

Best Practices

- 1.Saving Energy and Environment using Non-Conventional Methods.**
- 2.Talent Scholarship Expedition (TSE)**
- 3.Improving Research skills of Students by Performing in Innovative Small Projects**

**Saving Energy and Environment
using Non-Conventional Methods.**

BEST PRACTICE

1 TITLE OF PRACTICE:

Saving Energy and Environment using Non-Conventional Methods.

2 OBJECTIVES OF THE PRACTICE:

The overarching objectives of Shri Ram College's Environmental Stewardship and Green Campus Initiative are to:

1. Use non-conventional resources to develop energy for the use in the college and save energy using various awareness programmes.
2. Establish a Baseline: Systematically assess existing environmental conditions and resource consumption patterns on campus.
3. Promote Sustainability: Implement and enhance practices related to water and energy conservation, waste management, and green infrastructure.
4. Generate Awareness: Foster a deep understanding of environmental issues and sustainability principles among students, faculty, and staff.
5. Encourage Participation: Promote active engagement in environmental conservation through participatory auditing and community initiatives.
6. Serve as a Model: Document and disseminate best practices to inspire and guide other educational institutions towards environmental excellence and contribute to regional and national sustainability endeavours.

3 THE CONTEXT:

In an era marked by rapid urbanization, economic development, and escalating environmental and ecological crises, higher educational institutions bear a critical responsibility to address these challenges. Shri Ram College, situated in Muzaffarnagar, a region experiencing significant developmental pressures, recognized the imperative to lead by example. The National Assessment and Accreditation Council (NAAC)'s mandate for Higher Educational Institutions to submit annual Green Audit Reports further underscored the necessity of a formalized approach. Beyond compliance, the college embraced its Corporate Social Responsibility to contribute to global warming reduction through carbon footprint reduction measures. The underlying principle is a profound belief that humans must be stewards of nature, playing a vital role in preserving the planet's resources. This context necessitated a comprehensive and integrated approach to environmental management, moving beyond fragmented initiatives to a holistic green campus framework. Challenges included fostering behavioural change across a large community, managing diverse waste streams, and continuously upgrading infrastructure to meet evolving sustainability standards and resource demands.

The college is committed to enhance green campus regularly and use natural resources for energy consumption. Many environmental practices has evolved in session 2022-2023. The college's total campus area is 31,704 Sq. Mtr., with a total covered area of 13,657.90 Sq. Mtr, open area of 28,090.75 Sq. Mtr, and road and open area of 5,336.72 Sq. Mtr.

4. THE PRACTICE

Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar

Shri Ram College's "Comprehensive Environmental Stewardship and Green Campus Initiative" is a multi-faceted, integrated approach encompassing infrastructure, operations, curriculum, and community engagement, making it a unique model in Indian higher education and further insights into these practices.

4.1. Energy Conservation and Renewable Energy Adoption:

The college has significantly reduced its reliance on conventional energy sources. An energy audit for the period of July 2022 to June 2023 revealed key consumption patterns and areas for improvement.

- **Solar Power Integration:** 160 KW solar energy system is actively in working mode, demonstrating the college's commitment to self-sufficiency in power generation. This serves as a live model for renewable energy education. The total cost of installation for a 160 kWp solar panel system is Rs. 85,70,000.00, with a subsidy of Rs. 25,70,000.00, leading to a net cost of Rs. 60,00,000.00 (Cost per Watt: Rs. 37.50). This system produces approximately 465 units/day (or 960 KW per day and 350400 KW per year), with an annual saving of Rs. 17,10,417.60 and a payback period of 5 years.



Fig: Solar Power Plant at SRC

Grid and Backup Power: The campus has a 630 KVA (step-down) transformer for power distribution. In case of power cuts, two generators provide backup: Generator 1 (160 KVA) and Generator 2 (82.5 KVA), both operating at an approximate power efficiency of 85%.

Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar

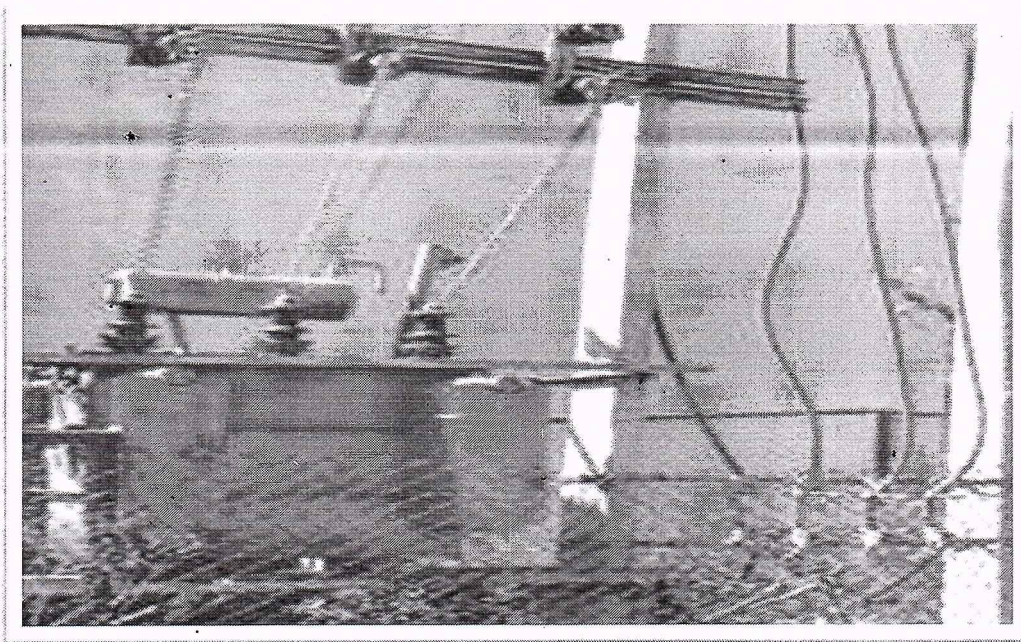


Fig.: Hydro électric power transformer installed near Lead Garden/ New Library building

