SNJB's Late Sau KBJ, College of Engineering, Chandwad

Academic Year 2021-22

Best Practices

BEST PRACTICE 1: Skill-based Innovative projects for societal growth & rural developmen'

A. **Objectives of the Practice:**

- **Applying theoretical knowledge to real-world scenarios:** Project activities provide an opportunity for students to apply the theoretical concepts they have learned in the classroom to practical situations.
- **Enhancing problem-solving skills:** By working on projects, students develop critical thinking and problem-solving skills, which are essential for success in the engineering field.
- **Developing teamwork and collaboration skills**: Project activities often require students to work in teams, which helps them develop essential teamwork and collaboration skills.
- **Improving communication skills:** Students have to present their ideas and findings in a clear and concise manner to their peers and instructors, which helps them improve their communication skills.
- **Fostering creativity and innovation:** Project activities provide a platform for students to think outside the box and come up with innovative solutions to societal problems.
- **Developing project management skills:** Through project activities, students learn how to manage their time, resources, and tasks effectively, which is a crucial skill for any engineering project.
- **Enhancing employability:** Project activities provide students with practical experience that can enhance their employability and make them more attractive to potential employers.

B. **The Context:**

The context that required the initiation of an engineering project involves identifying a problem or opportunity that requires a solution or improvement. Encouraging a research culture, critical and creative thinking, and sensitivity towards social and environmental issues, to find optimal solutions using technology, is a challenging task. Implementing this practice requires a team of Heads of Department, enthusiastic faculty, a Training and Placement officer, and interaction with industry experts and researchers. The initial challenge is identifying the social and industrial live problem statement itself. However, engineering always presents unexpected and challenging problems that require solutions within the constraints of time, human and financial resources. Providing students with real-life experience through innovative projects poses many challenges during the implementation of such projects.

C. The Practice:

Project work has been carried out in three major phases to improve the quality of students' projects. Projects group formation and guide allocation, Project Topic approval, and continuous monitoring.

The project group formation process starts at the end of the 6th semester. Students are allowed to form their project groups as per the University guidelines. Students are permitted to select the project of their interest, and project guides are allotted to the student's expertise. If the students cannot form groups or select the project topic, the project coordinator helps them. Projects are selected by considering the department's vision, mission, and program outcomes. Students are provided information like environment, safety, ethics, cost, type (application, product, research, review, etc.), and standards. Students are motivated to choose actual live problems/issues from society, and industry and faculties extend the student's technical support. If students are doing an industry project, they need to consult with an internal and industrial guide. The students were guided throughout their year and encouraged to convert their projects to patents, and products and participate in Project Competitions, and publications in conferences and journals if any.

A senior faculty member is appointed as Project coordinator by the Head of the department, responsible for planning, scheduling, executing, and evaluating all the activities related to the student project work. The project work manual and project diary are maintained by students and closely checked by the project guide and project coordinator for continuous monitoring. Project reviews are conducted based on Rubrics for Project Evaluation in a year to check students' progress work. At the end of the second semester of BE, all project groups are required to present the actual demonstration of the working model or prototype. The examiner's panel appointed by the department evaluates the quality of the project as per the designed rubrics.

D. Evidence of Success:

Our Projects are successive winners of the SMART India Hackathon, AICTE Chatra Vishwakarma Award, Avishkar Project Competitions, etc. The summary of Awards is shown in the table below.

AY	No of Teams selected at college level	Number of students Participated	Teams in Regional	Teams in Final	Winner /runner up	Cash prize/ Remark	Papers Published	Patents Filed/ Published
2021-22	48	191	2	9	2	105100	20	1
2020-21	22	86	10	10	1	5100	16	1
2019-20	44	202	14	7	5	218000	22	3
2018-19	25	128	6	13	9	141000	2	2
2017-18	35	117	10	20	15	57000	21	12
Total	**174**	**724**	**42**	**59**	**32**	**526200**	**81**	**19**

E. Problems Encountered
- Changing the teaching-learning process within the technical education system is difficult.
- Obtaining support from the industry to identify real-time problems, and evaluate and validate innovative solutions.
- Training of faculty to acquire domain-specific skills and providing opportunities for exposure to advanced technology laboratories present.
- Obtaining financial resources to create facilities for experimentation and innovative projects.
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F. Resources Required
- Research materials
- Software
- Hardware
- Laboratory access
- Funding
- Mentorship
- Collaboration tools
- Legal and regulatory compliance
- Project management skills
- Presentation skills

BEST PRACTICE 2 : Holistic Development Cell

SNJB, COE, started Holistic Development Cell which aims for an overall development of our SNJB COE &, MBA students. Holistic development essentially means the development of intellectual, mental, physical, emotional, and social abilities in students, so that they are capable of facing the demands and challenges of life. These abilities are vitally important for the success in personal & professional ,social fields of work.A Holistic Development Cell instills curiosity and develops better communication and social skills, developing psychological, social, and emotional growth and Make learning natural, engaging, joyful, effective, and appealing. This HDC is completely planned, coordinated and executed by SNJB COE, and the detailed study material is maintained and updated on faculty Blog.

Program objectives and Goals:

1. Develop mental, physical, emotional and spiritual wellbeing of the students.

2. Provide international exposure to the students.

3. Develop entrepreneurial skills and continuously work on students' progression.

4. Imbibe the importance of ethics in their life.

5. Develop Netizen and create better citizens.

6. Bridge the gap between Industry and institute.

7. Inculcate a sense of Sustainability amongst the students.

8. Provide a platform for developing and showcasing students' talent.

9. Enhance Soft skills of the students.