

BEST PRACTICE-1

Title of the Practice: Strategizing technology deployment for community needs through student training and engagement in community projects

Objectives of the Practice:

Don Bosco organizations across the globe have been training young students for life and livelihood. Therefore the VISION statement of DBIT mentions about transformation of students into SOCIALLY CONSCIOUS CITIZENS who promote sustainable technologies. To realize this vision the institute has devised a strategy to formally engage students in activities that contribute to this vision.

1. To sensitize the students to the needs of the community
2. To engage deeply with the community to understand their culture and practices and help identify their needs and their challenges
3. To learn the principles of innovative problem solving
4. To deploy latest technology for benefit of the community

The Context:

With the advent of Artificial intelligence (AI), Machine learning(ML), Internet of Things (IoT), there is a clamour amongst engineering students to learn these new age technologies and achieve a fair degree of proficiency in deploying them. It is observed that though these technologies have the ability to be inclusive and serve all sections of society there is an overwhelming tendency to use it for enhancing the comforts of the urban population. The institute took the initiative to offer a course in Development Engineering for the final year UG students of all branches to formally train them in addressing community needs through the use of technology.

The Practice:

- Students in the First Year of Engineering are taught Environmental Studies and are exposed to ecological, social and cultural issues
- They are engaged in mini-projects related to environmental issues.
- In the second year of engineering students are formally taught innovation techniques and trained to identify problems and to devise innovative and creative solutions. This course is not a part of the formal curriculum laid down by the university
- In the third year of engineering students are motivated and trained to participate in competitions like Chhatra Vishwakarms, Tata Crucible, Smart India Hackathon which all have community problem solving at their core. Students are also encouraged to select community problems as part of their final year project
- In the final year atleast 75 students opt for the elective subject of Development Engineering which focuses on understanding developmental issues and technology deployment to address the issues. Students read about organizations working in the development space and participate in presentations and in-house competitions.
- Experts are engaged to deliver talks to students, field visits are organized.
- Projects are carried out by final year students on solving community problems. These projects are exhibited during INNOVEX, the annual project competition, and the students are encouraged to convert their ideas into business proposals and start-ups.

Evidence of success:

- 100% participation of first year students in environmental projects and commendations from judges on the quality of ideas and presentation of projects
- Demonstration by 70% second year students of their ability to ideate and prepare mind-maps for product and process development
- Students winning competitions like Smart India Hackathon which demonstrates their ability to ideate, think out of the box and use technology for community issues
- At least 20%- 25% of the final year projects are related to solving community problems by deploying the latest technology.

Problems encountered

- Community projects have a long gestation period and cannot be completed as part of a year- long academic project
- Students need to have a lot of commitment and passion since there are no quick fixes for community problems
- Engaging with the community and winning over their trust is vital to working with them
- Projects need to be carried forward for a couple of years before the solutions are implemented

Resources Required

- Adequate manpower is required for surveys, sensitizing the community, monitoring the deployment and capturing the impact
- Resources are required for travel and stay with the communities
- Students may need to spend some time away from their academic classes
- Remuneration to experts to judge competitions, deliver expert talks
- Cost of field visits.

BEST PRACTICE -2

Title of the Practice: Faculty appraisal system designed to empower faculty and enhance their performance which can lead to achieving institutional goals

Objectives of the practice:

1. Have a multi- faceted approach to faculty performance appraisal
2. Align performance parameters with faculty expectations and aspirations
3. Assign adequate weightage to feedback from important stake-holders
4. Make the appraisal system empowering and enriching
5. Make the appraisal process objective and transparent
6. Set institutional benchmarks for teaching-learning
7. Assess strengths and weaknesses of the teaching-learning process

The Context:

Performance appraisal is an important aspect of any organization. The organizational culture plays an important role in defining the objectives of the organization which in turn raises expectations from its employees. In educational institutions the VISION and MISSION of the institute are equally important in framing the institutional goals and these must be shared with all stakeholders. Performance appraisal is an important tool to measure effectiveness of not only the employees but also of the various processes in the institute. Its provides indications on institutional effectiveness in achieving its long term objectives

Employees are important stakeholders in the growth and development of the institute and therefore any performance evaluation system must address their need for recognition, fairness, reward, growth and empowerment and must set aside biases and prejudices. Such an appraisal system has to be well thought out and designed by engaging with the faculty.

The Practice:

The appraisal system has three elements:

1. Faculty self-appraisal document- 70%
2. Faculty peer-review- 10%
3. Student feedback- 20%

The faculty sets long term objectives (3 years) and short term objectives for the academic year. The Road Map is defined and milestones are identified. The objectives are at 3 levels:

1. Individual
2. Departmental
3. Institutional

The objectives are reviewed and approved by the HOD and the Management

The objectives are then mapped onto the self-appraisal document. The self appraisal document has built in performance metrics and institutional benchmarks which enables the faculty to measure her performance and plan corrective actions.

Peer review is conducted twice every semester. The Peer Review process and the review format are designed in-house. The reviewer is a senior faculty who attends one or more

classes of the reviewee and assess classroom effectiveness and student engagement and provides feedback to better the performance. The review is repeated to ascertain the improvement.

Student feedback is taken twice every semester and address classroom effectiveness as well as faculty attitude.

All the above are collated and shared with the faculty and the Management who reviews the performance and suggests corrective measures, counsels the faculty, and approves rewards and recognition.

Evidence of success:

1. Faculty are able to assess their own performance and set individual benchmarks for improvement
2. Faculty have shown increased engagement with community, industry and other stakeholders
3. Marked increase in research and conference publications from faculty (nearly 50% more in 2019-20 over 2018-19)
4. Increased benchmark settings for classroom teaching (10 percentage points) and student projects
5. Greater faculty engagement in institute development

Problems encountered:

1. Removing personal biases in the feedback documents
2. Educating faculty about the efficacy of the appraisal tools
3. The appraisal process is not a one-time affair but is a year long process
4. Unable to implement appropriate reward and recognition scheme
5. Making the process dynamic and adaptable to changes in the educational ecosystem

Resources required

1. Funds for implementing a proper reward and recognition scheme
2. IT resources to make the process a part of the MIS