IPS ACADEMY
INSTITUTE OF ENGINEERING & SCIENCE
(A UGC Autonomous Institute, Affiliated to RGPV Bhopal)

BEST PRACTICE-1

1. Title of the Practice: Cultivating Youth Engagement in Community and Environmental Awareness

2. Objectives of the Practice

- Encourage youth to develop a strong connection with their local communities, understanding the needs, challenges, and opportunities present within them.
- Increase environmental consciousness about the importance of sustainable practices, conservation, and the impact of individual and collective actions on the environment.
- Empower youth to take an active role in community and environmental initiatives, providing them with the knowledge, skills, and resources needed to contribute meaningfully.
- Promote collaboration and teamwork among young participants, fostering a sense of collective responsibility and the ability to work together to address community and environmental issues.

3. The Context

Institute cultivated youth engagement in community and environmental awareness within the students. It involves creating meaningful and interactive experiences that not only educate but also inspire young individuals to take an active role in their communities and care for the environment. The students of the institute come from diverse backgrounds with varying levels of prior knowledge, interests, and experiences related to community and environmental issues. It was challenging to maintain the momentum and enthusiasm for community and environmental initiatives over the long term amongst the students. Low initial interest or awareness among students was also challenging issue to implement this practice.

4. **The Practice**

NCC- National Cadet Corps (NCC) training is imparted in 9 MP Senior Division Battalion of IPS Academy, Institute of Engineering & Science to volunteer students from IPS group of Institutions who enroll as cadets. Institutional training is the mainstay of NCC training and it is conducted at Institute by Associate NCC Officers and Armed Forces personnel with "Unity and Discipline" as motto for the NCC. Institute of Engineering & Science has been allotted a senior division of 56 cadets under fully self finance scheme of NCC 9 MP Battalion Indore from July 2022.

The NCC aims at developing character, comradeship, discipline, and a secular outlook, the spirit of adventure and ideals of selfless service amongst young citizens. Further, it aims at creating a pool of organized, trained and motivated youth with leadership qualities in all walks of life, who will serve the Nation regardless of which career they choose. Needless to say, the NCC also provides an environment conducive to motivating young Indians to join the armed forces.

NSS-The National Service Scheme (NSS) is a voluntary public service program aimed at developing the personality and character of students through community service. The NSS motto is "Not Me, But You," emphasizing the spirit of selfless service to the community. NSS engages in various community service projects, including environmental conservation, health awareness campaigns, literacy programs, and rural development initiatives. Apart from special camps, NSS volunteers engage in regular activities throughout the academic year, involving both direct and indirect community service.

Rural Outreach- AICTE is supporting village by using technical knowledge of engineers. Their objective is to involve engineering graduates and leverage their technical know-how for betterment of villages. It involves water and electricity conservation, low-cost housing, skilling rural youth, and sanitation related activities among others. The Rural Outreach coordinator ensures that the Rural Outreach Workers have access to resources and networks necessary to perform their role. They manage the Rural Outreach students and work with them to gather data for evaluation. They engage with service providers and stakeholders to develop relationships and limit barriers for community members to access services.

Through Rural Outreach Program students go to villages and identify the problems of villagers. Then they prepare a report regarding the problems of villagers and best solution of the problems. Then they submit their report to the institution and institution forward the summery of the report to the government for making the policies to solve the problems.

Unnat Bharat Abhiyan- The Mission of Unnat Bharat Abhiyan is to enable higher educational institutions to work with the people of rural India in identifying development challenges and evolving appropriate solutions for accelerating sustainable growth. Under the Unnat Bharat Abhiyan scheme, IPS Academy, Institute of Engineering and Science have adopted 5 villages: Kudana, Kattkya, Magarkheda, Solsinda, Potlod. The institute UBA team, consisting of students and faculty, took part in the survey of the villages and after closely studying the lives of the villagers, found out the real problems in the life of the villagers. The team met with villagers and conducted house-to-house surveys. They find out that in most of the villages were problems with road connectivity, transport, pure drinking water, garbage and sanitation.

