



**HINDU COLLEGE
UNIVERSITY OF DELHI**

BEST PRACTICE 1

ANVESHAN: A HOLISTIC LEARNING- RESEARCH ECOSYSTEM



INDEX

S.No.	Title	Page No.
1	Title of the Practice	3
2	Objective	3
3	Context	3
4	The Practice	4-9
5	Evidence of Success	10
6	Problems Encountered and Resources Required	10
7	Future Plans	10
8	Sample Pictures: The Learning-Research Ecosystem of Hindu College	11-17

Title of the Practice:

Anveshan: A Holistic Learning- Research Ecosystem

Objective:

Hindu College has adopted a principled approach to promote the kind of learning that is multifaceted and multidisciplinary and enables capacity-building for the students to take on intellectual and professional challenges in the contemporary world order. Providing a holistic exposure to academics and research, the college offers boundless opportunities for imbibing the essentials of critical thinking, professional rigour and exemplary and ethical research. This is done through a combination of specifically designed courses and first-rate mentoring as well as providing access to world-class research infrastructure to the pupils. The stated objective of this practice is to ensure that the knowledge students gain in the institution is not restricted to the curriculum alone, and that both a mind-set and a skillset for research and innovation is inculcated in them.

Context

India's young scholars exhibit extraordinary intellect and capabilities, which need to be done justice to, for them to emerge as trailblazers in their chosen line of work and study. Under the National Education Policy (NEP) 2020 and its emphasis on research at the undergraduate and the postgraduate levels, the college sees a great opportunity in the Government of India's investment in research and learning. In the same vein, the National Institutional Ranking Framework (NIRF) has acknowledged research and professional practices as one of the five parameters of academic excellence. The college, prioritizing its own legacy of path breaking accomplishments and its long association with research practices, has enabled expert guidance, infrastructural support and the possibility of collaborative research with the faculty members.

The Practice

1. Hindu College has, for decades, been at the forefront of conducting and promoting research and has always boasted of well-stocked research laboratories, libraries and faculty-advised student-run cells for learning and discussion.
2. The college was selected by MHRD for setting up a research cell titled the “Hindu Innovation Council” where student-teacher teams work with new ideas that require support for being turned into prototypes, thereby encouraging a local innovation ecosystem.
3. A newly-built Research Centre is an initiative to bolster multidisciplinary research and enable such projects in the future. Called the Relaxo Research Centre for Interdisciplinary Studies, the Centre has a number of well-equipped laboratories, as well as a multimedia studio. These include:
 - i. Fragrances and Flavors Research lab
 - ii. Polymer Research Lab
 - iii. Academia-Industry Collaboration Strategy Lab
 - iv. Design and Innovation Lab
 - v. E-waste Reuse and Recycle Skill Lab
 - vi. Drosophila Research lab
 - vii. Material Characterization Lab
 - viii. Centre for Green Policy
 - ix. Multimedia Studio
 - x. GNCN Research Lab I
 - xi. GNCN Research Lab II
 - xii. GNCN Research Lab III
 - xiii. Himalayan Study Circle
 - xiv. Synthesis Lab
 - xv. Center for Environment Studies
 - xvi. Life Sciences Research Lab
 - xvii. Material Synthesis Lab
 - xviii. Language Lab
 - xix. Research cell for Banking and Finance
 - xx. Centre for Gender Studies
 - xxi. The Social and Ethnographic Research Lab
 - xxii. Itihas Tarangini: The centre for Historical Research
4. The college has a unique ‘Faculty-student Undergraduate Interdisciplinary Innovation Project Scheme’, which was started in 2019 under which 16 projects have been sanctioned amounting to Rs. 36,87,735, entirely funded by the college management.
5. The faculty members are distinguished academics who have produced significant scholarship in their respective fields, in the form of journal articles, chapters in edited volumes and books. Many professors are not only accomplished academicians and scholars but are also working as dedicated researchers who are involved in several major projects sponsored by government agencies, such as DRDO, the Asian Development Bank, ICSSR, etc.

