc so that they can replicate it after returning back to their villages.
- Krushna tested 50 soil samples received from WSHG groups from Rajgurunagar & Junnar region villages.
- Vedant learnt basics of electrical fitting while carrying maintenance work of boys hostel and campus electrical work.



Jawar field

- Workshop department shifted solar water heater of ladies hostel building to classroom terrace for starting fabrication work on roof top for 'recreation center' work.
- Fabrik dept made 37 designer masks and sold them.

F] Wiki Team update:

Wiki team @ ashram did following wiki work during June-

- OCR making work of 'Shetkari Sanghatan' magazines : [अन्वयार्थ – २](#), [अर्थ तो सांगतो पुन्हा](#), [पोशिंघाची लोकशाही](#), [खुल्या व्यवस्थेकडे खुल्या मनाने](#), [चांदवडची शिदोरी : स्त्रियांचा प्रश्न](#), [पोशिंघाची लोकशाही](#), [बळीचे राज्य येणार आहे!](#), [शेतकर्यांचा राजा शिवाजी आणि इतर लेख](#), [बालबोध मेवा](#).
- OCR making work for Ranade Marathi dictionary (volume 1) completed ([OCR of Ranade Dictionary Volume 1](#)). The proof reading work completed for first 200 pages.
- New articles added Water testing ([पाणी परीक्षण](#)), Anemia ([पंडुरोग](#)), Plant nursery ([पौधशाला](#)), Grafting ([कलम बांधना](#)), Ethernet ([ईथरनेट](#))
- Book scanning work: 13 books (3984 pages) of renowned Marathi writer Shri. P.G.Sahastrabudhe.

G] Hero's of the month (Under lockdown) :



Babu Sonawane started his poultry operation



Santosh Mohol(Watunde,Mulshi) prepared Azolla for poultry and rice fields.

H] Other tit-bit :

- New project proposal submission: We have submitted 2 proposals to Department of Science & Technology (DST, GoI) on 'Technology based Entrepreneurship Development' and 'Towards self-sufficient village' under Innovation & Entrepreneurship Development Division & Technology Mission Division respectively. We have submitted this proposal in collaboration with Savitribai Phule Pune University and Greeny the Great.
- The Department of Science and Technology (DST) is formulating India's new Science, Technology, and Innovation Policy (STIP 2020). As part of the STIP 2020 policy drafting exercise, 21 thematic groups (TGs) have been constituted including TG - Sustainable Technologies. Dr.Yogesh Kulkarni is co-opted as a member of the thematic group on Sustainable Technologies.
- Weather record – Rainfall of the month -208.19 mm (Total – 208.19mm) ,Max temp-37.00 °C, Min Temp –20.00 °C , Humidity – 92 % , Water height in well – 5.60 Mtr.



EDP trainee Mrs Swati Gavandi started Biryani Business during lockdown

- iv) Energy consumption record- Electricity unit – III Phase -1309 units , I Phase Export- 261 units, Import- 729 units. DG used – 12.36 Hrs. Quality of power : Number of interruptions :87, Normal voltage : 82.91% No supply : 9.06 %, low voltage : 7.49 %, No data: 0%
- v) Animal Husbandry section update – Milk production – 667 Kg , Goat- Weight gain (2 male bucks)- 2 Kg, Weight gain (7 kid) – 8 Kg, Poultry Egg production – 115.75 dozens(FCR – 2.08)
- vi) Biogas consumption – Dung used- 780 Kg, Gas produced- 38.93 M³, Two wheeler record– NA
- vii) www.dsttara.org – 1197 (New visitor –1011 Repeated- 186) , www.vigyanashram.com –1124 (New visitor – 940 Repeated-184)

Data Report : https://drive.google.com/file/d/1xw-p_osqKirVmGIGeZrESlqqa5c16MUC/view?usp=sharing

(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:



Sanitizer stand by Tathwade school



Sanitizer stand by Asade school



Modified Solar dryer installed



Jobs made on plasma against order