- **LED Lighting Conversion:** Approximately 65% of conventional bulbs are replaced with energy-efficient LED lights across the campus, drastically cutting electricity consumption and maintenance needs.
- **Natural Lighting and Ventilation:** Architectural designs maximize daylight penetration and cross-ventilation, reducing the need for artificial lighting and air conditioning. Behavioral campaigns encourage conscious utilization of natural light, and false ceilings are installed in classrooms and offices for maintaining optimum room temperature.
- **Smart Energy Management:** A campus-wide policy mandates power-saving modes for electronic equipment. Energy-efficient appliances are prioritized during procurement. Resistance regulators are being replaced with electronic regulators, and master switches are installed outside rooms in hostels to facilitate easy power control. All laboratory panel boards have MCB switches to control electrical supply, with non-teaching staff responsible for switching them off.
- **LPG Conservation:** Widespread use of pressure cookers in hostel messes and canteens significantly reduces LPG consumption, complemented by training in efficient cooking practices. Gas burners and tubes are periodically checked for leakages, and slow flame is adjusted during practical work. Empty cylinders are centrally stored and monitored.
- **Energy Monitoring:** A robust system tracks electricity, LPG, and fuel consumption, enabling performance benchmarking and transparent reporting to the college community. The average power factor of 1.0 is maintained.
- **Existing Power Saving Measures:**

Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar

- Electrical equipment is turned off when not in use.
- CFLs are being replaced by more efficient LEDs.
- Computers and electronic equipment are used in power-saving mode.
- Street light sensors are provided.
- Regular maintenance of water pumps for minimum electricity consumption.
- Signboards like "Switch off the fans / light when not in use" are displayed in departments.

4.2. Water Management and Conservation:

The college implements an integrated water management strategy. The water user profile includes on an average 4800 students and 190 employees and 110 visitors with college timings from 9:00 AM to 5:00 PM for an average of 6 working days.



- **Controlled Water Supply & Leakage Management:** Strategic control valves prevent overhead tank overflows, and a dedicated team ensures prompt repair of leakages, minimizing water loss. Water-efficient fixtures are progressively installed. Water level controllers are installed on all pumps to prevent wastage. The storage (overhead/underground tank) is checked periodically for any leakage, and leaking taps are replaced.
- **RO Wastewater Recycling:** Reject water from RO purification systems is collected and reused for non-potable purposes like cleaning, toilet flushing, and extensive gardening, significantly reducing fresh water demand.

Coordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar

- **Robust Rainwater Harvesting (RWH):** Most buildings are equipped with RWH systems, channelling rooftop rainwater into underground sumps for groundwater recharge, crucial for replenishing local aquifers. Rainwater harvesting facilities are provided to the main building and new COE buildings. Block A and Block B collect rainwater in cemented water tanks (20,000-liter capacity) and use this water for practical, washing, and other departmental purposes. A soak pit is constructed in open ground where roof water is directed for water conservation.
- **Natural Water Bodies Management:** Perennial springs and two campus ponds are maintained, supporting biodiversity and providing water for nursery irrigation and developmental works. Bunds, terraces, and drains collect runoff, conserving rainwater and preventing erosion.
- **Water Quality Monitoring:** Regular testing of water sources ensures compliance with quality standards and safeguards community health.
- **Water Storage Details:** Water from submersible pumps is directly pumped to overhead tanks. The college has 28 overhead tanks with a total capacity of 23,500 liters, topped once a day with an average inflow time of 4 hours 57 minutes and a flow rate of 1100 lit/min.
- **Daily Water Usage (Estimated):**
 - Urinals: 1000 liters
 - Toilet/WC: 2000 liters
 - Laboratory: 900 liters
 - Canteen: 1400 liters
 - Garden (33,190 Sq.M.): 130,760 liters
 - Drinking purpose with RO: 11,500 liters
 - Total Daily Use: 147,560 liters
- **Daily Water Losses (Estimated):** Total daily water loss from various sources (urinals, toilets, labs, kitchen, garden, drinking points) is estimated at 45,726.28 liters.

4.3. Solid Waste Management and Recycling:

The college strives for a "zero-waste" campus through reduction, reuse, and recycling.

- **Efficient Collection & Segregation:** Daily waste collection is conducted, with prominently placed bins for biodegradable and non-biodegradable waste, supported by continuous awareness campaigns for source segregation. Proper dustbins are provided to each department, and 2 large (steel and plastic) dustbins are installed at various locations. Boys' hostels have 1 dustbin for every 2 rooms. Stored waste is collected daily by the Municipal Corporation.
- **Exemplary Vermicomposting:** Biodegradable waste from messes and horticulture is fed into 25 composting pits, producing nutrient-rich vermi-compost used in campus nurseries and gardens, closing the nutrient loop. Kitchen waste is also used as feed and fodder for cattle in the Gaushala.
- **Biogas Plant:** A biogas plant is already working in the campus, contributing to organic waste management and renewable energy generation.
- **Comprehensive Paper Management:** One-sided rough paper is reused internally for notices, time tables, etc. Waste papers are sent for shredding to prepare thread and

Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar

card sheets. Digital communication minimizes fresh paper use, and partnerships ensure responsible recycling.

- **Material Recycling:** Glass bottles (empty chemical glass bottles) are sent as scrap material. Plastic bottles, caps, and other plastic waste are stored separately and sold as scrap. Cardboard is also recycled.
- **Construction Waste Utilization:** Construction debris is repurposed for on-campus land filling and landscaping, minimizing off-site disposal and material demand.
- **Hazardous & Biomedical Waste Management:** Microbiological waste is properly sterilized using Autoclave and then dumped in landfills. Used chemical waste is dumped in landfills. Biomedical waste is strictly disposed of as per Central and State Pollution Control Board guidelines. E-waste (damaged electrical boards, switches, cut wires, computer parts) is collected for repair/reuse or sold as scrap to authorized recyclers. The institution has decided to contact approved E-waste management and disposal facilities for scientific disposal.

4.4. Greening and Biodiversity Enhancement:

The campus is a flourishing green oasis.

