

Best practice I

Title of the practice: Comprehensive Education

Context

ZHDC is fully committed to an education program that persistently strives for an all-round development of the students. An all-round development, in our vision, includes harnessing the potential of the students, bringing clarity to their vision and interests and persistently stimulating their drive to excel in their academic and extra co-curricular pursuits and helping them to transform into reflective members of the civil society who are adept at making value judgments for themselves and to shape and guide our society in a progressive direction. Thus, our intent is to create an ecosystem where every chosen element is wholeheartedly dedicated to the holistic development of the student.

Objectives

1. To create an institutional infrastructure and policy paradigm that is capable of continuous evaluation and persistently evolves to accommodate the progressive realities of the time in defining what holistic education stands for.
2. To provide ample opportunities to the students to pursue their interests and express their all-round potential and skills
3. To strengthen the mental fortitude of the students by affording them platforms to inspect and augment their emotional and mental well-being.
4. To infuse students with moral sensibilities, stimulating them to reflect on social and moral issues and to acquaint them with general principles of value judgements
5. To afford students the opportunity to participate in social outreach programs as agents of progressive change.

Practices

The following are some of the practices put in place by the college, individual departments and the stated societies to achieve the broader objective of integrated education.

- To transform students into torchbearers of civil society to mitigate negative discrimination of any form and to facilitate the inclusion of all in the mainstream, Persian Society organized a Group discussion on “Women’s Empowerment”.
- To underscore some of the significant social and ethical issues and to afford students an opportunity to delve into them and reflect, the Monist Society of the Department of Philosophy has organized a debate on ‘Euthanasia’ and ‘Abortion’, Poster making competition on the issues of ‘gender equality’, ‘violence’ and ‘education’, and a Seminar on ‘ethical and legal aspects of surrogacy’.
- Our students have been given the opportunity to be the Guard commander of the guard of honour and the member of the guard of honour offered to important dignitaries, including Air Chief Marshal Birendra Singh Dhanao
- Some of our students have been honoured with the best cadet award, and some have been offered the position of 2nd in command, platoon commander, and camp senior.
- Our faculty specializes in very diverse areas, and it is not expected that all may be very well acquainted with the Gandhian thoughts on issues that are significant for our society. We recognize that in order to create an ecosystem, where everyone reflects or is capable of reflecting on the principles of liberty, equality and justice, our faculties should be regularly

provided with the opportunity to broaden their horizon. Thus, a Faculty Development Program on “Revisiting Gandhi today: Questions of Caste, Class, Gender, Religion and Environment” was organized by the Gandhi study circle. An Orientation Programme was also conducted on the relevance of Gandhi in the contemporary world.

- To mark the 150th Birth Anniversary of Mahatma Gandhi, a week-long Gandhi celebration (GANDHI UTSAV) was organized, where students were given the opportunity to participate in a series of events, including Panel Discussion, Stage Play, Quiz, Debate, Charkha Exhibition, Painting Competition, Round Table and Documentary/Film Screening. The Society also organized a visit to “Bal Sahyog” an orphanage, Charkha Classes and Yoga Classes.
- A Panel discussion on “Gandhi and Rashtravad” was organised by Gandhi Study Circle in collaboration with the Gandhi Peace Foundation.
- All-religion Interfaith prayer was organized by the Gandhi Study Circle Society and the National Gandhi Museum.
- To expose the students to the realities and expectations of the job market and to allow them to bridge the gap between their academic knowledge and the requirements of the industry, Career Counselling and Placement Cell, Zakir Husain Delhi College organized an Annual Job and Internship Fair on 10th and 11th February’ 2020.
- In pursuance of our goal to work for strengthening the mental fortitude of the students by affording them platforms to inspect and augment their emotional and mental well-being, Girls Association organized a talk on “Dealing with Mental Pressure through positive Psychology” by Nutan Kanth (Clinical Psychologist /counsellor -SPYM)
- NSS organised the orientation program where a lecture on Health Issues and Motivational Skills was delivered. NSS also organized social outreach programs for the students to gain first-hand experience of directly participating in activities that are meant for bringing positive social transformation. The intent is to transform students into individuals who understand their social responsibilities and are willing to make commitments to shape and nurture the society with progressive outlooks and ideas. NSS, in order to achieve the foregoing goals, organized the Stem Cell Donation Workshop, ‘Raddi Collection Drive’, Cloth Distribution in the nearby locality, Diwali Mela and a Visit to Ashram.
- Zakir Husain Memorial Football Tournament session was organised by the college.
- An Intramural Competition in Chess, Table-Tennis and Carrom was also organized.
- To encourage students to adopt healthy fitness practices a Fitness Fair was organized, where a lecture was delivered themed "Get, Set, Fit" and Aerobics
- Five of our football players participated in this year’s Santosh trophy, and our volleyball team stood first in the inter-college DUSC competition, a testimony of the kind of ecosystem that we are able to provide to our students where they are afforded every opportunity for their talents to be nurtured and skill to be honed.
- The art and Culture Society of ZHDC is a very active body of the college, regularly participating and demonstrating excellence in cultural events at inter-college level as well as events of national importance. Over the years it has persistently brought national recognition and accolades to the college. The year 2019-20 is no different in this regard. Students of Aman-the Theatre Society, Dhanak-the Western Dance Society, Dhwanik-the Indian Classical Music Society, Suchitra- the Fine Arts Society, Nrityathi-the Classical Dance Society, and Illume- the Western Music Society participated in various competitions and won several prizes in different categories

