

## Best Practice 1 of ARSD College

### Title of the Practice: Research-Oriented Teaching-Learning Environment

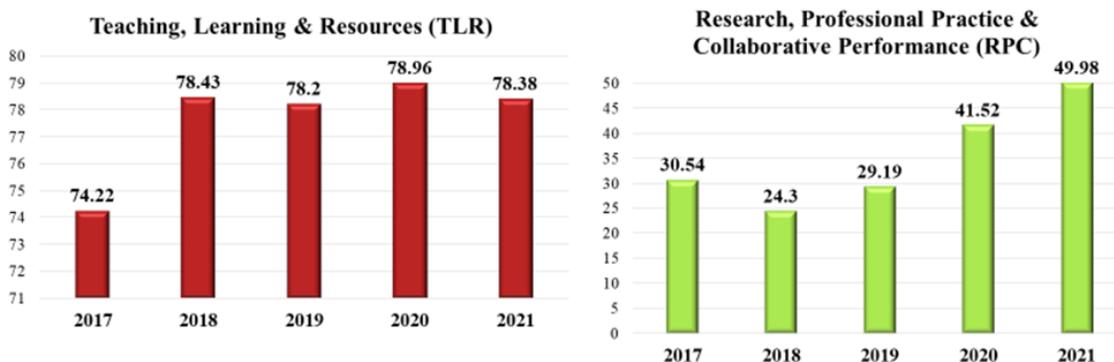
#### Objective and Context:

ARSD has a strong undergraduate research culture that has been nurtured by the premium placed on Quality Education, Holistic Learning, and Academic Excellence in the College's Vision and Mission. The college aims to provide a conducive research environment and facilitates optimum utilization of institutional capabilities to encourage research initiatives by the students and the faculty and promote out-of-the-box thinking and practical innovations to real world problems.

#### An Overview of the Practice:

To maintain an edge in research and innovation, and to reinforce Research-Oriented Teaching-Learning Environment in the College efforts are underway at the levels of the College, faculty members and the students. An analysis of the College's performance in the NIRF surveys from 2017-21 in terms of TLR and RPC parameters aptly demonstrates both the consistently high scores achieved and College's investment in research and professional practice.

#### • COLLEGE'S TLR & RPC (NIRF-MHRD) •



#### Initiatives undertaken by the College:

- The IQAC of the College has launched the In-house Interdisciplinary Research and Innovation Projects Scheme, PRABODH, to encourage undergraduate research in the

College and to inculcate innovative thinking in the students, providing minor funding support to encourage research in areas that go beyond the curriculum boundaries. Rs. 1.5 crores would be invested and its returns utilized for funding research projects in College.