- **Extensive Plantation Drives:** Over 2 lakh saplings have been planted, with over 1,000 annually, achieving a 75% survival rate. Over 75% of the campus is green, with diverse native species. The college campus is covered with various plant species including Melia azedarach, Populus, Neolamarckia kadamba, Delonix Regia, Tectona grandis, Toona ciliata, Pine, Cycas, Maulsari, Ficus, Eucalyptus, Jade Plant, Casaurina, Pistol Palm, Areca palm, Platycladus orientalis, Rudraksh, Silver Oak, Bismarckia Palm, Raphis Palm, Sapodilla, Mango, Monkey Jack, Litchi, Guava, Java Plum, Sideroxylon inerme, Murraya Paniculata, Crepe jasmine, Peace Lily, Hibiscus, Rose, Bamboo etc. and many medicinally important plants like Shatavari, Bakayan, Harsingar, Aak, Patthar chatta, Karipatta, Lemongrass, Doob ghaas, Calendula and Sadabahar. Indoor plants include Ficus, Spider plants, Snake plants, Bamboo palm, Rubber plant, chrysanthemum, Peace lily, & Gerbera.
- **Detailed Green Zone Breakdown:**
 - Green Zone 1 (Block A, Main Gate to Block B Internal Gate, Parking): 80 trees, 700 plants, 6200 sq. m. Grass Lawn, 2575 sq. m. Haze Area.
 - Green Zone 2 (College of Technology, Architecture, Boys Hostel): 470 trees, 1425 plants, 2405 sq. m. Grass Lawn, 3652 sq. m. Haze Area.
 - Green Zone 3 (Block B, C, D, Playground, Shri Ram College): 172 trees, 905 plants, 24,585 sq. m. Grass Lawn, 654 sq. m. Haze Area.
- **Agriculture Zones:**
 - Agriculture Zone 1 (Behind Block E): 1.5 Acre, Crops Grown: Rice, Vegetables, Herbs and Wheat.
 - Agriculture Zone 2 (Behind Block C, D and Shri Ram College): 3 Acre, Crops Grown: Seed Production.
 - Mushroom Cultivation is also practiced in SRC.
- **Carbon Absorption and Oxygen Emission:**
 - Carbon Absorption: The campus's 600 full-grown trees absorb approximately 5391.3 kg CO₂ (5.3913 tons) annually. The 2793 semi-grown plants, flowers,

Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar

and 40,000 sq. m. of Lawn and Bush area absorb approximately 8365.5936 kg CO₂ (8.365 tons). Total Carbon Absorption: 13.7563 Tons/annum.

- Oxygen Emission: The 600 full-grown trees emit approximately 70760.40 kg (70.760 tons) of oxygen annually. Semi-grown plants, lawns, and bushes emit about 109796.554 kg (109.796 tons). Total Oxygen Emission: 180.56 tons/annum.
- **Dedicated Gardens:** The Lead Botanic Garden (over 400 angiosperms, 12 gymnosperm species), Herbal Garden, and Fernery serve ecological and educational purposes. Departmental gardens further enhance greenery.
- **Rich Biodiversity:** The lush green cover attracts significant faunal diversity, including over 410 squirrels, various bird species, reptiles, mammals (over 410 squirrels), and insects, contributing to ecological balance.
- **Unique Rock Garden:** A specialized Rock Garden showcases Xerophytes communities, offering insights into plant adaptations.
- **Community Plant Distribution:** Seedlings are distributed to guests and communities on environmental occasions, promoting off-campus greening.

4.5. Environmental Awareness and Education:

A culture of responsibility is fostered through education.

- **Dynamic Eco Club:** The Eco Club organizes diverse activities: recycling, e-waste, anti-plastic campaigns, tree plantations, SDG awareness, cleanliness drives, and competitions.
- **Celebration of Environmental Days:** World Environment Day, Earth Day, Ozone Day, etc., are celebrated with seminars, exhibitions, rallies, and tree planting, involving multiple departments.
- **Participation in Movements:** Students (via NSS) actively participate in Swachh Bharat Abhiyan and local environmental protection movements. NSS units organize environmental awareness programs, and volunteers take responsibility for planted trees.
- **Integrated Curriculum:** Environmental Sciences is a compulsory paper for all UG/PG students. Vocational courses in Biotechnology and Microbiology include environmental modules. Faculty engage students in environmental research.
- **Awareness Campaigns & Workshops:** Periodical campaigns and workshops on pollution reduction, conservation, and sustainable living are conducted for all campus users. Specific awareness programs include:
 - No-polythene campaign with Muzaffarnagar District Administration.
 - Best of WASTE Competition.
 - International seminar on Problem of Waste water with Japan's Taf Guard JICA foundation.
 - Seminar on Waste Management.
 - World Water Day.
 - Green Cycle Campaign.
 - Rally for Rivers.
 - Unnat Bharat Abhiyaan.
 - Gur Mahotsav (Promoting Herbal Jaggery).
 - Science Exhibition.

Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar

- A pilot study on organic waste separation behaviour was designed and conducted in two neighbourhoods in Muzaffarnagar, in collaboration with Massachusetts Institute of Technology, USA, and Nagar Palika Muzaffarnagar, with students from the Bio Science department of SRC Development.

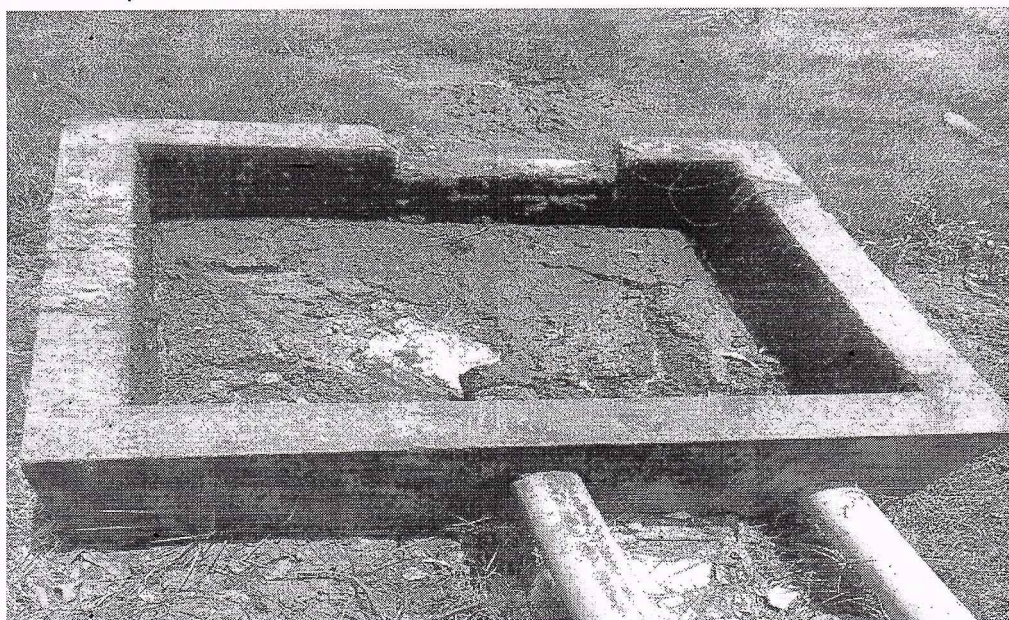
Constraints/Limitations:

- Initial challenges in achieving complete source segregation of waste.
- Lack of installed water meters initially hindered accurate water consumption data collection (now a future recommendation).
- Need for specific management plans for inorganic waste (identified as a future goal).
- Dependence on external agencies for certain specialized waste disposals (e.g., hazardous waste treatment).