Environmental Awareness- Institute has incorporated courses focuses on the environmental & Sustainability into the curriculum such as Environmental Studies, Energy & Environmental Engineering, Power Electronics Converters for Renewable Energy, Smart Grid Technology, Solar & Wind Energy, Electrical Energy Conservation and Auditing, Air and Noise Pollution Control, Integrated Waste management, Industrial Pollution Abatement, Water Resources Engineering etc. The institute can ensure that the environmental courses not only provide theoretical knowledge but also equip students with the skills and mindset needed to contribute positively to environmental sustainability. Institute is also actively organizing activities to enhance environmental awareness. These activities include the National workshops, FDPs, Expert lectures, Tree Plantation Drives, Clean-Up Campaigns etc.

5. Evidence of Success

The above mentioned programs engaged numerous students and fostered their holistic development and leadership skills, benefiting their careers. Students also actively took part in charitable initiatives, such as Swachh Bharat Abhiyan under Puneet Sagar Scheme, Nutrition & Health Problems in villages, Water and waste management, Sanitation, World Environmental Day Celebration & Eye checkup camp in association with SRJ Netralaya etc. The institute was involved in activities like Ek Bharat Shresth Bharat (Student Exchange) - Face

Art Culture of Nagaland & Madhya Pradesh (Singing, Speech, Art/Sketch, Poetry, and Photography), Awareness Workshop on "I&E Challenges in cyber security by Dr. Varun Kapoor, IPS ADGP, MP & Mission Amrit Sarovar-Jal Dharohar Sanrakshan.

Institute organized following activities for enhancing the environmental awareness amongst the students:

- Five Days National Workshop On "Save Water Save Life: Recent Trends and Advancement in Water Management and its Treatment (August 21st -25th, 2023)

- One week National Workshop on "Waste to wealth-Recent Trends and Technological advancement in Treatment of waste water" Sponsored by SERB during (July 17th-22nd, 2023)

- Environmental Awareness Program on World Environmental Day (June 05th, 2023)

- Five Days National Workshop on "Carbon Neutrality for Sustainable Development: Challenges and Advances" (March 13th -17^{th,} 2023)

- Five Days National Workshop on Contemporary Techno-economics Advancement in Waste Mitigation (January 9th-13th, 2023)

- One week high end workshop on early diagnosis of oral cancer biomarkars of saliva in oral cancer- A non invasive diagnosis of oral cancer in a microfludic platform (August 22nd - 28th 2022)

- World Water Day is celebrated by Civil Engineering Department of IPS Academy, Institute of Engineering and Science. Theme of WWD 2023 "Accelerating the change to solve the water and sanitation crisis" (March 22nd, 2023)

6. Problems Encountered and Resources Required

Many young students not initially see the relevance or importance of community involvement or environmental issues. They more focused on immediate concerns or interests. Youth often have busy schedules with academics, extracurricular activities, and social commitments, making it challenging to allocate time for community and environmental initiatives. In a fast-paced digital age, holding the attention of young people long enough to engage them in meaningful community or environmental activities can be a challenge.

Resources Required:
- Educational Materials
- Training Programs
- Technology and Communication Tools
- Transportation

- Funding

- Volunteers and Mentors

- Partnerships and Collaborations

- Evaluation and Monitoring Tools

BEST PRACTICE-2

1. Title of the Practice: Fostering a Culture of Entrepreneurship and Innovation

2. Objectives of the Practice

- To create and strengthen the culture of Innovation and entrepreneurship ecosystem

- To foster innovative ideas, inculcate Entrepreneurship spirit and to promote Start-Ups

- To engage, encourage and channel the creative energy and entrepreneurial potential of youths to build innovations and enterprises.

- To provide a platform for nurturing innovative ideas and translating them into viable products and services

- To create a sustainable innovation ecosystem within the institution and the community

- To improve the involvement of students & faculty in research & innovative activities

3. The Context

IPS Academy, Institute of Engineering & Science is a highly esteemed autonomous institute that prioritizes academic excellence and all-round development of its students, situated in a rapidly evolving socio-economic landscape. The institute offers a diverse range of undergraduate and postgraduate programs to students from different backgrounds. The institute recognizes the significance of innovation and entrepreneurship in preparing students for the future and accordingly established an Institution's Innovation Council (IIC) in 2018, following the guidelines of the Ministry of Education, Government of India, and an Innovation and Entrepreneurship Development Centre (IEDC) in 2012 with the support of the National Science & Technology Entrepreneurship Development Board (NSTEDB), Department of Science & Technology (DST), Government of India, New Delhi.

