

Report on the 4-day workshop

## **4-day Workshop on Creativity & Design**

and

## **Design Driven Innovation**

27<sup>th</sup> – 28<sup>th</sup> April 2013 and 4<sup>th</sup> -5<sup>th</sup> May 2013

First of its kind workshop on **Creativity, Design & Design Driven Innovation** for faculty members of engineering colleges was conducted by International Innovation & Research Foundation (IIRF) for Gujarat Technological University (GTU) and was attended by more than 30 faculty members from 10 engineering colleges of Gujarat.

The objective was to introduce design thinking and other creative approaches for innovation as a systematic organised learning with the skills to practice them. Exposure and sensitization were provided to numerous existing examples to obtain an insight into the core concepts utilised. Available innovation tools and techniques were analysed and later applied. The goal was to be able to become continuously innovative and to empower others for maximum results.

The 4 day “hands on”, “co creation” workshop focused upon sensitizing faculty members towards the why, what & how of creativity, design, design thinking and design driven innovation. This workshop aimed at providing an insight into process, methods and tools & techniques that could be used in classroom / lab environment as well as project based learning to produce innovation.

Success of the workshop can be gauged from the fact that the faculty members stated that now since they know the process of design and design driven Innovation, they will be able to help the students in the upcoming projects by encouraging them to focus upon the various steps of innovation, e.g. taking a human centric approach and linking industry problems to the same.

The workshop was divided into Part I & II. Part I covered Creativity and Innovation Tools & Techniques, where, faculty members were given various models, processes and techniques which could be used to create a culture and habit of creativity and innovation. Easy to use SCAMPER technique for innovation was introduced and faculty members presented wide range of innovations at the end of each day. **There were more than 8 short duration innovation projects that saw 100+ innovative solutions emerge.**

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Part II focused upon Design, Design thinking & Innovation – processes and best practices from across the world. The faculty members studied and learnt about Stanford & IDEO method of innovation and then tried to customize it to Indian (their college context). 8 Case studies of top companies from around the world were covered. Here **groups of faculty members proposed more than 50 directly applicable innovations to range of problems from environment, building, human interface, products, engineering college systems (such as exam, class room, interactive teaching learning practices etc).**

Exercises, Assignments and projects covered creative techniques, design elements & principles, design thinking processes, design driven innovation processes and models. The heartening fact was that all the faculty members understood the significance of various processes, techniques, methods and documentation that goes in the innovation process. In fact minute details of how ideas have to be generated and problems identified and defined were gained through practical hands on exercises. The faculty members went with basic blue print for conducting innovation exercises with students in their respective colleges.

Workshop conducted by : International Innovation and Research Foundation (IIRF)

Mentors Prof. Rohit Swarup & Prof. Amar Gargesh for conducting such a path breaking workshop.

Faculty members participation was rewarded through joint certification GTU & IIRF.

## Note on activities of the 4 days

### Part A: Day 1 & 2

#### A. Introduction to Creativity

- Why Creativity
- What is Creativity
- How to become Creative
- Interactive Presentation

**B. Creativity Techniques**

- Lateral thinking
- Divergent Thinking
- Random Idea Generation

**C. Innovation : Tools & Techniques : SCAMPER**

1. Overview and Examples
2. Application of **SUBSTITUTE** Technique
3. Application of **COMBINE** Technique

**Day II**

4. Application of **ADAPT/MODIFY**
5. Application of **PUT TO OTHER USE/ELIMINATE**
6. Application of **REARRANGE/REVERSE**

**D. Display/Presentations and Wrap up**

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Part B: Day 3 & 4

DESIGN DRIVEN INNOVATION WORKSHOP PROGRAM

## Day I

- A. Introduction to **Design – Sekhar Mukharjee (HOD Animation, NID)**
- B. **Design Principles & Elements – Dorothy (Mentor IIRF)**
- C. **Introduction to Design, Design Thinking & Design Driven Innovation**
  - **Videos Introductions**
  - **Case Studies to bring out Design – Design Thinking – Innovation**
  - **Design Driven innovation**
- D. **Mini Project I (Application of understanding of Design, Design Thinking & Innovation)**
- E. **Stanford Model Case Study**

## Day II

- F. **Assignment II – Perfume (Synaesthesia : Multisensory approach) & Presentation**
- G. **Innovation Harvard Video Case Studies & Discussion**
- H. **IDEO process understanding**
- I. **Mini Project II : “Design Driven Innovation approach”**
- J. **Display/Presentations and Wrap up**

## Working towards an OPEN DESIGN SCHOOL and a CENTER for INDUSTRIAL DESIGN Findings & Suggestions

Enthusiasm of the faculty members can be gauged from the keen involvement and sincere effort over the 4 days (despite of it been Saturdays & Sundays). Few faculty members joined in-between on recommendations of their colleagues who attended the Part A, also, new members came on the last day hearing from their colleagues.

It was observed by our team that each member was keen to learn. At the very onset of the workshop, small informal discussions pointed out that most of the faculty members were not aware of the process,

methods, tools & techniques used to produce innovation. The role, direct applicability and resulting benefits of creativity, design & design thinking was a grey area.

This workshop paves the way for future such workshops and also creation of new age contextual project approach and material, that will directly help the students to engage design, design thinking and design driven innovation in their projects.

Views:

Faculty members shared these views upon their learning from the workshop,

- Enhancement in understanding of creativity, design, design thinking & Innovation as disciplines
- Global best practices in design thinking & innovation
- Application techniques that can be directly used in classroom to enhance student learning
- How projects could be made both challenging, interesting in a playful manner
- How other subjects could be taught using a hands on, co creation and experiential manner
- How learner centric approach could be used more to make classroom interactive
- Role that process, tools & techniques play in systematic understanding and execution of projects & assignments
- Practical tips for contribution to the innovation ecosystem directly by them and students through projects

Feedbacks from faculty members as well as their ongoing work was documented through photographs & videos (done by the GTU team), these along with ongoing discussions with Faculty members, GTU team for innovation & insights from Hon. Vice Chancellor Dr. Akshai Aggarwal, and, related exercises and projects carried out in these 4 day workshop points out to an apparent need for,

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## Working towards an OPEN DESIGN SCHOOL and a CENTER for INDUSTRIAL DESIGN

1. Faculty members' mastery & empowerment of process, methods, tools & techniques for producing innovations through college projects.
2. Mentoring for global best practices within local context of industry, college & students.
3. Sensitization, mastery and Empowerment of students with necessary process, method, tool & techniques knowhow through Virtual Design Lab & Virtual Design Clinic at the respective colleges.
4. Creativity, Design & Innovation Kits for Faculty members as resource material.
5. Common platform to share their understanding & projects using web & broadcast.