5. EVIDENCE OF SUCCESS

The effectiveness of Shri Ram College's environmental best practices is evidenced by several key indicators and recognitions:

- **Energy Savings:** The 160 KW solar energy system is in working mode, producing 465 units/day and contributing to an annual saving of Rs. 17,10,417.60. The 65% LED conversion significantly reduces electricity consumption.
- **Waste Management Efficiency:** Successful vermin composting of biodegradable waste (204 kg/day out of 230 kg/day total waste generated) reduces landfill burden and provides organic fertilizer. High rates of paper, glass, and plastic recycling. The biogas plant is already working in the campus. It aims to establish the water consumption pattern in individual sections, so as to realise the consumption levels with respect to exploring various pollution prevention and waste water minimization opportunities. Water audit also helps to establish the existing water distribution system as well as waste water collection and recycling, if any.



[Signature]
Coordinator
IQAC, Shri Ram College,
Muzaffarnagar

[Signature]
Chairman
IQAC, Shri Ram College,
Muzaffarnagar

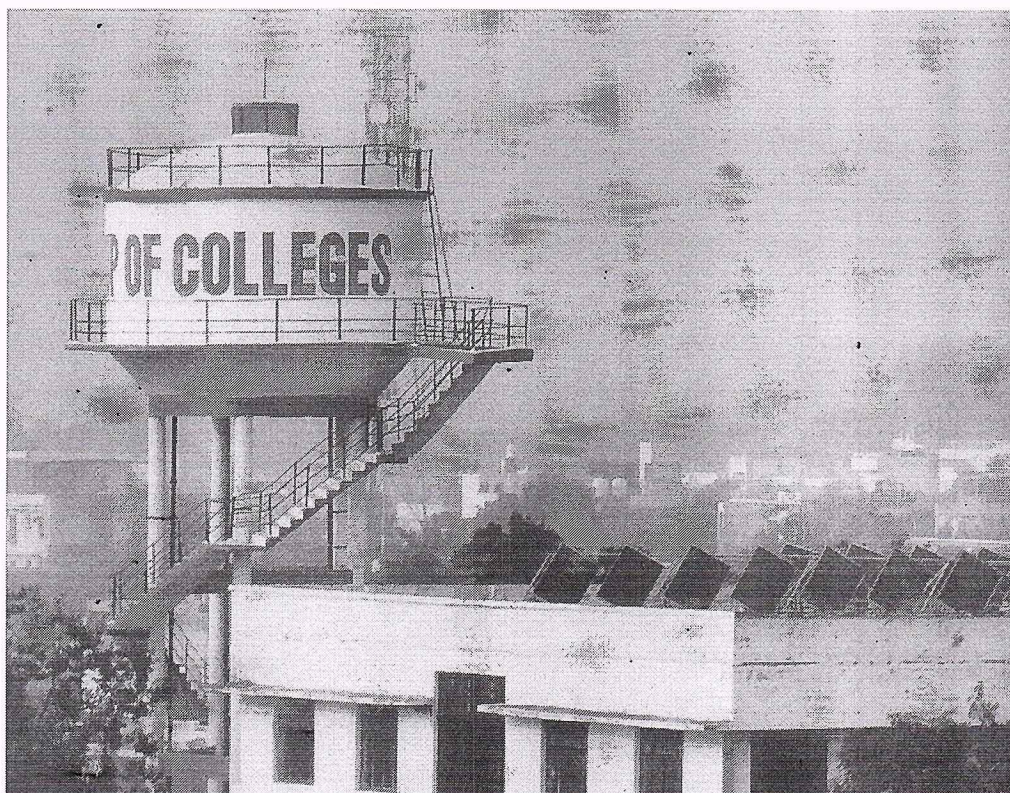


Fig:- Water tanks in the College and Water Treatment Plant

