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One Day Workshop on Innovation Framework Design

Participants: UDISHA / GTU Innovation Club Co-ordinators & Training & Placement Officers (TPOs) of Degree Engineering, Diploma Engineering and MCA

Date: 7 December, 2013

Place: S4 Co-Creation Space, GTU Innovation Council

GTU Innovation Council has been continuously trying to design innovation policies based upon the feedbacks received at all three levels , at GTU Innovation Council, Sankul Level and UDISHA Club Level. The Innovation Club Co-ordinators are the direct contact points of the students at the college level and hence have the maximum exposure to the real life situation in the respective colleges. GTU Innovation Council invited Innovation Club Co-ordinators to discuss and develop futuristic innovation framework based on the IDP / UDP process during this day long deliberation. Council of Deans and Associate Deans were invited to listen to the co-created inputs of about 100 participants. Prof Akshai Aggarwal, the Hon. Vice-Chancellor, GTU VC joined the Deans to hear the presentations at the valedictory part of the day-long meeting.

EARLIER MEETINGS: Two meetings of UDISHA / GTU Innovation Club Co-ordinators & Training & Placement Officers (TPOs) had been organized on 3rd December 2011 and 5th May 2012. Earlier we had arranged Design Innovation workshops to train the faculty members who can assist their students to solve the challenges in a strategic manner. GTU Innovation Council has created a canvas based upon the innovation framework of IDP / UDP during the final year. In the early stage, the pilot testing of this framework has been validated during these Design Innovation workshops.



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Hiranmay Mahanta, MD Techpedia, shared the journey of GTU Innovation Council and insights from yearly experiments of Techpedia for creating linkages between innovation, industry and the young students. He presented some of the case studies which had been highlighted at national and international stages based upon the experiment at GTU Innovation Council. During the first half of the event, a brief discussion was done covering few of the best practices as presented by few Innovation Club Co-ordinators. Dr. Francis Xavier shared his efforts at Parul Campus on journey of IPR success by involving Innovation Club Co-ordinators, students, college authorities and other stakeholders within and outside the college. Some Innovation Club Co-ordinators shared that **the employability of their students has significantly gone up and by virtue of which the placement rate has become manifold.**



In the second part of the workshop, groups were designed comprising Innovation Club Co-ordinators from different zones and Sankuls. They were asked to discuss and suggest various necessary modifications and new process insertion which may make the innovation framework more efficient. Then after, the Co-Creation hands on workshop each team presented their suggestions and proposed framework for necessary policy intervention. The Council of Deans, Dr, N M Bhatt, Dr Sachin

Parikh, Dr Rupesh Vasani and Prof Dilip Ahir were present during the presentation of each group of Innovation Club Co-ordinators. Hon. VC GTU was also present throughout the presentation. This motivated the participants to contribute in the best possible manner. Hon. VC summarised the discussion and shared his vision in the theme of the questions raised by the participants. Based on the novelty, relevance and importance of the suggestion of the groups, the best two groups were appreciated by VC GTU and Council of Deans. Both Deans and Associate Deans shared their comments and highlighted some of their inputs which can be immediately considered as a policy instrument in the existing innovation framework. An open discussion was arranged to discuss the generic challenges and their possible solution which may add to the efficiency of IDP / UDP process. All the participants appreciated the format of the event and contributed throughout the day. They have promised to take this workshop at their respective college level to make the innovation policies based on further grass-root insights. We believe by doing so, we can sense the very bottom need of every team and stakeholder and be able to help the real need on ground in real time basis.



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8 teams were formulated to work on innovation framework model canvas as well as SWOT analysis of nine parameters covering the whole value chain. Each team gave feedbacks considering present scenario and based on the need for the futuristic policy tools.