6. The entire college campus, including the hostel, is WiFi enabled and ICT facility is provided to the library and to the classrooms. A lot of classrooms have been ICT-enabled so that audio-visual techniques can be used for teaching. Extensive use of multimedia teaching tools, internet content from reliable sites, MOOCS, Swayam, e-Paathshala, and other online portals for supplementing conventional curriculum delivery are being utilized.
7. During the pandemic, but also after it, the College organized and continues to organize a number of seminars, conferences, panel discussions, and workshops in the hybrid or online mode.
8. The college also offers value-added courses to build global competencies which will make the students assets for the workforce, while enhancing their critical skills. To this end, the college offers foreign language courses in collaboration with reputed entities such as Alliance Française de Delhi, Goethe Institute and Instituto Cervantes as well as unique value-added certificate courses, painstakingly crafted by the faculty members. Most of the value-added courses are offered in the blended mode—offline for those who can attend these courses on campus and online, for those who cannot, in tandem with the college's prioritizing of accessible education.
9. To promote collaborative research and innovation, the College has entered into partnerships with other eminent institutions to foster an exchange of resources, skills, human resources, and ideas. The following is a list of such undertakings:
 - Memorandum of Understanding between Hindu College and Philanthropist-cum-Alumnus Shri Raj Kumar Bhargava for donation of a sum of Rs. 100 lakhs for the award of Scholarship to undergraduate students at Hindu College who may be studying either History or any other social science subject such as, Political Science, Sociology, Economics or Commerce.
 - Memorandum of Understanding between Hindu College and Whitireia Community Polytechnic Limited and Wellington Institute of Technology Limited (WandW) to establish programmes of all projects and exchange and collaboration in areas of mutual interest and benefit.
 - Memorandum of Understanding between Hindu College and NBCC (India) Limited to provide financial assistance for a sum of Rs. 1,00,00,000/- for purchase of equipment and furniture required for Inter Disciplinary Research Projects at Hindu College.
 - Memorandum of Understanding between Hindu College and Sangneria Foundation for Health & Education for making a new Auditorium situated at the Academic building.

- Memorandum of Understanding between Hindu College and Sangneria Foundation for Health & Education for construction work of science block.
- Memorandum of Understanding between Hindu College and Ultra International for equipment/instruments to be placed in the laboratory of Hindu College for Research and uses of faculty, staff and students of the College.
- Memorandum of Understanding between Hindu College and Shriram Institute for Industrial Research to collaborate for joint projects in the areas of Material Science, Analytical Sciences, Toxicology, Drug & Pharma, Food and Farm and Environmental Science.
- Memorandum of Understanding between Hindu College and Lynchburg College (USA) in Academic and Cultural exchange programmes aimed at promoting scholarly activities and international understanding.
- Memorandum of Understanding between Hindu College and King's College London to establish and co-curricular collaboration.
- Memorandum of Understanding between Hindu College, University of Delhi and North Kamrup College, Gauhati University, Assam, under the aegis of Vidya Vistar Scheme of University of Delhi.
- Memorandum of Understanding between Hindu College, University of Delhi and Dorjee Khandu government College, Rajiv Gandhi University, Arunachal Pradesh, under the aegis of Vidya Vistar Scheme of University of Delhi.
- Memorandum of Understanding between Hindu College and Maharani Lakshmi Bai College, Village Bhiwani Rohilla, Balsmand Road, Distt. Hisar for supporting extension and outreach activities.
- Instituted a scheme of Research Fellowship in the name of "Dr. B.M. Bhatia Memorial Research Fellowship by generating a corpus fund of Rs. 29,04,000/- .from the donation made by Hindu College alumnus.
- Sponsorship sanctioned by Bank of Maharashtra for a sum of Rs. 25 lakhs for establishing Research Cell for Banking & Finance. The Cell in addition to general research will also provide service to the industry for finding solution to specific issues being faced by any particular Bank or industry in general.
- Going Global Partnerships Grant was awarded to Hindu College, along with Green Chemistry Centre of Excellence, York University, and University of Ladakh, by the British Council.