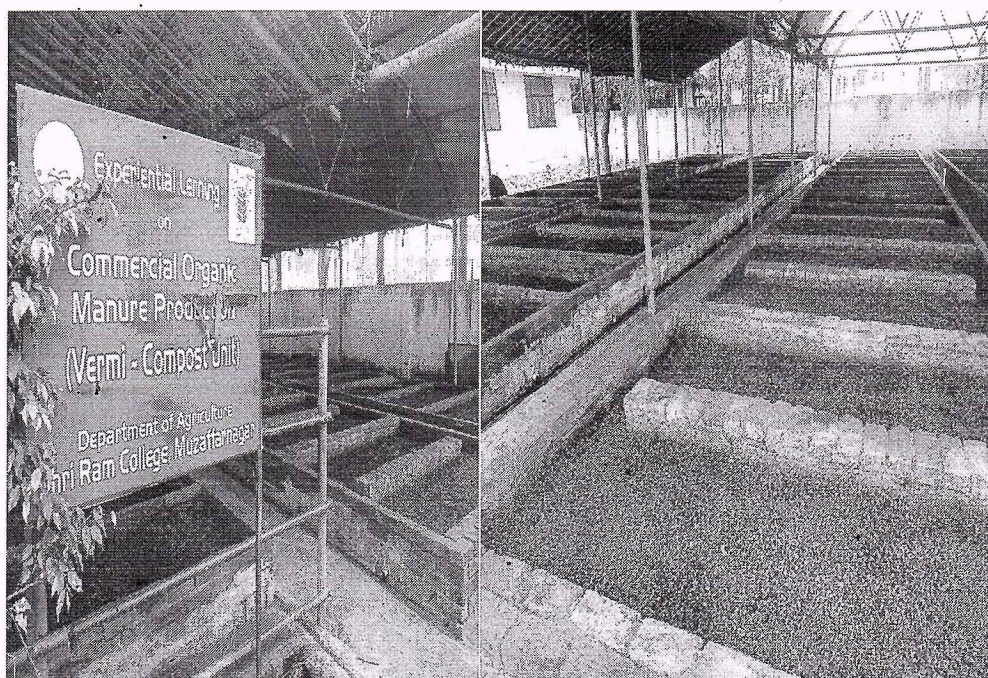


Fig:-Vermi-compost preparation out of Organic Waste on SRC Campus

Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar

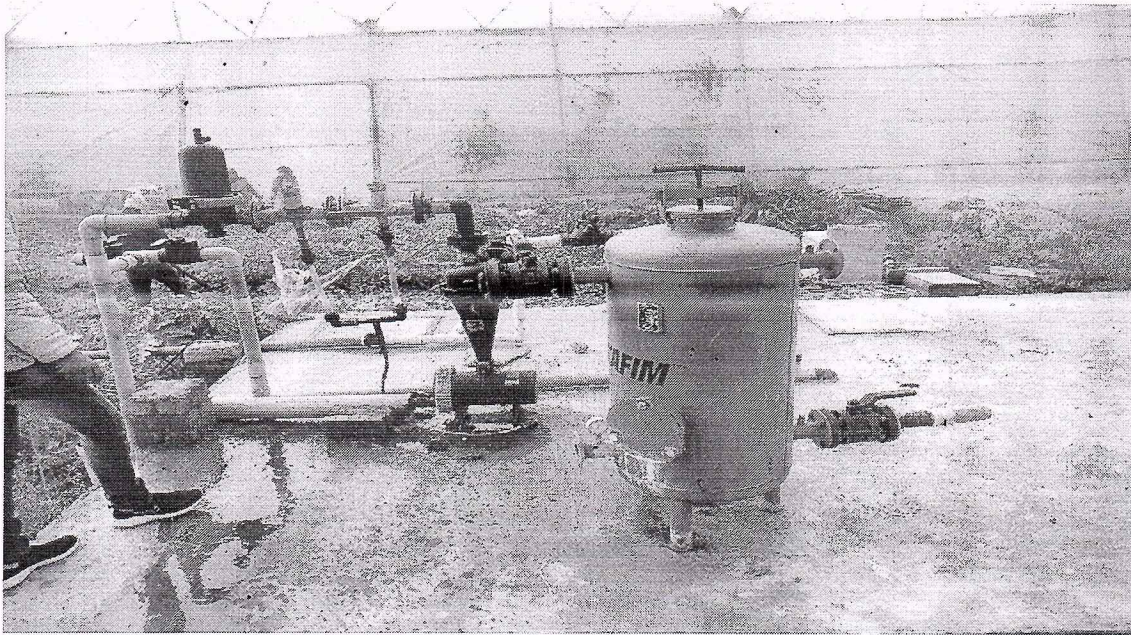


Fig:- Rain Water harvesting in the College campus

- **Green Cover Expansion:** Over 2 lakh saplings have been planted across the campus, with a remarkable 75% survival rate, transforming 75% of the campus into green spaces. Total Carbon Absorption: 13.7563 Tons/annum. Total Oxygen Emission: 180.56 tons/annum.



Fig: Tree Plantation drive in the College Campus .

- **Biodiversity Enhancement:** The extensive green cover and natural water bodies have attracted significant faunal diversity, including over 410 squirrels, various bird species, reptiles, and amphibians.

Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar




 Co-ordinator
 IQAC, Shri Ram College,
 Muzaffarnagar


 Chairman
 IQAC, Shri Ram College,
 Muzaffarnagar

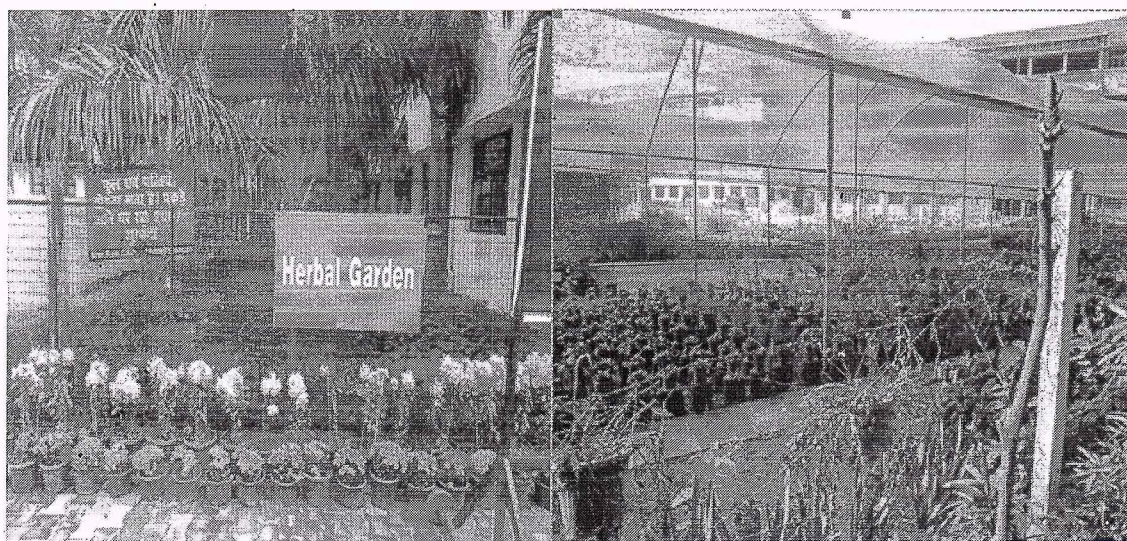
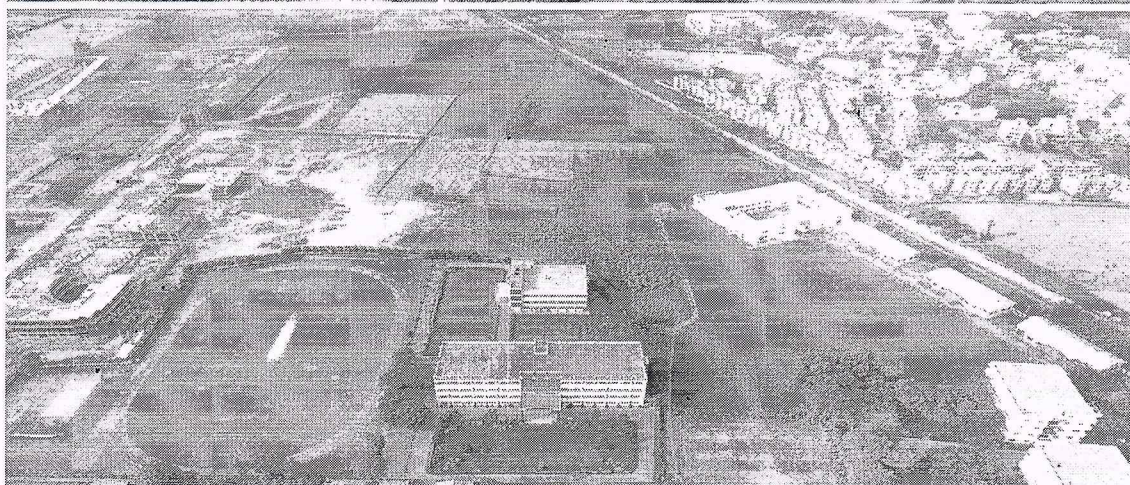


Fig:- Glimpses of Green Campus

Coordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar

एनवायरमेंट-डे पर विभिन्न कार्यक्रम

श्रीराम ग्रुप आफ कालेजेज में वर्ल्ड एनवायरनमेंट-डे पर विभागों में कार्यक्रम आयोजित

