Gandhinagar Institute of Technology

A Report on

"3D Printing Workshop"

(17th January 2020)

Workshop Overview:

Gandhinagar Institute of Technology has organized the workshop on 3D Printer for the students under the SSIP on 17/01/2020 from 9:00 am to 3:30 pm. Prof Dhaval Patel, Prof Jatin Patel & Prof Jyotin Kateshia have conducted the workshop. There were total 50 participants in the workshop. The workshop will provide an opportunity for every student to know 3D Printer Machine and Additive Manufacturing Process.

Objective:

The objective of the workshop was to educate the students about 3D printing technology. The silent objective was also to teach them CAD tool to prepare prototype design using 3D modelling software and experience the 3D printer by printing the model which they have prepared during workshop. The workshop was organized to give them hands on experience.

Workshop Detail:

The 3D printer workshop was started with the first 50 registered participants at 9:00 am in the seminar hall (A105). The partcipants were eager to learn the 3D printing technology. Only those registed students who have basic knowledge of SolidWorks were asked to join the workshop. So that the less time will be given to educate them about CAD tool & more time given to 3D printing technology.

Prof Dhaval Patel had initiated the session with the introduction and various commands of Solidworks. He demonstrated part modelling commands and the file conversion in the required format for 3D printer. After this session they were asked to occupy their seats in computer lab A109A & A109B. All the students had made their components on solidworks in the computer laboratory during the session. A practical session was divided into a different group for making such a mechanical component in 3D Printer.

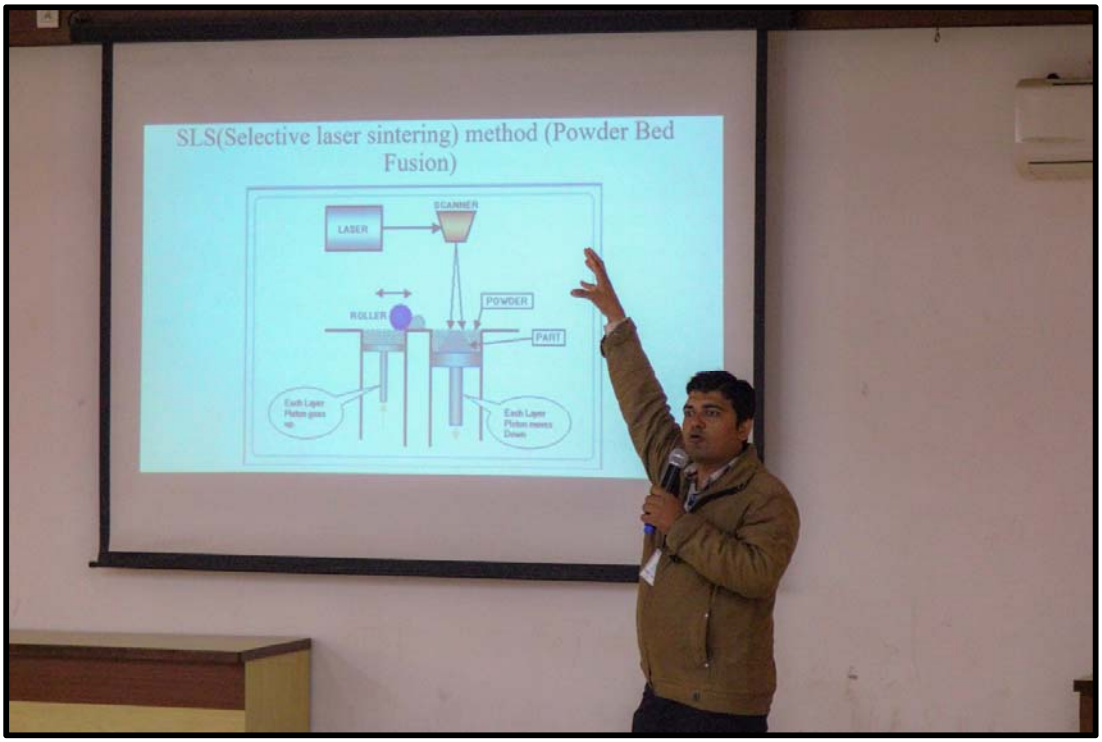
In the next session, Prof Jatin M Patel have delivered basic details, historical development and specifications of 3D printer. He educated participants that the exported ".stl" file from solidwork need to use in "Cura" software for 3D printer. He demonstrated various aspects like bed temperature, material of printing, nozzle temperature, nozzle size, layer thickness, shell thickness, fill density etc. He added that the nozzle speed can also be adjusted to have desired quality of product.

The participants were taken to 3D printer in the last session. They experience the 3D printing technology by priting their own prepared prototype in 3D printer. They have also visualized the effect of change in the parameters in Cura on their product. The participants were delighted to having such an amazing experience under the observation of expert faculty members.

