BEST PRACTICE-1: PROMOTION OF RESEARCH CULTURE

1. Title of the practice

Promotion of research culture

2. Goal

- To engage in innovative, high impact and leading edge research within and across disciplines
- To provide intellectually inspiring, academically challenging and research oriented culture.
- To act as a gateway and forum for research and scholarship.

3. The context

The University believes that research plays an important role in innovation-driven global society and that research has become the key to prosperity and social well-being. Research needs nurturing and support as most of the faculty members are actively engaged in teaching students at an undergraduate and postgraduate level without sufficient time as well as direction to pursue research activities. The limitation of time and completely occupied in a focused manner in a highly specialized area limits interdisciplinary approach and thinking process. This necessitates the need for the measures for encouragement and promotion of research.

4. The practice

The University considering Research as an important facet for its Vision and Mission in providing quality education to the students has taken several steps to strengthen its research initiatives. To provide academic freedom and conductive environment for research the University has made following well defined policies.

- Research Promotion Policy
- Intellectual Properties Right Policy
- Rules for Consultancy Services
- Code of Ethics for Academic Integrity and Plagiarism

Various steps have been introduced and executed to encourage research activities and strengthen research culture in the University. Some of them are as under

- The admissions to M.Phil/Ph.D. programmes are made on the basis of competitive entrance examination conducted in a fair and transparent manner to select meritorious students for research.
- Besides JRF, SRF and Project Fellowships the University provides 2 to 3 University research scholarships to students of every department in order of merit every year.
- Regular conduct of inter-disciplinary seminars, workshops, and symposia with national and international experts with a focus on building problem solving, critical thinking and learning - to - learn skills.
- Best thesis award is also being given on the basis of the cumulative impact factor of the papers published out of the student's Ph.D. thesis work.
- The University grants duty / academic/ study leaves and financial assistance liberally to the teachers as and when required for pursuing higher research and for participating in conferences / symposia/ workshops organized in India as well as abroad.

- Maharshi Dayanand University is having state of the art facilities like Vivekananda Central Library, Central Instrumental Laboratory, Animal House, and Green House to promote advance research.
- The University subscribes sufficient number of research journals including e-Journals of different specializations. Faculty members also have access to a large number of on-line journals.
- Research is promoted by providing seed money to the faculty members out of Radha Krishnan foundation fund. For smooth running of the research projects simple and logical guidelines have been made for project purchases.

5. Evidence of Success

The success of research promotion is evidenced by

- The University ranked 76 NIRF Survey 2019 organized by Ministry of Human Resources Development (HRD), Govt. of India.
- Development of students who are selfdirected, self-disciplined, self-monitored and self-corrective with rigorous standards of excellence.
- Research papers published by the research students and faculty members of the department in refereed Journals indexed in reputed databases including WoS/Scopus/Pub Med/ICI and also in the journals having impact factors indicate that research standards of the University are reasonably good.
- The faculty members received financial support for number of research projects from various funding agencies

6. **Problems Encountered and Resources Required:**

The issues/problems encountered during the programme

- Motivation of faculty members pursuing academic research to undertake industry and application oriented projects.
- Revenue generation by consultancy and IPR generation

BEST PRACTICE – 2: STUDENT CENTRIC APPROACH IN TEACHING LEARNING PROCESS

1. **Title of the practice**

Student centric approach in teaching learning process

2. Objectives of the practice

- To motivate the students to learn the perspective and to achieve their learning objectives individually.
- To enhance problem solving skills of the students to bring them with innovative and competent in their respective field.

3. The context

The educational system as a whole is one which has experienced significant changes in the last two decades. Traditional educational models have been very teacher-centered, with teachers providing direct instruction with little to no room for student engagement opportunities or empowerment in their own learning. Over the last ten years, the traditional classroom model has changed dramatically with a shift in the model of content delivery. One of the most prominent themes education currently is student-centered instruction, and teachers today utilize a myriad of student-centered learning strategies to equip, prepare, and produce students capable of success after completion of their degree.

4. The Practice

A student-centered approach varies greatly from the traditional teacher-centered instructional model. In a student-centered approach to learning, classrooms move from direct instruction to a more community-driven environment, one which supports student empowerment, conversations, critical thinking skills, independence, and problem-solving techniques. In student-centered classrooms, the change begins with the teacher. Student-centered learning strategies do require and involve students in the overall planning process, implementation, and assessments. The several strategies for adopted for implementing a student-centered classroom are:

- **Admonishing the students to think** i.e. Small group discussion and peer instruction. Students think about the answer to a question posed by the teacher, and then discuss the question among each other. The faculty member then selects students to explain the consensus to the class.
- **Interactive lecture demonstrations:** Students are allowed to make predictions about the outcome of a classroom demonstration. They then observe the experiment or demonstration, describe the results, and discuss and reflect on the observed outcome.
- **Concept mapping:** Students are allowed to create a visual representation (similar to a flow chart) that identifies and shows the interconnections among various ideas related to a specific topic or problem.
- **Problem-based learning:** Students work in groups to solve complex, multifaceted, and realistic problems, researching and learning necessary background material as needed.
- **Problem sets in groups:** Students work on problem sets in teams, and submit one set of solutions per team.

- **Random calling:** The teacher poses the question to the class, and remains silent for ten seconds to allow everyone to think through an answer. After a sufficient pause (or perhaps after peer instruction), the teacher selects a student at random to share thoughts about the answer. Then, the teacher calls on another student at random to comment on the first student's response.

5. Evidence of Success

The courses who practiced the innovative teaching process determined its effectiveness through student results, entry level assessment of the following academic year.

6. **Problems Encountered and Resources Required:**

The issues/problems encountered during the programme

- Rural background of students