● जनवाणी संवाददाता, मुजफ्फरनगर
मुजफ्फरनगर की श्रीराम ग्रुप आफ कालेजेज में वर्ल्ड एनवायरनमेंट डे 2024 के अवसर पर अलग-अलग विभागों द्वारा कार्यक्रम आयोजित किए गए।

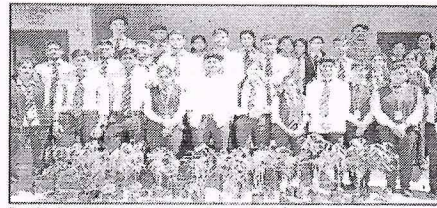
श्रीराम कलेज के वाणिज्य विभाग तथा राष्ट्रीय सेवा योजना इकाई के द्वारा संयुक्त रूप से पर्यावरण तथा पौधे का संरक्षण कार्यक्रम में शिक्षक वर्गों तथा विद्यार्थियों द्वारा भाग लिया गया। वहीं इसी क्रम में श्री राम ग्रुप ऑफ कालेजेज, मुजफ्फरनगर की इकाई में भी वाणिज्य विभाग द्वारा कार्यक्रम आयोजित किया गया।



यहां श्री राम कलेज ऑफ इंजीनियरिंग के प्राचार्य डॉ. अशोक कुमार शर्मा के अध्यक्षता में कार्यक्रम का शुभारंभ हुआ।

श्रीराम कलेज ऑफ इंजीनियरिंग में हुए कार्यक्रम का शुभारंभ श्री राम ग्रुप ऑफ कालेजेज, मुजफ्फरनगर के अध्यक्ष डॉ. अशोक कुमार शर्मा के

अध्यक्षता में हुआ। इस अवसर पर श्रीराम ग्रुप ऑफ कालेजेज के प्राचार्य डॉ. अशोक कुमार शर्मा के अध्यक्षता में कार्यक्रम का शुभारंभ हुआ।



विभागों द्वारा आयोजित कार्यक्रमों में भाग लेने वाले शिक्षकों के साथ छात्रों का फोटो लिया गया।

इस अवसर पर श्रीराम ग्रुप ऑफ कालेजेज के प्राचार्य डॉ. अशोक कुमार शर्मा के अध्यक्षता में कार्यक्रम का शुभारंभ हुआ।

कार्यक्रम में भाग लेने वाले शिक्षकों के साथ छात्रों का फोटो लिया गया। इस अवसर पर श्रीराम ग्रुप ऑफ कालेजेज के प्राचार्य डॉ. अशोक कुमार शर्मा के अध्यक्षता में कार्यक्रम का शुभारंभ हुआ।

- **NAAC Accreditation:** Achieved an A++ Grade from NAAC, reflecting high institutional quality, including its environmental performance.
- **Compliance:** Consistent adherence to environmental regulations, evidenced by no warning notices or letters issued by State Government bodies. Regular water/wastewater quality and DG set stack monitoring. Illumination and Ventilation are adequate, and Noise level in the campus is well within the limit (below 50 dB at daytime).
- **Awareness & Participation:** High levels of student and faculty engagement in Eco Club activities, environmental day celebrations, and national movements like Swachh Bharat Abhiyan. Environmental Sciences as a compulsory paper ensures widespread literacy. The "No Polythene Campaign" and "Cycle Day" are notable initiatives to reduce vehicle use and plastic consumption.
- **Resource Conservation:** Reduced reliance on municipal water supply due to RWH, RO wastewater recycling, and utilization of natural water bodies. Reduced LPG consumption through efficient cooking. Water level controllers are installed on all pumps.
- **Energy Efficiency Upgrades:** 10 low-rated efficiency Air conditioners have been replaced, and 5-star rating fans are purchased for newly constructed buildings.

These results collectively indicate a robust and effective environmental management system that not only meets but often exceeds regulatory requirements, fostering a sustainable campus environment and a culture of environmental responsibility.

6. PROBLEMS ENCOUNTERED AND RESOURCES REQUIRED

Problems Encountered:

- **Initial Segregation Challenges:** Achieving consistent source segregation of waste across a large and diverse community initially required significant awareness and behavioural change efforts.
- **Management of Inorganic Waste:** While progress has been made, developing comprehensive and specific management plans for all types of inorganic waste, especially plastics, remains an ongoing area of focus.

Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar

- **Resource Mobilization:** Implementing large-scale green infrastructure projects (e.g., solar plants, RWH) and maintaining extensive green cover requires continuous financial investment and skilled manpower.
- **Behavioural Inertia:** Overcoming initial resistance or inertia towards new sustainable practices (e.g., switching off lights, using less water) required consistent awareness campaigns and enforcement.
- **Suboptimal AC Usage Practices:** ACs being used without proper insulation (broken window panes) or without keeping curtains closed, leading to increased load and consumption.

Resources Required:

- **Financial Resources (Funds):** Continuous funding is essential for infrastructure upgrades (e.g., more solar panels, biogas plants, solar streetlights, replacement of remaining low-efficiency ACs), maintenance of existing green infrastructure, and support for environmental programs. The net cost for a 160 kWp solar system is Rs. 60,00,000.00.
- **Infrastructure:** Requires adequate space for waste management facilities (composting pits, segregation areas), RWH structures, and potential biogas plants.
- **Manpower:** Dedicated and trained personnel are needed for waste collection, green space maintenance (gardeners), plumbing, electrical work, and managing environmental programs.
- **Technical Expertise:** Access to technical experts for designing and implementing sustainable solutions (e.g., green building concepts, advanced waste treatment, and optimizing AC usage).
- **Awareness & Training Materials:** Continuous development and dissemination of educational materials for awareness campaigns and workshops, particularly focusing on optimal appliance usage (e.g., ACs with curtains).
- **Monitoring Equipment:** Installation of water meters and potentially ambient air quality monitoring equipment for comprehensive data collection.

7: SUMMARY

The success of practice lies in a holistic approach that combines technological adoption (solar, RWH), robust operational management (waste segregation, vermin composting), and a strong emphasis on education and community engagement. The college's proactive stance, evidenced by its "Green Campus" award and A++ NAAC grade, demonstrates that environmental stewardship is not a burden but an asset that enhances institutional quality, fosters responsible citizens, and contributes meaningfully to a sustainable future. Collaboration with local government bodies, environmental organizations, and leveraging student volunteerism (NSS, Eco Club) are key strategies that can be adopted by other institutions to amplify their environmental impact. The commitment to continuous auditing and implementing recommendations ensures an evolving and improving green campus. The ongoing replacement of CFL lamps with LED lamps, procurement of 5-star rating fans, and the commitment to wheeling generated green energy to the main grid further exemplify the college's dedication. The college also maintains a strong focus on environmental monitoring, including illumination, noise level, ventilation, and indoor air quality, ensuring a healthy campus environment.