10. The College also offered a number of Add-On courses in collaboration with other institutes/ organizations. The following are a few examples:

- Add on course on “Programming in Python” in collaboration with IIT Bombay – Dr. Pragati Ashdhir
- Add on course on “Business Analytics ; Introductory course using R in collaboration with BSE Institute Ltd. – Dr. Debasree Goswami
- Add on course on “Computational Chemistry in collaboration with Department of Physics Stockholm University Sweden, Physics group Bhabha Atomic Research Centre & Department of Chemistry J.V. College, Baraut, U.P. – Dr. Geetika Bhalla and Dr. Devanshi Magoo.
- Add on course on “Introduction to Digital Content and Audio Visual Production” in collaboration with DIMTP workshop.- Dr. Shalini Suryanaryan.

11. The College instituted a dedicated Research Advisory Council consisting of eminent and renowned experts from various fields. Following is a list of members of the Council:

External Members:

1	Mr Atul Punj	Managing Director Punj Lloyd Ltd.
2	Ms Bhuvana Nageshwaran	Director F & F Ultra International Ltd.
3	Mr Ramesh Kumar Dua	Director Relaxo Footwear Ltd.
4	Mr Rajesh Mehra	CMD Jaquar & Company Private Limited
5	Prof. Alok Dhawan	Scientist-Director, Centre of Biomedical Research,
6	Prof Anil Tripathi	Director Institute of Science, Banaras Hindu University.
7	Dr Anjan Ray	Director CSIR -Indian Institute of Petroleum Dehradun.
8	Mr Rajesh Relan	Former Country Head MetLife Insurance
9	Dr. Pankaj Mittal	Secretary General Association of Indian Universities (AIU)
10	Prof. Arvind Panagariya	Vice Chairman, Niti Aayog, Government of India
11	Prof Rajesh Chadha	Senior Fellow Centre for Social and Economic Progress.

12	Prof K P Chinda	Former Principal, Keshav Mahavidyalaya
13	Prof M M Sharma	Professor Emritus (Mathematics) Atlanta USA
14	Prof. R K Sharma	Former Professor Department of Chemistry University of Delhi & Director, Research Centre
15	Prof Dinesh Mohan	Professor School of Environmental Sciences Jawaharlal Nehru University.
16	Prof R. M. Mehra	Professor Emeritus (Electronics) Sharda University
17	Prof Arvind Gupta	Professor in Computers and Former Director, NIC
18	Mr Mukul Mudgal	Former Chief Justice Punjab & Haryana High Court
19	Dr Lalit Bhasin	Senior Advocate, Bhasin & Co.
20	Mr Raj Bhargava	Former Home Secretary, Government of India.
21	Mr Vinod Rai	Former CAG of India
22	Mr. Gautam Gambhir	Cricketer and Member of Parliament
23	Mr Gursharan Singh	Secretary General Paralympic Association of India
24	Dr B. Venkatesh	Professor Tata Institute of Social Sciences
25	Prof V S Chauhan	Former Chairman, UGC

Internal Members:

1	Dr Ashok Mittal	Member, Governing Body
2	Prof Anju Srivastava	Principal
3	Prof Reena Jain	Vice Principal
4	Prof Shalini Suryanarayan	Director, IQAC
5	Prof Rameshewar Rai	Hindi Department
6	Dr Archana Verma	History Department
7	Dr Pragati Ashdhir	Physics Department
8	Dr Achla P. Tandon	Sociology Department
9	Dr Debashree Goswami	Statistics Department
10	Dr Lalit Kumar	Physics Department
11	Dr Talim Akhtar	Political Science Department
12	Dr Varunendra Singh Rawat	Zoology Department

