



Workshop/Seminar Feedback Form

Workshop Date: 03.12.2019 TO 06.12.2019

Workshop title: **UNBOX TINKERING**

Venue: SUNBEAM ENGLISH SCHOOL, VARANASI

Attended by: Umesh Verma

Resource Person: Mr. Jag Mohan Yadav

Organizer: Atal innovation Mission, IBM

Profile of the Resource Person:

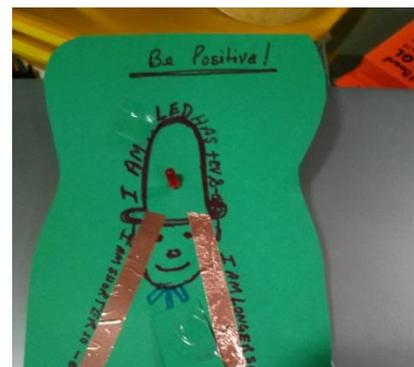
1. Content of the Workshop/Seminar

DAY 1 (03.12.2019)

- First Day of the Unbox Tinkering - ATL Teacher Training Programme started with the welcome and Introduction session wherein the teachers received the welcome docket which consisted of The Atal Tinkering lab Handbook, Orientation Brochure, Activity Calendar, Tinker Fest and ATL Community Day Guidebook.
- The ATL Mentor Mr. Jag Mohan Yadav briefed the teachers about the objectives of the T Program, AIM Website, and ATL Dashboard. He also discussed about the importance of creating the ATL advisory Committee and the guideline for setting up of ATL Lab.
- Teachers were divided into 7 groups and were given a task of creating a solution for the problem they have chosen. They were asked to identify a statement and create prospective solution around it using cardboard/paper prototyping. The key points involved in this activity (Design Thinking) were empathy, ideate, prototype and test.
- Post Lunch session started with a presentation on Basics of Electronics
- and Understanding Circuits in which the basic concepts of Electronics and



Team Of different schools, Team No.One



Paper Circuit

- Hands on Activity on Paper circuit was conducted using LEDs, A4 sheet, copper teachers have designed a greeting card using the circuit components.
- The day concluded with a discussion on ATL equipment in which the various equipment available in ATL were introduced .

DAY 2 (04.12.2019)

- Second day of the Unbox Tinkering Training Programme started with a recap of activities/session conducted on the first day.
- Icebreaking Activity was conducted for the teachers in which they wrote a positive feedback about any one of the team members on the paper circuit they have made.
- A hands on session on 3D printer was conducted wherein introduction to the basic components of 3D printer such as the type of printer, filament, and heat resistivity of the printer were discussed.
- An introduction to the software Tinker cad was held and each participant created a design of their own such as key ring using the software. Then the file was stored in .Stl format using software called Ultimate Cura and was converted into the file format g code which the printer can read and understand.
- Various aspects of the 3D printer such as the thickness of the nozzle, filament type, temperature printing speed, temperature, and bed temperature were explained.
- After Tea break, a presentation on "Introduction to Computational Thinking" was held in which the basic concepts of computational Thinking such as Decomposition, Abstraction, Pattern Recognition and Algorithm were discussed.
- Many tasks were given to the teachers such as to make a flow chart for finding average of three numbers, writing an algorithm for finding the area of the rectangle, signal light functioning, withdrawal of money from ATM were given. The tasks given enabled us to understand the concepts of flow chart and algorithms very well.



An introduction to the software

which the difference between sensors and actuators were explained. Also the different types of sensors available in ATL Lab such as Water Level sensor, light sensor, force sensitive sensor, rain water sensor etc. were discussed.

- Post Lunch session started with Coding Languages and Arduino in which the basics of coding/programming, Introduction to Open Source Programming Boards, setting up of Arduino (hardware and IDE) were discussed.
- Activities using Arduino were conducted in which the teachers set up the Arduino, wrote coding for the given tasks such as blinking of LEDs, ON and OFF of 5 LEDs etc. The session was very interesting and useful to understand the concepts of Arduino.



Activities using Arduino by all the groups

- Day 2 of the Unbox Tinkering Training Session ended with summarizing the day's activities and learning outcome of the session.