4. The Practice

Ministry of Education, Govt. of India has established its "Innovation Cell" at IPS Academy, Institute of Engineering & Science, Indore for Technical Education to systematically foster the culture of Innovation. The IIC at the Institute was ranked among the top 25 performers at the National level during the session 2018-19 and the top 3 performers in the Central India zone during the session 2019- 20. The IIC is a Mentor to five IICs in the central India region. IIC aims to create and strengthen the culture of Innovation and entrepreneurship ecosystem. To promote and support student innovations and sustainable startups from academic institutions. To engage, encourage and channel the creative energy and entrepreneurial potential of Indian youths to build innovations and enterprises. Under IIC, activities like awareness of IPR, EACs, Bootstrap Camps, leadership talks, copyright training, Industrial Visit, Ideas, and POCs startup camps are organized.

5. Evidence of Success

Institute is recognized as Band Performer in Atal Ranking of Institutions on Innovation Achievements (ARIIA 21) by Ministry of Education (MoE), Govt. of India. The IIC was felicitated as top 25 performing IICs among 950 Institutions by MHRD GoI at AICTE New Delhi by the Hon'ble Union Minister for HRD Hon'ble Minister of State for HRD for its performance in the session 2018-19. The student and faculty team registered many marvelous achievements like setting up start-ups, filling IPs, etc. One among them is winning the prestigious Smart India Hackathon 2019 under the software category. The IIC was felicitated as the top three best- performing IICs in Central India for its performance during the session 2019-20.

AICTE Appointed the IIC to mentor five IICs of the CRO Region:
1. LD College of Engineering (Gujarat)
2. School of Planning & Architecture, SPA (MP)
3. VITM (MP)
4. Symbiosis University of Applied Sciences (MP)
5. SISTech (MP)

The IIC successfully completed the Mentor-Mentee program of AICTE, and the Mentee Institutes improved their grading of Innovation activities. The students and faculty team of the institute were runner-up in the prestigious Smart India Hackathon-2022 under the

software category. Due to the innovation activities, the institute got permission to set up the AICTE IDEA Lab. Five start-ups are incubated under the IIC, and many more are in the pipeline.

The IEDC Cell of institute conducted various programs on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship. The following programs were organized to develop entrepreneurship skills in students and to familiarize them with various procedures required in converting an idea into a successful business.

- Workshop on design thinking (February 15th, 2023)
- Expert Talk on Technology readiness level (February 10th, 2023)
- Workshop on Design Thinking, Critical Thinking and Innovation Design (January 31st, 2023)
- Session on Driving Innovation with matlab (October 14th, 2022)
- Motivation towards Innovation with view of Environment by Padma Shri Janak Palta McGilligan (October 12th, 2022)
- Workshop on Entrepreneurship and Innovation as Career Opportunity Startup "Ink Ideas" (October 04th, 2022)
- Pre-Conclave Talks on Youth involvement in Innovation and Leadership (September 27th, 2022)
- Entrepreneurship Awareness Program (August 3rd, 2022)

6. **Problems Encountered and Resources Required**

Limited Exposure: Many students have lack exposure to entrepreneurship and innovation concepts, particularly in traditional educational settings that prioritize academic subjects over practical skills and real-world problem-solving.

Fear of Failure: Fear of failure prevented students from taking risks and pursuing entrepreneurial ventures. Overcoming this fear and instilling resilience was crucial for fostering an entrepreneurial mindset.

Lack of Role Models: Without visible role models or mentors who have successfully navigated the entrepreneurial journey, students struggle to envision themselves as entrepreneurs or innovators.

Resource Constraints: Students faced resource constraints, such as funding, workspace, and access to technology and mentorship, which impede their ability to develop and test innovative ideas.

Curriculum Limitations: Traditional education systems are not prioritizing entrepreneurship and innovation in their curriculum, focusing instead on rote learning and standardized testing. Integrating entrepreneurship education into the curriculum can be challenging due to competing priorities and rigid academic structure.