12. The stated objectives of the Research Advisory Council are:

- Developing and enhancing the institution's research culture
- Building out and improving research infrastructure
- Encouragement for faculty members to conduct research in their fields of specialisation and across disciplines
- The safeguarding, exploitation, and patenting of the institute's intellectual property
- Conducting consulting services for research and development
- Direction, oversight, and support for research initiatives sponsored by the institution, government, and non-governmental organisations
- Research grants and start-up funds
- Checking for compliance with the code of ethics for research
- Research-related complaint resolution
- Support for new fields of study and research
- Building collaborations and investigating funding options with businesses and research institutions

Evidence of Success

1. Value-Added courses are much sought-after, and the number of students registering their interest in them goes up every time they are offered.
2. Students' curricular work has also started reflecting insights and knowledge gained from these courses.
3. Student feedback has always proved these courses to have been successful in achieving their outcomes.
4. The Asian Undergraduate Summit was a glorious triumph, with the college hosting international students as well as our delegates participating in the legs of the summit conducted at universities across Asia.
5. More Memorandums of Understanding and collaborations are underway with other esteemed institutions.

Problems Encountered and Resources Required

1. Collaboration with external institutes and agencies often raises bureaucratic bottlenecks
2. There is always a monetary requirement. Funding directly affects the quality of resource-persons and the time that can be devoted to an intensive course.
3. Engaging with additional courses requires work beyond class-hours, which can sometimes be challenging for both students and faculty.

Future Plans

1. The College plans to initiate a dedicated Skill Hub, to up-skill and motivate the current generations of students towards innovation and research, and to equip them to be able to manifest their own ideas in the form of entrepreneurship and start-ups.
2. The College also plans to more regularly organize Summer Camps focussing on research and innovation, as well as to start vocational courses to enhance students' skillsets.
3. More Add-On courses and Value Added Courses would be offered, with a thrust on multidisciplinary research.
4. The College is actively seeking more Higher Education Institutions for collaboration and partnership.
5. The College will seek more robust avenues of funding and sponsorship.

THE PRACTICE, IN PRACTICE: THE LEARNING-RESEARCH ECOSYSTEM OF HINDU COLLEGE



**Meeting of the Research
Advisory Council**



GREEN CHEMISTRY NETWORK CENTER (GCNC) Activities

Green Chemistry Network Centre (GCNC) was established in Delhi University under the recommendation of a panel of world leaders headed by Professor Paul Anastas (known as father of Green Chemistry) with aims to:



- Build a Green Chemistry Network
- Prepare and disseminate the GC Material
- Design trainings
- Take up Green Chemistry Research Projects (CSIR, UGC, DST, DBT, INDUSTRY)
- Setting up of GCNC Laboratory (Ministry of Textiles)

IUPAC CHEMRAWN GCI-DEN GRANT



Vidya Vistar Scheme

E-Launch on 25 April 2022

Distinguished Chief Guest

Shri Pema Khandu

Honourable CM of Arunachal Pradesh





MOU with Maharani Laxmibai College Hisar

- Opportunities for cultural immersion
- Online courses for their students
- Joint entrepreneurship and skill development project
- Uplifting rural women

हिंदू कॉलेज व महारानी लक्ष्मीबाई कॉलेज के बीच एमओयू

दिल्ली, 22 अक्टूबर, हिंदीर- महारानी लक्ष्मीबाई कॉलेज में हिंदू कॉलेज को आमंत्रित कर और श्रीमान के नेतृत्व में एक कार्यक्रम में हिंदू कॉलेज और महारानी लक्ष्मीबाई कॉलेज के बीच एक एमओयू पर हस्ताक्षर किए गए। यह एमओयू हिंदू कॉलेज के अध्यक्ष डॉ. विनय कुमार और महारानी लक्ष्मीबाई कॉलेज के अध्यक्ष डॉ. राजेश कुमार के बीच हस्ताक्षर किया गया।