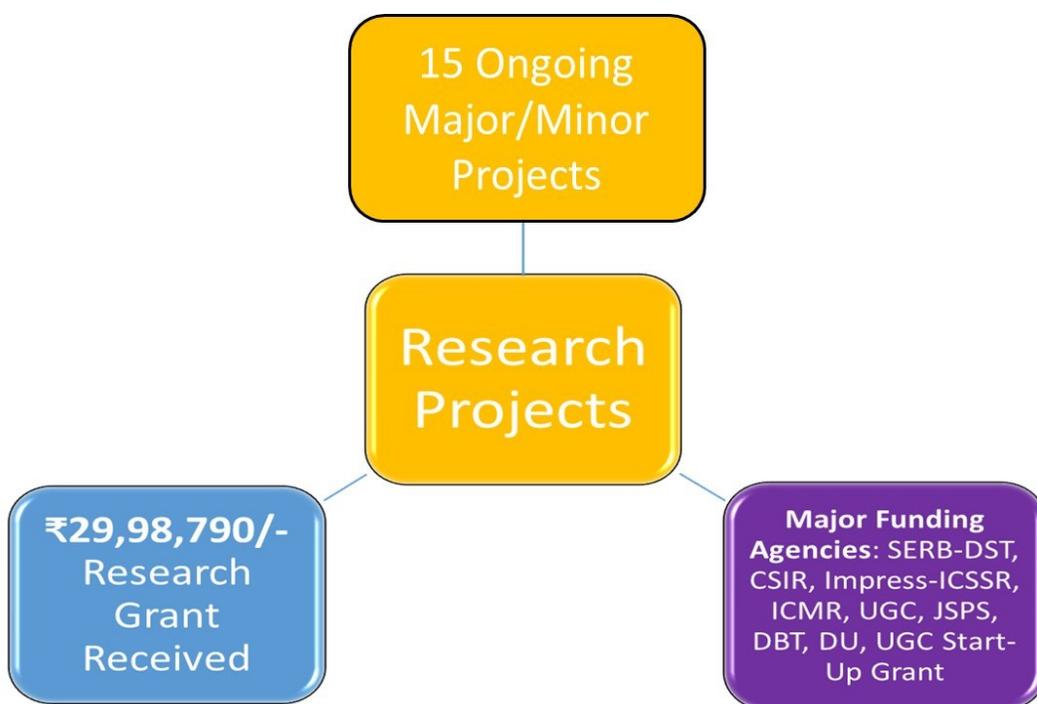
- The College is set to launch an interdisciplinary Central Instrumentation Facility (CIF) inside the campus for the students, researchers and faculty members. The aim of the CIF is to provide a conducive research environment and optimized utilization of advanced infrastructure so as to enhance the quality of analysis and subsequent research outcomes. This will also provide modern analytical equipment to stakeholders so that they can keep pace with research taking place globally and publish their research findings in reputed journals.
- The Vidya Vistar (V2) Scheme has been initiated by the University of Delhi for developing academic cooperative bonding between colleges of the University with the colleges of fellow universities, situated in remote areas of the country. The College has signed MoUs with two colleges in Uttarakhand under the Scheme, promoting capacity building and institutional collaboration.
- ARSD college has signed an MoU with Netaji Subhas University of Technology and Shri Ramswaroop Memorial University, Barabanki to foster the research environment and provide more opportunities for students as well as faculty for enhancing their technical skills and research temperament. The MoU includes access to research instruments and other enabled facilities, exchange visits by faculty members for academic and research purposes, joint certified courses and joint collaboration in International/National Seminar/Workshops/Conferences.
- The college regularly organizes FDPs/Workshops/Seminars/Refresher Courses and national and international conferences on contemporary issues for the benefit of both the students and the faculty. 1 FDP, 2 refreshers, 1 international conference, 3 national seminars and over 300 national and international webinars, have been organized during the last one year.
  - Two 2-week long Refresher Courses were organized. A Two-week Online Interdisciplinary Refresher Course (Bilingual) on “Cinema, Society & Education,” was organized from 6-19 April 2021, in collaboration with Teaching Learning Centre, Ramanujan College under the aegis of PMMMNMTT, MHRD. An online, bilingual Refresher course titled “The Quintessential Educator-Challenges and Opportunities in the Changing World” was organized by the College in collaboration with Teaching

Learning Centre, Ramanujan College under aegis of PMMMNMTT, MHRD from 23 August to 6 September 2021.

- An International Conference on “Advanced Functional Materials and Devices” (AFMD-2021) was organized by the Department of Physics and IQAC of the College from 3-5 March 2021 via online mode. AFMD 2021 was enriched by 20 invited lectures from eminent researchers and 94 abstracts for oral and poster presentations were received from academics and researchers around the world. The proceedings were published by Springer.

### Faculty Contributions to Research:

- Our faculty members are involved actively in research writings and research projects funded by agencies like UGC, DST-SERB, ICSSR, CSIR, DBT etc. 324 research articles, 44 books/chapters in books and papers in national/ international conference proceedings were published by the faculty members during the last year.



- Twenty three of our faculty members are guiding 71 research scholars at PhD/MPhil levels.
- Prof. Sunita Bhagat (Chemistry) has a patent in “A process for Chemical Synthesis of a Herbal Antidiabetic compound isolated from E. Jambolana”, July 2020 (Patent Application No: PCT 201911030346).

- Faculty members in an effort to regularly update themselves in their respective fields actively participate in FDPs, Refresher and Orientation Courses, Workshops, Conferences, Symposia and Webinars/Seminars.

### **Students' Participation in Research:**

- Students are trained to think critically, develop their lateral thinking abilities and hone their academic writing skills. Led by a team of highly motivated and research-oriented faculty members, over 200 undergraduate students have been involved in research activities at Star DBT and at departmental/ college societies level and major/minor projects.
- In its conscious endeavor to encourage research acumen amongst undergraduate students of the College, the IQAC has ensured their active involvement in its newly launched In-house Interdisciplinary Research and Innovation Scheme, PRABODH.
- 31 students have published papers in seminars and conferences and published 16 articles in scholarly journals under the mentorship of faculty advisors.

### **Problems encountered:**

- Adequate Funding
- Infrastructural requirements
- Collaborations

### **Disruptions due to pandemic**

- Resources required:
- Research and professional training personnel
- Monetary resources
- Administrative and infrastructural support