Hon. VC shared the following points:

- a. We can have Innovation Festivals during the interval of January to April on Zonal level.
- b. Faculties should be aware of the industries around themselves and they should work to develop good industrial relationships.
- c. The academic laboratories should be the source of MSME research centres who in general cannot afford quality human resource and technology support.
- d. Co-creation facility at S4 / GTU Innovation Council will be provided for after-hours project work of students.
- e. Colleges will be encouraged to set up similar labs at their respective campuses to support their teams and in their vicinity.
- f. Provide a model CV for students to emulate/follow right from the first semester to begin the Skill Development activities.
- g. Make the classroom more interesting through active use of ALVCOM.
- h. Ask students to prepare study material for a particular chapter. Send the three best prepared materials for evaluation. Students should be given marks (internal examiner) on the basis of the work they have done.

Edited by Nisarg Mehta

After all presentation, best policy framework suggesting teams were appreciated. The overall inputs by the participating groups is included as below

Suggestions and Inputs by various groups on given Innovation Framework Model Canvas

1. Communication and Sensitization

- a. Reduce communication gap between MSMEs and academic establishments.
- b. We should create a portal for IDP / UDP; where University, industry, and faculty can communicate directly with different stakeholders. Collaboration and Co-Creation is to be encouraged via both online and offline mode.
- c. Role of UDISHA members, faculty and industry people should be pre-defined and a timeline of activity has to be designed and given to stakeholders at various levels.

2. Industrial Shodh Yatra

- a. **Document a film or presentation on Industrial Shodh Yatra and share with all pre-final year students before they start their Industrial Shodh Yatra.**
- b. **Shodh Yatra should be thoroughly planned in between 5th and 6th semester of engineering and carefully started soon after the 6th semester examinations get over for engineering students.**
- c. Industry-Academic Meets: asking industrial leaders and college authorities to meet at various places for periodic interactions with concrete goals and action agenda.
- d. Special efforts are to be made to support students for the branch whose industries are generally not found in the vicinity of the college.
- e. It has to be explored if the IDP / UDP linkages can extrapolate the possibilities so that the good students doing innovative jobs based on particular challenge of an industry can be absorbed by the same industry.

3. Review of Literature & PSAR

- a. Understanding of Literature survey and PSAR by bringing awareness amongst students and faculty before Shodh Yatra.
- b. University e-library should put up all literature about patent.
- c. GTU should provide financial assistance to nodal centres for providing access to high quality journals and research publications.

4. IDP/UDP Report Making & Presentation

- a. Periodic evaluation is to be reported in the comprehensive IDP / UDP report and originality of the content and data is to be checked.
- b. There should be a predefined format available on GTU website which students can use readily.

5. Design Thinking Approach

- a. Appropriate dissemination of knowledge through online resources.
- b. Systematic problem solving strategies and design thinking approach has to be taught to the students.
- c. From first year of engineering, students should be taught various aspects of innovation. There should be interdisciplinary research labs for students. The students should be motivated to solve industry / academic problems by scouting them.
- d. The problem solving approach is to be inculcated across all the streams right from the beginning under every subject.

6. Project Work during 7th and 8th semester of B.E.

- a. Practical efforts for solving problems should be given more weightage.
- b. Real time tracking, mentoring and hand-holding of every project should be carried out.
- c. Plagiarism should be discouraged.
- d. More time should be allotted towards the end of the project in the hand of the students so that they can carry field implementation and other necessary things.

7. Project Examination during 7th and 8th semester

- a. Evaluation parameters and objectives have to be shared well before the exam so that there is more clarity on the need and the process.
- b. Fundamental implementation, prototype making, original work, novelty and co-creation have to be judged during the project examination.
- c. The incomplete / semi-complete projects are to be encouraged to be carry-forwarded in coming semester or academic year within the same college or outside. Kho-kho and relay model of the project is to be encouraged.

8. Prototype / Design Strategy / Patentability / IPR

- a. Zone wise workshops for IPR, Design Strategy and Innovation should be arranged for faculty members. Trained faculty members will be required to train their students in their respective colleges.
- b. Novelty of the innovation is to be tracked from the beginning, special support to be provided to make them more novel, linking them to the efforts like patent clinics at GTU Innovation Council and help students file provisional and complete application for patents.
- c. Design aspects of each innovation have to be thoroughly studied and implemented.
- d. It should be encouraged to develop a minimum viable prototype MVP by the end of the project which should be tested in the lab and by the user.