एमओयू के तहत, दोनों कॉलेजों के बीच एक संयुक्त प्रयास होगा, जिसमें छात्रों को एक-दूसरे के परिसरों में भ्रमण करने का अवसर होगा। यह एमओयू दोनों कॉलेजों के बीच एक संयुक्त प्रयास होगा, जिसमें छात्रों को एक-दूसरे के परिसरों में भ्रमण करने का अवसर होगा।



Going Global Partnerships Grant



Exploratory Grant - Awarded by British Council to Green Chemistry Centre of Excellence, York University, Hindu College, University of Delhi, Green Chemistry Network Centre, University of Delhi and University of Ladakh



Department of Chemistry

Green & Sustainable Chemistry Education Today
for a Better tomorrow

Going Global Partnerships Grant

Outreach collaborative effort by UK and India

Green Chemistry

Teacher's Training

- ❖ Green Chemistry Education for a Sustainable Tomorrow through Going Global Partnership Grant funded by British Council: Outreach Programme for strengthening transnational education.
- ❖ Yusuf Hamied inspirational teacher's training program.
- ❖ Green chemistry awareness in schools.

Department of Physics

Warli Art

Gold Extraction

Recycling & Reuse of e-waste

- ❖ e-waste: Recycling & Reuse.
- ❖ Workshops and Training Sessions will be organised for teachers and students from schools with limited infrastructure facilities and exposure.
- ❖ Revival of Warli art and encourage students for startups

E-WASTE REUSE, RECYCLE & SKILL CENTRE HINDU COLLEGE

E-Waste to Useful products

Bringing the dead laptop back to life!

Making variable power supply from E-wasted LED tubelights

Repairing & decorating E-wasted table lamps

E-WASTE SKILL CENTRE



Hindu College Innovation Council and Start Up Cell

Promotes Innovation and Entrepreneurship Activities



UVC- Disinfectant Machine patented in 2022; certified by SRI and DRDO



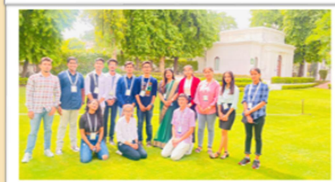
MOU with IIT, DELHI



- IIT Scholars under Prime Minister Research Fellowship (PMRF) Scheme mentored by Hindu College Faculty
- Programme Coordinator: Dr. Pragati Ashdhir
- Round 1 (July-Dec 2022): 23 PMRF Scholars
- Round 2 (Jan-June 2023): 22 PMRF Scholars



Going Global Partnership



DBT STAR COLLEGE SCHEME



GRANT OF: 82 LACS

PARTICIPATING DEPARTMENTS
BOTANY, CHEMISTRY, PHYSICS,
ZOOLOGY

ACTIVITIES:
EXTENSION, OUTREACH,
INTERNSHIPS, WORKSHOPS,
SEMINARS, POPULAR LECTURES,
PROJECTS, INTERNSHIPS

BENEFICIARIES: 1200 STUDENTS



Let's all meet and contemplate Online
in
INTERNATIONAL CONFERENCE
on
**ENVIRONMENT, WATER, AGRICULTURE, SUSTAINABILITY
AND HEALTH (EWASH-2020): EXPANDING OUR VISION POST COVID-19**
&
2nd Annual Meet of STE

Organized by



SAVE THE ENVIRONMENT

A Society for Research Awareness and Social Development

19 to 20 December, 2020

Invited Dignitaries

Chief Guest



Padma Shri Prof. Bimal K. Roy
Chairperson, National Statistical Commission

Guest of Honour



Mr. Vijaypal Baghel
Eminent Environmentalist
Renowned 'Green Man of India'

Chief Guest - Valedictory



Shri Sanjeev K Varshney
Head, International Cooperation (Bilateral)
Department of Science and Technology
Technology Bhavan, New Mehrauli Road
New Delhi

Co-organized by



CSIR-NEERI
Delhi Zonal Laboratory (DZL)



The Royal Society of Chemistry
North India



**Environment and Social
Development Association (ESDA), Delhi**



Hindu College
University of Delhi, Delhi

Sponsored by



NABARD

**GAUR
SURGICALS**