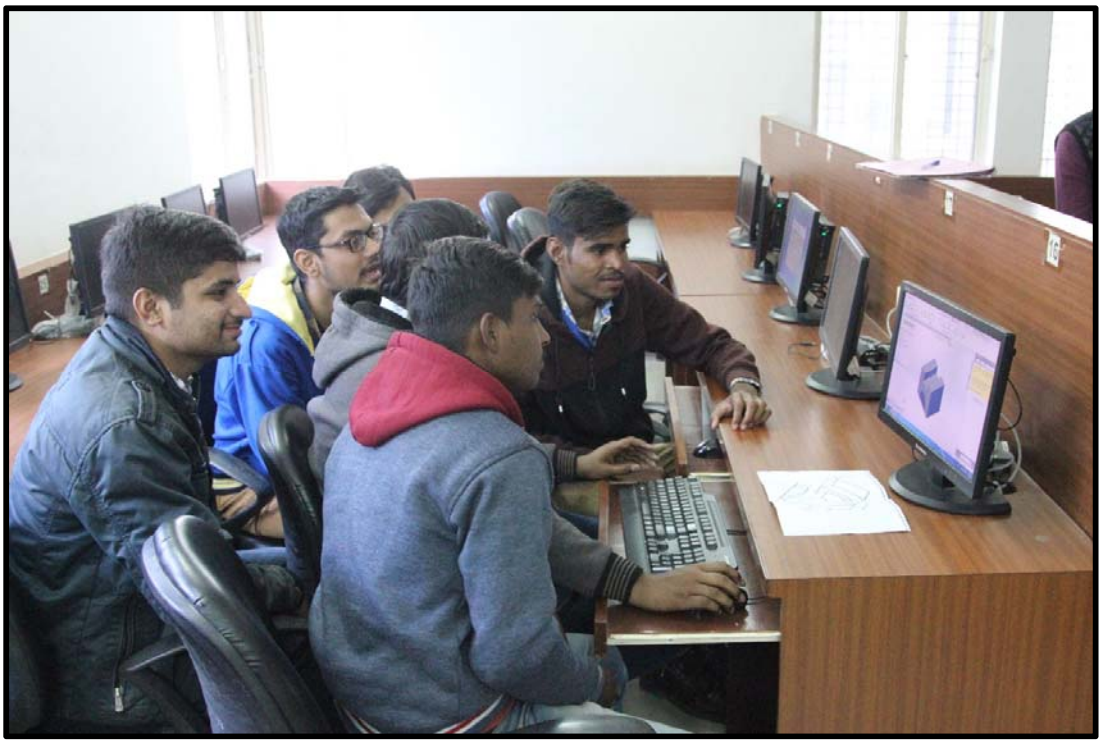
The event was a grand success under the enlightenment of Dr H N Shah, Director of the institute and the participants.

Photo Gallery:

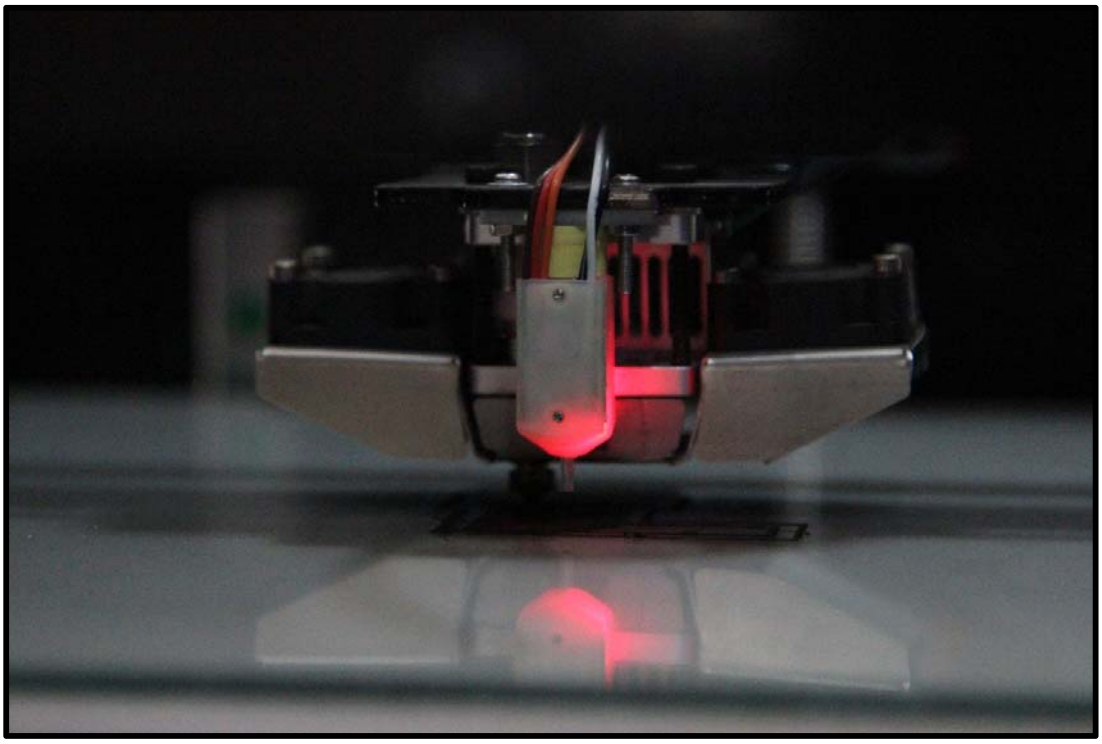
Interaction between participants & mentors



Mentor delivering session



Participants preparing their 3D model



Model making on 3D printer

Hands on exercise on 3D printer