National Assessment and Accreditation Council (NAAC)Annual Quality Assurance Report (AQAR) For the Session 2020-21

7.2.1 – Describe at least two institutional best practices

Best Practice Case 1

1. Title of the Practice:
Faculty, staff & Student Reward & Motivation Scheme

2. **Objectives of the practice**:
This scheme was launched for smooth running of the college functioning and to improve the academic performance standard of the institute. The scheme encourages faculty and students to contribute in a positive and competitive environment for the betterment of academic and non-academic activities

3. The context:
While preparing for a global career, students should strive to acquire global competencies and innovative skills in their undergraduate studies with the best academic results. PIET has always been known to maintain its quality in academics and has always provided a platform to all the faculty members, staff and students by which they can enhance their skills in multiple directions.

4. **The Practice:** In Indian higher education system, the teaching faculty members serve as an asset to the institute and their role makes it possible for the organisation to lead towards the growth and development. It applies to both the faculty members and students so that they may work hard for the achievement of desired goals.

- **Transmission and Protective Measures under Pandemic of Covid-19:** Preparing for a global career, students should strive to acquire global competencies and innovative skills in their undergraduate studies with the best academic results during pandemic of Covid-19. Institute have increased the number of buses to maintain the social distancing and distributed the safety accessories like masks, sanitizers etc. Institute organized awareness session for protection of Covid-19. Institute provided internet allowance for smooth running of regular theory classes and practical classes during online mode of academics. The institute also provided various facilities regarding online study platform (Zoom, MS-teams, Meet etc.) to the faculty members and other staff members. Management also provided Glass board system for taking virtual classes for better academic understanding.

- **CRISP:** Apart from various motivational policies, Institute has launched a research based scheme from 2019-20 onwards, called as **Consultancy & Research Incentive Scheme of Poornima.** In the light of the changing economic scenario, government policies and Poornima's priorities, the Institute considers sponsored research and industrial consultancy projects as an important tool for broadening the experience base of the Institute community to the sponsoring agencies to benefit from scientific research work in the Institute. And as a tool to contribute to the country and economic development. Therefore, as a matter of policy, the Institute encourages its faculty members to undertake research and consultancy work as a measure of scientific/technical collaboration with external agencies.

- **Kalanidhi**: It is the annual prize distribution function which is organized every year to honor and give awards to the toppers of various category, branch and subject who have excelled in the field of academics and non-academics. The students are awarded with Gold, Silver and Bronze medals and Certificates of Appreciation respectively, but due to pandemic, it was not organized in this session. We will certainly organize this activity in coming next session 2021-22.

- **Department Day:** To encourage students in various fields of academic and non-academic excellence, Department Day is celebrated every year but it was not celebrated in 2020-21 due to Pandemic. We will positively arrange Department Day in coming next session 2021-22.

- **Performance Incentive Scheme for Faculty & Technical Staff and Incentive Policy for Awards and Recognition**: In order to motivate the faculty members, the institute provides incentives to faculty members who receive State, National and International recognition/awards from Government bodies, Industry and NGO's in the form of salary increments, certificates and cash prize. Faculty members are graded A/B/C by the Management on the basis of Self Appraisal process and motivated to do much better in future. This policy motivates the faculty member and staff a lot which results in the form of paper publication and patent by students as well as by faculty members.

- **Technical Publication Incentive Scheme:** The Management of Poornima provides "Technical Publications Incentive Scheme" for faculty members. Under this scheme the publications must be related to broad academic disciplines relevant to subjects being taught by the faculty member or other area relevant areas. All papers are published renowned journals of Scopus Indexed, Springer, UGC care journals etc.

- **Participation in Conference/Seminar/Workshop/Training/Symposia:** Management of Poornima is pleased to allow faculty members for participation in conference/ seminar/ workshop/ trainings/ symposia etc. The guidelines are aimed to provide opportunity to all Faculty & Staff members to interact at international and national level for the overall growth of individual and of Institute.

- **Welfare Schemes**: In spite of all such facilities, we also provide welfare schemes like Transportation, Dress Code, Subsidized Accommodation, Group Insurance Scheme, Travel Grant etc.