9. **Exploring technology transfer/ Licensing/ Award/ Impact Study/ Future Kho-kho possibility/ Exact Benchmarking / Dissemination**
- a. Cultivate problem solving environment.
 - b. Train the faculty members about patent drafting, licensing and technology transfer.
 - c. Support M.E. / M.Tech and PhD students in such domain.
 - d. Suitable incentives and awards to be established at Innovation Club Level, Sankul Level, and at GIC Level to appreciate the best projects.
 - e. **Suitable incentives to be given to the top mentors, project guides, external mentors and appreciate them during the regular academic functions.**
 - f. Successful case studies of scouting challenges and solving them have to be documented in every branch and to be shared with all the students and faculty members in their sector.
 - g. The successful cases of patent filing, design prototype, technology transfer and entrepreneurship modules have to be reported and highlighted at University websites and respective colleges.
 - h. Insights should be drawn from these successful cases and develop new frameworks so that more and more students and faculty members can design such IDP / UDP.
 - i. Formal training is to be given to all the students and their guides in 8th semester **for mock drafting of their patents after checking novelty through PSAR** and carefully noting down the progress.
 - j. Open source innovation community is to be created by pulling together all IDPs / UDPs which can be declared as open source with consent from the teams so that a larger community can take benefit out of these collective efforts.
 - k. After protecting the IP, the successful stories can be shared in media to be highlighted so that more students and other stakeholders take a note of that.
 - l. Very carefully designed benchmarking process is to be followed so that the real effort making teams can be distinguished from the ordinary ones. These will create a differential motivation for genuine IDP / UDP makers.

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Reports of Earlier Work for GTU Innovation Clubs:

1. 11 Jan 2011: Circular for setting up UDISHA Clubs
<http://www.gtu.ac.in/circulars/11Jan/Udisha%20Club%20Circular.pdf>
2. A Report on the Progress of Udisha Clubs during 27th Apr-4th May 2011 in Colleges all over the State:
<http://www.gtu.ac.in/circulars/11May/Report%20on%20Last%20week%20activities%20of%20GTU's%20Udisha%20Clubs.pdf>
3. Udisha Clubs: creating the Summer of Innovation Agenda: Linkages between MSMEs and Academia: Report of April-May 2011:
http://www.gtu.ac.in/circulars/11May/meetings%20of%2024%20Udisha%20Clubs_30th%20April%202011.pdf .
4. Report of a meeting of Training & Placement Officers (TPOs), organized on 3rd December 2011 at http://www.gtu.ac.in/circulars/11DEC/Report_of_TPO_meet_final.pdf (The Call for the meeting is available at http://www.gtu.ac.in/inno_tpo.asp)
5. Additional Agenda _ 23 Feb 2012 – In addition to the one given on 11th Jan 2011:
<http://www.gtu.ac.in/circulars/12Feb/Circular%20of%20Agenda%20for%20Udisha%20Clubs.pdf>
6. An Integrated Training and Placement Cell (I-TAP) was set up on 23rd Feb 2012. Its Report is available at
<http://www.gtu.ac.in/circulars/ITAP%20CELL/Reports/ITAP%20meeting%20North%20Gujarat%20Ozone%20-23.02.pdf>.
7. The list of the members of its executive committee and zonal committees was announced at http://www.gtu.ac.in/ColCorner/Circular_for_ITAP.pdf.
8. Report of a meeting of UDISHA / GTU Innovation Club Co-ordinators, organized on 5th May 2012 is available at
http://www.gtu.ac.in/circulars/GTU_innovation_sankul/Udisha_Coordiantors_FDP_5th_May_2012.pdf.
9. The announcement of a One day Confluence of UDISHA Coordinators on Saturday, 7th December 2013 was made through http://www.gtu.ac.in/circulars/13Nov/30112013_01.pdf.