DAY 3 (05.12.2019)

- Day 3 started with the recapitulation of the activities conducted in the previous day's session in which the participants shared the key learning during coding season.
- Discussion on PFMS and GeM systems was held in which guidance to procure ATL equipment and services was also given, there was a discussion on how to integrate ATL in school curriculum.
- Demonstration of Raspberry Pi 3 activity was conducted in which the basics of Raspberry Pi 3 was introduced to the teachers. Raspberry Pi, a microcomputer which can be connected to a monitor and keyboard and can be used as a computer. This reduces the cost of buying too many computers.
- A brief discussion on Digital Wellness and Digital Literacy was held in which the importance of Ethics and Leadership skills in ATL ecosystem was discussed.

various aspects of Intellectual Property such as Patent, copyright, Trademark and designs were discussed.

- A Hands on session on "Soldering" was conducted in which teachers were divided into groups and made a basic circuit using LEDs, batteries and connecting wires and soldering iron.

- Hands on sessions on Tinkering and DIY equipment, Measuring tools such as Vernier caliper, spirit Level (Mechanical and Electrical), Power tools (Drill press, Rotary machine etc.), Electronics measurement tools (millimeter, CRO)

were conducted in which the basic concepts of the equipment and the safety measurement to be taken while using the tools were briefed.



Project presentation by our

- The session concluded with a recap of the whole day's proceedings and the learning outcome of the session. Also there was an icebreaking session in which teachers were asked to showcase their talents such as singing, dancing, poem recitation, standup comedy etc.

DAY 4 (06.12.2019)

- The last day of the Unbox Tinkering - Teacher Training Programme started with a brief discussion on the information available on the web site www.mygov.in. The mentor briefed about the important details of GeM through which the materials required for the Atal Tinkering Lab can be purchased by bidding. He explained about the process of bidding and PAC.



Project made by

- A presentation on "How to create Business Pitch" was presented in which the different aspects of creating a business pitch such as the problem area, details of prototype to curb the problem, how to make the prototype into a product, the marketing techniques to elevate the product were discussed



Receiving Certificate from Principal of Sun Beam

Teachers along with a student from the host school were divided into groups and were given a task of creating a

Business Pitch for the prototype made. Each group presented their prototype and the PPT to the other groups.

- The 4th day of the training concluded with testimonial shoot, a photo session and certificate distribution ceremony.

2. Learning outcomes (Knowledge and Information) from the workshop/Seminar?

The 4-day Unbox Tinkering – Teachers Training Workshop conducted by NITI AAYOG in collaboration with IBM s was highly informative and meticulously planned so that all aspects of Atal Tinkering Lab can be covered. More such regular sessions will definitely enable the teachers to understand the concepts and working principle of the various tools available in the Atal tinkering Lab so that they can facilitate the students to bring the best and contribute towards the development of the country.

3. Which topics or aspects of the workshop/Seminar did you find most interesting or useful and can be applied to the classroom teaching?

Arduino learning, Raspberry Pi , 3D Printing and PFMS

4. How will you implement the knowledge & techniques acquired to your subject?

- Involve students, teachers and other school staff in developing a vision, goals and objectives for Helping student in, learning and practicing Arduino, Raspberry Pi and 3D printing.

5. Comments and suggestions (How do you think the workshop/Seminar could have been made more effective?)

Audio Visual was comprehensive and informative.

6. Was the advance briefing about the workshop/Seminar appropriate? YES

GENERAL FEEDBACK	YES	NO	NOT SURE
• The workshop/Seminar was applicable to my job	✓	<input type="radio"/>	<input type="radio"/>
• I will recommend this workshop/Seminar for other faculty members.	✓	<input type="radio"/>	<input type="radio"/>
• The program was well paced within the allotted time	✓	<input type="radio"/>	<input type="radio"/>
• The material was presented in an organized manner	✓	<input type="radio"/>	<input type="radio"/>
• The resource person was a good communicator	✓	<input type="radio"/>	<input type="radio"/>
• The resource person was knowledgeable on the topic	✓	<input type="radio"/>	<input type="radio"/>
• I would be interested in attending a follow-up, more advanced workshop / Seminar on this same subject	✓	<input type="radio"/>	<input type="radio"/>
• I will be able to conduct follow up workshop for the benefit of fellow Staff Members	✓	<input type="radio"/>	<input type="radio"/>

Report submitted by

Signature

Name – Umesh Verma

Designation – TGT

Submission Date – 23-12-19