5. **Evidences of success**:

After launching the incentive scheme for awarding students and faculty members, results are witnessed as 5-6% improvement as compared to previous results and university result. This leads further to retain the faculty members and balance the quality ratio. By such motivational schemes, our students always prove their excellence in academics, sports and technical events at national and international platform.

6. Problems Encountered and Resources Required:

Participation of individual faculty and students would strengthen the interaction with wide spectrum of industries and academics in a prearranged manner. For implementing this practice, Institute provided funding, travelling allowances etc. to be in association with the industries. Each and every year we were trying to do many practices in college in an enthusiastic way, but since 2020 we weren't able to do some practices in offline mode due to Pandemic situation as Covid changed the way of normal life of functioning.

Best Practice Case-2

1. Title of the practice

Project Oriented Labs & Non syllabus Projects

2. Objectives of the practice

To Gain hands on practice: With the advent of informational society, the integration of technology and practical knowledge in education has aroused the dire need to promote it among the engineering students. The overall objective of engineering can be explored with practical experiences or hands on practice of real world and its issues related to what they create.

To Focus on Problem Solving at Society level: This is absolutely necessary as engineering is all about creating something, which has societal benefits. Unless you know the society and its challenges, how anyone can you produce something that's required?

To spotlight on Real World problem: To prepare the students to solve/work on the real world/practical/theoretical problems involving concept of science and engineering. The overall objective of engineering can be possible if engineering students are not taught practical experiences of real world and its issues related to what they create.

3. The Context- Developing and maintaining undergraduate research programs benefits students, faculty mentors, and the institute. Incorporating a research component along with projects enables students to develop independent critical thinking skills along with oral and written communication skills. The research process impacts valuable learning objectives that have lasting influence as undergraduates prepare for professional service. Every student in turn of this NSP program benefits from presentations and publications that serve to increase visibility in the scientific community. Whether projects are derived through student-generated or mentor-generated means, students benefit from completion of exposure to the hypothesis-driven scientific method.

4. The Practice

Project Oriented Lab (R & D lab): We have one Non Syllabus Project lab session in every semester which is 100% project oriented lab. In this lab, credit is given to the student only when he or she is able to convert his idea into a workable project. It is the responsibility of the concerned Faculty/Course Coordinator to monitor the performance of the students in that laboratory on a weekly basis and provide regular feedback for the same.

- **Hackathon**: Poornima Hackathon 2021 was organized by PIET which was sponsored by Rajasthan Technical University under the scheme of TEQIP III. The theme of Poornima Hackathon 2021 was "Role of Engineers in Innovation and Technological Advancement for village upliftment". The event played a vital role in harnessing creativity, fuelling imagination and funneling for self-reliant India, improving governance and empowering citizens. A Hackathon at Poornima provides an opportunity to create functioning the software or hardware by the end of the event. Poornima Hackathon was continued from several hours to three days giving the participants a chance to interact, to learn and to recreate among the intellectuals. Some of the benefits of Poornima Hackathon were observed as follows:

- Provides exposure to real world challenges and opportunities to work on them
- Experience of Industrial mentorship
- An Opportunity to interact and learn
- Opportunity to implement the projects for the sake of launching in market scenario
- Facilitates the benchmarking in execution and planning within team members.

- **Startup Cell (Institute Innovation Council):** PIET has established a startup cell with the name as Institute Innovation Council. The Institute Innovation council is registered with the Ministry of Education's Innovation Cell approved by AICTE and MHRD. Startup Cell's major role is to engage large number of faculty, students and staff in various innovation and entrepreneurship related activities such as ideation, Problem solving, Proof of Concept development, Design Thinking, IPR, project handling and management at Pre-incubation/Incubation stage, etc., so that innovation and entrepreneurship ecosystem gets established and stabilized in HEIs. The Startup Cell model is designed to address the existing challenges/issues in HEIs such as less numbers, occasional and unplanned Innovation & Entrepreneurship (I&E) activities organized in HEIs with low involvement of top leadership, lack of coherence and absence of synergy in resource mobilization, deployment and underutilization of creative potential of youths as major barrier for vibrant I&E ecosystem to emerge from HEIs.

