7.2 - Best Practices

Best practice-I

1. **Title of the Practice:**

   Innovative Research through Centre of Excellence.

2. **Objectives of the Practice:**

   A center of excellence is a facility equipped with the tools needed to improve Students abilities. Through industry-relevant projects that make use of these facilities and industry expertise, these centers give faculties and students plenty of chance to learn about the most recent practices in the sector and advance their knowledge. As a revenue-generating approach, the center offers to improve the skills of technicians who are already working in the business. To improve relations between the institute and the industry, efforts are underway to establish other such centers.

3. **Context:**

   The Center of Excellence is in charge of creating, putting into practice, and sharing best sourcing techniques and resources to encourage operational excellence among recent graduates. Students have access to tools to work on real-time projects in addition to the curriculum. CoE is crucial since it greatly improves an organization's capacity to reach or surpass the objectives that the center promotes. Success is inevitable when a company has shared learning, governance, support structure, guidance, and metrics. The center of excellence's presence and efficient operation are crucial tools for achieving particular outcomes in a wide range of fields.

4. **The Practice:**

   It is a regular Research Practice of the Institute to prepare analytical and experimental models of the contemporary problems in the society to search for amenable and affordable solutions. To Conduct the webinars, workshops, boot camps, seminars, and technical events.

5. **Evidence of Success:**

The CoE is frequently the group taking the lead in investigating and implementing new technological methods, tools, or procedures. In GNIT Center of Excellence students have been developed products under the guidance of Faculty members. For example in Mechanical Department they developrd GO kart EV & CV."Elevating Kitchen Comfort: Introducing Product Development as CHIMNEY**.** Engineered to combine sleek design with advanced functionality, this chimney ensures a cleaner, healthier kitchen environment by efficiently removing smoke and odors. Experience the perfect blend of style and performance with our latest innovation. Students Participated and they won first prize in National level GO-CART Championship.

6. **Problems Encountered:**

To finish the product development, funding is needed. The institute is partially sponsoring, but more funding is needed to support additional events. The second is that the academic calendar has a strict timetable that includes both exams and regular coursework. Therefore, it is being considered to cover activities such as product development and internships.

Best Practice – II

1. **Title of the Practice**: 'Industry Institute Interaction'
2. **Objectives of the Practice:** Through Memorandums of Understanding, Centers of Excellence, sponsored projects, industrial visits, and in-plant training programs for staff and students, the primary goal is to build and preserve connections with the business community. Industry competition has intensified since globalization and the openness of the Indian economy to the outside world.
3. **The Context:**

In order to prepare the workforce of the highest caliber in science and technology by instilling the different skills needed by the industry, the Industry-Institute Interaction should be planned to last for a longer period of time. This will help to advance the general economic and social growth of the country.

4. **The Practice:** Industry competition has intensified since globalization and the openness of the Indian economy to the outside world. They now turn to engineering colleges to find solutions to their engineering difficulties.

- Organizing workshops on emerging technologies for faculty members and students
- Students enthusiastically participate/ publish their ideas in National/International Conferences and Journals.
- Expert/Guest lectures are frequently conducted for students by Industry Professionals to impart knowledge of the latest trends in Industries. Technical events are organized to improve the professional and technical skills of students to enhance their employability.
- For the overall development of students, various programs are conducted like personality development, career counseling, technical competitions, industry training programs, industrial visits, add on courses etc.

5. Evidence of Success: In addition to academics, GNIT places a strong emphasis on research and development enrichment to raise faculty and student expertise. It serves as a link and eliminate the gap between college academics and Industry, encourages research-based teaching and learning, and assists students in developing creative thinking in their profession.

6. Problems Encountered : Industry expects students to work full time for sponsored projects which is not feasible due to academic schedules. Sometimes it is a hurdle to call speakers from prominent companies for expert sessions because of their busy schedules.

Best Practice – III

1. Title of the Practice:

Encouraging faculty members to conduct research in order to advance technological development

2. Objectives of the Practice:

- To raise the standard of the teaching-learning Methodology

- To improve the caliber of UG and PG projects. Students and faculties are encouraging to submit work for conferences and peer-reviewed international and national publications

- To get research projects from many funding bodies. To engage in cooperative projects and consulting for sustained engagement with academia and business

3. The Context:

Research is an endless pursuit of information that can be applied to advance society. The modern world is changing quickly, creating opportunities for new research projects aimed at improving people's quality of life. The most important factor now is to meet the increasing demands and wants. Continuous research and development of new projects and goods has become essential to meet these needs. This inspired the college to increase its R&D efforts, which emphasize a number of distinct fields and promote interdisciplinary study

4. The Practice Teaching and Research must go together:

With this aim, research and teaching learning process is promoted by the college in the following ways and means:

- Sponsoring the registration price and TA/DA with paid leave in order to sponsor seminars, conferences, workshops, orientation courses, refresher courses, such as STTPs, FDPs, SDPs, etc.
- Monetary incentives, such as paying the registration price for journal and conference publications and TA/DA for technical paper presentations at various national and internationalconferences
- Upgrading research facilities and laboratories
- Exposure to global knowledge through the hosting of conferences, seminars, workshops, invited lectures, etc.

5. Evidence of Success:

The teaching and learning process has greatly improved as a result of the faculty members exposure to the most recent developments in their field of study. They can also assist new faculty members in starting their own research. Many professors were accepted into Ph.D. programs at different universities. Both undergraduate and graduate student projects have improved in quality, and the number of student publications has increased.

6. Problems Encountered and Resources Required:

In order to enable teachers to teach advanced subjects that aid in their research, more undergraduate courses have been added recently for attempting to find experienced and competent educators to cover the gap between industry and academics. There should be more cooperation between industry institutes. To raise the caliber of research, the college has partnered with a few industries.