Coordinator
IQAC, Shri Ram College
Muzaffarnagar

Chairman
IQAC, Shri Ram College
Muzaffarnagar

Talent Scholarship Expedition (TSE)

BEST PRACTICE

Talent Scholarship Expedition (TSE)

TITLE OF THE PRACTICE: Talent Scholarship Expedition (TSE)

OBJECTIVE OF THE PRACTICE:

Supporting Talented and meritorious Students in higher education especially for economically weaker sections. Financial assistance on the basis of TSE is making higher education more accessible and affordable for deserving students. By providing these scholarships, SRC encourages academic excellence and helps reduce the financial burden on students pursuing their education in the college.

THE CONTEXT:

The TSE (Talent Scholarship Expedition) is a process in which examination are conducted every year in online and offline form by Shri Ram Group of Colleges, which is designed with aims to recognize and support deserving, or meritorious students. Shri Ram College offer financial assistance in the form of fee relaxation to students enrolling in undergraduate and postgraduate courses on the basis of merit of exam and this scholarship are provided by Shri Ram Charitable Trust. Most of the students expect to get scholarship for their education from the college but due to limitation of fund, limited number of students was selected to get scholarship from the college on the basis of performance of students.

Implementing the TSE (Talent Scholarship Expedition) involves several contextual features and challenges:

(a) Ensuring Fairness and Accessibility:

Guaranteeing that the test is accessible to all eligible students regardless of their geographical or socioeconomic status. In the 2022 TSE, the mode of registration was both offline and online, and the mode of examination was online.

(b) Standardized Assessment:

Creating a fair and standardized testing mechanism that accurately evaluates the aptitude and knowledge of students across diverse educational backgrounds.

(c) Financial Management:

Balancing the financial implications of offering fee relaxations while maintaining the institution's revenue.

THE PRACTICE:

Talent Search Examination (TSE) conducted by Shri Ram Group of Colleges (SRGC) primarily involve providing financial benefits such as fee relaxations to students who perform well in the test. Continuously monitoring the effectiveness of the TSE in achieving its objectives, such as increasing enrollment and improving academic performance. By conducting the exam online and offline, TSE ensures wider participation from diverse socio-economic backgrounds. In the 2022 TSE, In TSE of 2022-23, the total number of students qualified was 679 for SRC related programme and 403 SRC students admitted in the 1st year of UG & PG programme. 534 SRC students already admitted in the 2nd/3rd/4th year of UG & PG courses are also benefited through TSE.

Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar

Alongside scholarships, SRGC may offer support programs that focus on skill development and employability. The content and structure of TSE are designed to align with the academic standards and expectations within the Indian educational framework.

Constraints or Limitations

1. Resource Intensity:

Conducting TSE requires significant resources in terms of planning, administration, and evaluation.

2. Access and Equity:

Despite efforts to make the exam accessible, students from rural or underprivileged backgrounds may still face barriers such as limited internet access or lack of preparatory resources.

3. Financial Sustainability:

Providing substantial fee relaxations can strain the institution's financial resources.

4. Standardization Challenges:

Creating a standardized test that accurately reflects the diverse academic backgrounds of students in India is complex.

5. Awareness and Participation:

Effectively communicating the existence and benefits of TSE to potential candidates can be challenging.

6. Impact Measurement:

Evaluating the long-term impact of TSE on students' academic and career success can be difficult. These constraints highlight the need for continuous assessment, resource optimization, and inclusive strategies to ensure the long-term success and broader impact of TSE.

EVIDENCES OF SUCCESS:

The examination dates for the 2022 TSE were 13.07.2022 and 30.08.2022. This scholarship test evaluates students' knowledge, aptitude, and potential, emphasizing merit-based selection. It encourages students to pursue higher education by alleviating some of the financial burdens through scholarships awarded based on their performance in the test.

The exact benefits and fee relaxations vary depending on the marks obtained in the TSE. In the year 2022-23, there were 5814 registered students, and 3288 students participated in the examination for TSE. 403 students from first year got scholarship and 503 students from II, III, IV year got benefitted through TSE. The total amount offered through TSE during the 2022-23 session was Rs 3483130.

Detail of benefitted students is attached with it.

PROBLEMS ENCOUNTERED AND RESOURCES REQUIRED:

Problems Encountered

- Infrastructure and Technological Challenges:**

Conducting online exams demands significant infrastructure, including reliable internet connectivity, online payment gateway etc.

- Administrative Complexity:**

Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar

Organizing the exam, evaluating results, and distributing scholarships require meticulous planning and coordination.

- **Equity in Access:**

Ensuring all students have equal access to the exam, especially those from underprivileged backgrounds, remains a significant challenge.

- **Financial Constraints:**

Offering scholarships and managing the associated costs without compromising the quality of education poses financial challenges.

- **Evaluation and Standardization Issues:**

Creating a standardized test that fairly assesses students from diverse educational backgrounds is complex.

Resources Required

- **Technological Resources:**

Reliable internet infrastructure, secure examination platforms, and technical support for both online and offline exam processes.

- **Human Resources:**

Skilled personnel for exam administration, invigilation, result processing, and scholarship distribution.

- **Financial Resources:**

Funding to cover scholarships, technological investments, administrative costs, and promotional activities to raise awareness.

- **Logistical Support:**

Physical venues for offline exams, transportation facilities for students, and communication systems to ensure smooth coordination.

Addressing these challenges with adequate resources is crucial for the successful implementation and sustainability of the TSE.

ADDITIONAL INFORMATION FOR IMPLEMENTING TSE:

To implement the Talent Scholarship Expedition (TSE) effectively, consider the following additional steps and factors:

1. **Strategic Planning**

- Detailed Framework: Develop a comprehensive plan outlining the objectives, processes, timelines, and expected outcomes of the TSE.
- Stakeholder Involvement: Engage all relevant stakeholders, including academic staff, administrative personnel, and potential sponsors, to ensure a cohesive approach.


2. **Awareness and Promotion**

- Marketing Campaigns: Utilize various channels such as social media, local newspapers, educational fairs, and school visits to increase awareness about TSE.
- Community Engagement: Partner with local schools and community organizations to reach a broader audience and ensure inclusive participation.

