

GTU INNOVATION COUNCIL

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Student Startup Support System (S4)	Gujarat Technological University (GTU)	GTU Innovation Council (GIC)

Report: Implementation of Design Thinking to Solve Real Life Problems

Date: 20th January 2016

Time: 5:30 pm to 7:30 pm

Venue: 131, Student Start-up Support System Co-Creation Centre, GTU Innovation Council, ACPC Building, L.D.C.E. Campus, Navrangpura, Ahmedabad-380015.

Background

GTU Innovation Council (GIC) is the 1st large scale innovation ecosystem trying continuously to bring the culture of innovation all across the university and its associated ecosystem during the past few years. Imagination is the base of innovation. GIC nurtures the soft skills and talent of the students to lead their imagination in a proper way. GIC has been designed to establish close bonding between industries, entrepreneur and students to make research and development at the University relevant to the needs of industries at national and international levels. It aims to bridge the gap between industry and academics.

Introduction

Design Wednesday, happened as a series of events on every Wednesday, which provided a platform for all the students, where they got an opportunity to develop their problem solving skills by understanding design thinking.

The agenda of the workshop was,

- For the Students to understand the importance of Design thinking.
- For the Students to learn and improve Ideation and Thinking process.
- For the students to learn, how to use Design Thinking process to solve nearby problems.

Report

Mr. Jay Shah, Student Lead of Design Wednesday, a student associate at GTU Innovation Council started the session by giving a brief overview of Design Thinking. He explained the objective behind design engineering and further inquired regarding how much knowledge did the students had regarding startups and about the activities being carried out at GTU Innovation Council to promote innovation and entrepreneurship. A power point presentation on the various phases of design thinking was carried out. One by one, each phase, such as Empathy, Ideation, Product Development, Prototyping, Customer Validation and Revalidation were explained by giving the example of the laptop for blind people.

Mr. Mitesh Rajput, a student associate at GTU Innovation Council took the session further by giving the example of the strategy used by Colgate to improve sales. In which the diameter of the tube was increased to increase the level of consumption by the customers.

Later, **Mr. Kalp Bhatt**, Research Assistant for Entrepreneurship at Gujarat Technological University gave an overview to the students regarding the various initiatives of GTU Innovation Council. He asked the students to unanimously ideate on the one major problem that the students faced every day. It turned out that every student had a major problem in common; everyone was fed-up by the mismanagement of Traffic in their city and issues related to bad traffic.

After ideation, participants provided few good solutions that included; (i) Car-pooling, (ii) dedicated personnel to manage the frequency of city buses, (iii) instead of providing challan to the people without helmets, they should be made to buy the helmet on the spot every time they ride without helmets, (iv) allocation of four-wheelers on the basis of the size of the family and irrespective of the financial capacity.

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Participants were asked to ideate on 11 different problems faced in day-to-day routine, from which they had to select any one and work on it during the entire session and understand the Empathy and Ideation phase. The 90 participants were divided into 11 different teams. Once the ideation phase got completed, participants were asked to share their ideas and solutions with others.

The solutions given by the various groups are as follows:

- The 1st group presented the **ways to improve wheel chair abilities** with solutions like, providing automation by use of arduino and controllers, use the structure similar to that of the tires of battle tanks type for ease of access over ladders, use DPTT, use navigation on handles.
- The 2nd group presented ideas on **how to connect doctors and clients**. They came up with solutions like, having a user-friendly application for android/iOS with information of hospitals such as the list of doctors, fee structure, specialty or multi-specialty etc. in a format in which, even the illiterate people can also easily understand and use the application.
- The 3rd group worked on the same idea and found solution as to have **a call center where the medical students can help the patients**, and also the visiting doctors can connect with these patients.
- The 4th group worked on the **idea to improve the ability of cell phone chargers**. They came up with solutions like using temperature sensors for heating issues, to use hot-spot for transfer of batteries.
- The 5th group found solution for the **post box system**, like to scan the posts by using barcode chips on each envelope and if any fault occurs, than use the tracking system of the post system, the efficiency can be increased by using color-code for the envelopes.
- The 6th group presented solution for **generating infinite energy**, by converting sound energy of multiple horns during traffic into electricity, converting energy of the pressure exerted on jogging track and also from the pressure exerted on the gym floor, energy generation can be done, pressure sensors can also be used on shoes.
- The 7th group found **solution for dustbin**, to create design for AMC by adding sensors and if it would be full than replacement could be done as early as possible and along with the use of air fresheners.

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- The 8th group presented solutions regarding **the voting system**, like use of barcode when out of state, voting by mobile phones by OTP.
- The 9th group presented the same solution for the post box system.
- The 10th group presented solution on **how to upgrade the water pouch box**. For example, to use solar energy for cooling, add a USB port and speakers, add wheels to use it as trolley, seating space for babies.
- The 11th group did thinking on the problems related to dustbin and found solutions like, to have **smart dustbin which can distinguish between dry and wet waste**, to use internal pressure sensors and get the garbage collected, by using vacuum pressured drainage system, somewhat similar to that in the airplanes.



Picture: Interaction with participants

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Overall Feedback from participants

It was an amazing workshop to learn how to observe problems in day to day life. After this session, our doubts are cleared regarding Design Engineering. Very excited for the next session. We are hopeful that GIC will carry out such sessions also on the entire life-cycle of startups and how to carry a startup.

Google Plus :-<https://plus.google.com/103524965676346846569/posts>

YouTube:-https://www.youtube.com/channel/UC68Q1zrro22bwx2xo_ADG1A

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