

Best Practices

1. Innovative Mini Projects

2. Objectives of the Practice

i) Subject wise mini projects:

Through the notion of doing mini projects on all the subjects of study was developed during the online mode of teaching learning scenario to inculcate a research bend of minds in the students. The ideas of subject wise-mini projects were given with proper instructions and the learners understood the relevance of their major topics of study in connection with their real life. The purpose of making the students understand the application of the topics in that subject better got its result.

ii) Technical Project

The “Technical Club” established in 2019, provides a common platform for interdisciplinary technical activities as well as opportunities to identify problems and provide engineering solutions. The club aims to technically develop and build 21st century success skills such as critical thinking, problem solving, communication, collaboration, creativity/innovation in the various fields of Engineering & Technology. The motive of the Club is to make the participants understand the objective of an engineer. The authorities recommended students to collaborate with their team members and they carried out the projects successfully without much exertion. Students were able to collaborate with their team members, learnt problem solving, applied creative thinking, and also were able to increase their self-confidence .

iii) Vacation mini project

The notion of doing vacation mini projects was generated with a motive to give the students to gain momentum in their journey towards campus placement. The expectation of the recruiter for an industry ready candidate with sufficient practical knowledge along with the knowledge of the basics motivated the departments to impart sufficient skills and support to add value to their curriculum and the assignment of technical projects during the first year is the latest achievement.

3. Contextual features or challenging issues that needed to be addressed in designing and implementing this practice

The lockdown scenario posed a major constraint in collecting relevant material for implementing extraordinary ideas and as result the learners had to adapt to comparatively easy ideas for doing their projects. Physical presence of the facilitator was also missing during the course of time and that was also a major difficulty to achieve 100% perfection.

4. The Practice

i) Subject wise mini projects:

This activity based learning helped to induce interest in students about the subject and that made them learn the subject easily and with better understanding. A single student would have done a minimum of twelve mini projects in this connection in one semester.

ii) Technical Project

FAB Lab established in 2019 provides facilities to start-up with innovative projects for the First year B.E./ B. Tech students, we initiated this through our Branch specific Technical Club. The requirements facilitated through FAB Lab would encourage the students to experience the process of creation from ideations to prototyping. Knowledge and skill gained doing the project through FAB Lab will provide students with a broad understanding of their project work which would indeed be the stepping stone for them to do advanced projects .

The requirement to the project team through FabLab for the academic year 2020-2021 was not feasible due to the lockdown declared in view of Covid 19. Still students were asked to buy relevant materials and get the money reimbursed.

iii) Vacation mini project

Students were able to build on their research skills and deepen their learning skills beyond memorization. Such individual projects were enhanced and students were encouraged to apply for patents.

Technical mini project is a group project and vacation mini project is an individual project. Technical mini project is core based and vacation mini project was core, interdisciplinary, general science topic too. For the successful completion, faculties from the first year and from the respective departments were allotted as mentors.

5. Evidence of Success

Many vacation mini-projects were shortlisted and enhanced to Technical Papers out of which numerous projects were presented as papers in national and international conferences. Students from various branches got the best paper awards also. Some of the mini projects were enhanced to apply for patents.

6. Problems Encountered and Resources Required

A few students were showing much interest and few others are reluctant towards their commitment. So driving them and making them to complete their task needed extra attention, patience and passion from the faculty.