Major Focus of Startup Cell

- To create a vibrant local innovation ecosystem.
- Start-up/ entrepreneurship supporting Mechanism in HEIs.
- Prepare institute for Atal Ranking of Institutions on Innovation Achievements Framewor (ARIIA).
- Establish a Function Ecosystem for Scouting Ideas and Pre-incubation of Ideas.
- Develop better Cognitive Ability amongst Technology Students.

Functions of Startup Cell

- To conduct various innovation and entrepreneurship-related activities prescribed by Central MIC in time bounded fashion.
- Identify and reward innovations and share success stories.
- Organize periodic workshops/ seminars/ interactions with entrepreneurs, investors, professionals and create a mentor pool for student innovators.
- Network with peers and national entrepreneurship development organizations.
- Create an Institution's Innovation portal to highlight innovative projects carried out by institution's faculty and students.
- Organize Hackathons, idea competition, mini-challenges etc with the involvement of industries.

- **Toycathon**: Poornima Toycathon 2020-21 aimed a unique opportunity for Students, Teachers, Start-ups and Toy experts/professionals in India to submit their innovative toys/games concepts and win a large number of prizes worth Rs. 50 lakhs. It was to bring together all the junior level, senior level and start up professional level. Toycathon is being organized to develop India as the global toy manufacturing hub. The launch of Toycathon today is an endeavour by the government to create an ecosystem for the domestic toy industry and the local manufacturers, tapping the untapped resources and utilizing their potential. Approx. 30 Registrations are allotted to our Centre from which 12 are digital and rest of them are physical. Registrations were received from cities like Rajasthan, Madhya Pradesh, Telangana etc. out of which 50% registrations were from out of Rajasthan, 30% registrations were from out of Rajasthan. PIET glad to inform that 12 digital teams are reported for this event. The Event was organized on Microsoft team Platform. On 22 June, 2021 the inauguration ceremony took place in which Mr. Kunj Tiwari was the Chief Guest and Mr. Lokesh Sharma was the guest of honour. They all had motivated all participants with their words. For Evaluations, PIET has conducted four rounds; every round has mentoring and elimination rounds. Total 12 teams were evaluated in four rounds. some important point of Toycathon:

- Toy/Games concepts based on Indian civilization, heritage, culture, mythology, history, Ethos, technology, ethnicity, national heroes and important events,

- Inculcate positive behaviour and good values(‘Sanskaar’)
- Toys for specially-abled/ Divyanga children
- Boosting physical and mental fitness, Using eco-friendly, and recycled material
- Focus on promoting Vedic Mathematics
- Encouraging national unity and respecting the cultural diversity.
- Supporting missions like Swatch Bharat, Beti Bachao Beti Padhao, Environment Conservation, Climate Change, Digital India, Skill India, Ek Bharat Shrestha Bharat.
- Rediscovering/redesigning traditional Indian toys
- Toys for pedagogy (for teaching students ‘difficult concepts in Math, Science, Languages, Social Sciences, etc.)
- Design should confine to basic toy guidelines issued by Govt. of India. Click the link to View the Gazette Notification

➢ **Non Syllabus Project:** Engineering doesn't mean passing exams, learning all theory and earning a degree. Degrees have no meaning without practical applications, whatever they are learning. For that purpose we incorporate non curricular activity in the regular curriculum so that our students can apply practical knowledge. It also helps to show his creativity and innovative mind. Apart from this entire student also learns teamwork, documentation and gathering experiences that help them in final year projects.

➢ **Project Exhibition:** It is an important event of PIET to create awareness about the contemporary technological landscape. Online Project display was organized at PIET in which students presented their technical projects and models to know about their application.

5. Evidences of success:

- Quality publication in Scopus Journal, Springer, UGC care journals etc.
- Even few IPR have been registered and every year 5-6 Entrepreneurs are also being evolved.

6. Problems encountered and resources required: Developing projects enhance the skills of our students, but the need for innovative project on the latest technologies and industry support to provide key issues needs to be addressed. The innovation of the students has earned the institute many IPRs, but the gap is huge. Developing projects enhance the skills of our students, but the need for innovative project on the latest technologies and industry support to provide key issues needs to be addressed. Infrastructure scaling is also a major factor with the latest developing technologies. The process of setting both short term and long term goals for a project needs to be efficient and well thought out. New technology will often need to be employed to maintain the unique nature of projects.