3. **Collaborations and Partnerships**

- Educational Institutions: Collaborate with other colleges or universities to share best practices and resources.


Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar


Chairman
IQAC, Shri Ram College,
Muzaffarnagar

- Corporate Sponsorships: Seek partnerships with businesses for financial support, which can help in scaling the scholarship program.

4. Technology Integration

- Online Platforms: Invest in robust, user-friendly platforms for online exam administration to ensure a seamless experience for students.
- Data Security: Implement strong data protection measures to secure students' personal information and exam data.


5. Continuous Feedback and Improvement

- Feedback Mechanisms: Establish systems for collecting feedback from students, parents, and staff to identify areas for improvement.
- Impact Assessment: Regularly assess the program's impact on student enrollment, retention, and academic performance to ensure it meets its objectives.

6. Policy and Compliance

- Regulatory Compliance: Ensure that the TSE complies with national and institutional education policies and standards.
- Transparent Processes: Maintain transparency in the selection criteria, evaluation process, and scholarship distribution to build trust and credibility.

By addressing these additional factors, Shri Ram College can enhance the effectiveness and sustainability of the TSE, ensuring it continues to benefit deserving students while aligning with the institution's broader educational goals.


Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar.


Chairman
IQAC, Shri Ram College,
Muzaffarnagar

Improving Research skills of Students by Performing in Innovative Small Projects

BEST PRACTICE

Enhancing Student Research Skills Through Innovative Small Projects

1. TITLE OF THE PRACTICE

Improving Research Skills of Students by Performing in Innovative Small Projects

2. OBJECTIVES OF THE PRACTICE

The primary objective of this best practice is to inculcate a research-oriented mindset among students by engaging them in innovative, small-scale research projects across disciplines. These projects aim to promote curiosity, independent inquiry, analytical thinking, and effective communication. Students are encouraged to explore real-world issues through guided academic investigations, bridging the gap between theoretical knowledge and practical application. The underlying principle is to integrate experiential learning into the academic curriculum to boost employability, critical reasoning, and lifelong learning skills, aligning with the goals of the National Education Policy (NEP) 2020.

3. THE CONTEXT

In Indian higher education, the traditional emphasis on theoretical teaching often leads to limited exposure to research, especially at the undergraduate level. Students from rural or semi-urban colleges frequently face barriers such as lack of access to journals, inadequate mentorship, and unfamiliarity with data analysis tools. In such a setting, introducing small, manageable research projects becomes a strategic intervention to cultivate early research skills. The idea was to provide opportunities within the academic calendar for students to explore local problems, conduct fieldwork, and analyse findings under faculty guidance. It also aimed to address challenges like passive learning environments, lack of student engagement, and low participation in scholarly discussions during the session 2022-23.

4. THE PRACTICE

Shri Ram College has established a CIFED (Centre for Innovation, fabrication and entrepreneurship development) and launched an institution-wide initiative to promote student-led research projects as part of internal assessments or as co-curricular activity. Each department was encouraged to develop a research oriented framework through which, students could conduct mini-research studies.

Projects ranged from field-based explorations to secondary data analysis and laboratory investigations. Topics were often interdisciplinary. Key elements of the practice included:

- Formation of research committees of students within departments.
- Orientation workshops on basic research methodology, citation styles, and ethical practices.
- Templates and rubrics to help students design and present their research.
- Interdisciplinary mini-conferences where students presented findings in poster or PPT formats.
- Uploading student work to institutional repositories.

Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar

- Continuous mentoring and feedback loops throughout the semester.

Unique Features:

- Integration into regular curriculum.
- Intercollegiate and Interdepartmental collaboration for project supervision.
- Strong focus on local relevance and societal application.
- Encouragement to publish findings in student journals or newsletters.

Constraints/Limitations:

- Faculty members faced an increased workload due to mentoring requirements.
- Students lacked prior exposure to academic research protocols.
- Limited technological resources for conducting advanced data analysis.
- Short semester timelines restricted project depth in some cases.

Nonetheless, the initiative significantly transformed classroom dynamics into a research-enabled environment where knowledge creation became a shared goal between teachers and learners.

5. EVIDENCE OF SUCCESS

Quantitative and qualitative outcomes of the initiative were notable. Faculty of college worked on 12 projects for which approx 13 lakh rupees as financial assistance was provided by some Industry / organisation during the year 2022-23. Some departments have made mandatory to do project in their curriculum. Many projects and internship are being performed by the students of most of the departments. 33 Project of student are from Biosciences Department, 162 Internship by students from Business Administration, 130 Internship from students of Fine Art Department, 42 projects are from Agriculture Department, 41 Internship from Students of Mass Communication Department, 247 projects are from computer Application Department, 29 are from Botany Department, 28 are from Zoology Department, 43 are from Commerce Department, 246 internship from Education Department, 77 are from Physical Education Department. Departmental internal assessment records showed that students who participated in these projects demonstrated better critical thinking and subject integration in their final exams. Feedback from students indicated increased confidence in preparing research proposals, interpreting data, and using referencing tools like Mendeley. Faculty noted a higher level of classroom interaction and curiosity among participating students. Moreover, peer-learning and team-based approaches helped boost leadership and collaboration skills. This positive outcome suggests that integrating research into undergraduate curricula leads to holistic academic development and prepares students for postgraduate research and competitive examinations.

6. PROBLEMS ENCOUNTERED AND RESOURCES REQUIRED:

Problems Encountered:

- Initial reluctance among students due to fear of research complexity.

Co-ordinator
IQAC, Shri Ram College,
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar

- Limited exposure to software tools for survey design and data processing.
- Challenges in balancing project work with academic course load.
- Need for constant faculty supervision.
- Financial support to students for research work related expenditure.

Resources Required:

- Subscription to digital libraries and open-source journals.
- Availability of data analysis tools like SPSS, R, or Google Sheets.
- Funding for field visits, printing posters, and research supplies.
- Incentives or credits for faculty engaged in mentoring.

7. SUMMARY:

This model of “learning by doing” can be replicated in institutions aiming to make their curriculum outcome-based and NEP-aligned. Colleges may start with voluntary research clubs and gradually integrate projects into core assessments. Collaboration with local governance bodies, industries, and NGOs can enrich the context of the research.

Suggestions for betterment include:

- Conducting research activities with providing financial assistance.
- Publishing an annual journal to archive the best student projects.
- Institutionalizing recognition through certificates, awards, and internal marks.

The success of the practice is obvious because the Industries and organisations are paying money to our students for their projects.

Co-ordinator
IQAC, Shri Ram College
Muzaffarnagar

Chairman
IQAC, Shri Ram College,
Muzaffarnagar