Evidence of success

- The intent for adopting the above-stated practices has been to promote an ecosystem, where the students are afforded every opportunity to give wings to their ambitions, maintain their drive, develop their potential and hone their skill-set. The above-listed events and practices are a testimony to the fact that the college has managed to provide a variety of opportunities in diverse domains for the students to express their talents, skills and excellence.
- Moreover, to make students sensitive to social and ethical issues, to acquaint them with general principles of value judgement and to afford students the opportunity to participate in social

outreach programs as agents of progressive change, ZHDC has been able to organize several programs, lecture series and drives with the able support of NSS, Gandhi circle and other departmental societies of the college as detailed above.

- Further, students enjoyed a good measure of autonomy in conceiving and developing social and moral objectives to be attained and planning for resource acquisition and deployment for the purpose. Such activities are likely to offer students an opportunity to understand the ground realities of the society, to reflect on the nature of problems and possible solutions to them; and the activities, it is to be believed, would have enabled the students to gain a first-person perspective on what it means to be a participant in the events of progressive social transformation.
- Finally, a reasonable measure of our success lies in the recognition our students have managed to gain for their excellence in many of the extra co-curricular activities. ZHDC is known for its excellence in Sports and related events, with many of our teams and individuals, as stated in the section on 'practices', have won recognition and accolades for their excellence in the year 2019-20. The same goes for the students from our art and theatre societies, who won national recognition in acapella competition, solo western singing competitions and the battle of bands.

Problems encountered

- The purpose of the practices has been to make students sensitive to moral, social and ethical issues, to offer them an opportunity to reflect on the issues that are significant for the development of society and to acquaint them with general principles of value judgement. The wholehearted participation of the students from all the departments is the key to be successful in attaining all the goals listed above, but often the goal becomes difficult to attain as it requires coordination and cooperation between all the departments to agree upon a time slot that doesn't encroach within their regular academic schedule. Thus, many students are often required to make a trade-off to attend such events, but we are working on the issue to find a proper solution to the problem in the future.
- Secondly, the college is enthusiastic about introducing more social outreach programs where students gain firsthand experience of participating in the activities that can bring progressive social change, but such events also require dedicated support from civil society organizations, alumni network and civil administration. Unless these bodies proactively support and aid in such activities, it is difficult for the college to manage and execute such programs.
- Thirdly, maintaining a fine balance between extra-curricular activities and purely academic pursuits is often a difficult task, where tradeoffs have to be made very judiciously. Either set of activities cannot be pursued at the expense of the other. College authorities acknowledge the dynamic nature of the problem as it varies from year to year. Thus, a continuous evaluation is done to ensure that lines are not crossed in either direction.
- Finally, it is during the fag-end of the 2019-20 academic session that COVID-19 paralyzed the whole world, and we too didn't remain untouched by its devastation. Most of our activities became stagnant for a very brief while, and in the most undesirable circumstances, the significance of a state-of-the-art ICT infrastructure dawned on us in affording quality all-round education to our students, much like most institutions in the world. However, we were quicker than most in adopting the technology to face the challenges that were awaiting us in the COVID-infested world.

Resources required

- Cooperation of the students and faculty is probably the most significant resource needed to ensure the success of all the objectives listed above, and that we have no dearth of. Apart from it, ZHDC is proud to have robust logistical and infrastructural support to organize seminars, symposia, workshops, and lectures, etc. Designated financial, physical, and human resources are allotted in a timely manner to ensure that all the objectives are accomplished effectively.

Best Practice-II

Title of the practice: Sustainable practices

Context

Unbridled exploitation of nature to satisfy our never-ending wants and unjust considerations is bound to have undesirable consequences for us and the ecosystem enveloping us, a fact that appears not to receive the acknowledgement it truly deserves. The only course correction to avert the inevitable seems to be the practice of sustainable living. Environmental preservation and conservation, promoting biodiversity, strengthening ecological balance, reducing carbon footprint to control global warming and in effect climate change, and curbing the polluting agents are some of the sustainable practices that can ensure the sustenance of our biosphere and in effect our sustenance and the sustenance of our future generations. Thus, acknowledging the significance of sustainable practices, ZHDC has resolved to put in place a system that implements sustainable practices in the college and imparts education to the students in a way that makes them sensitive to the need for adopting sustainable practices and transforms them into the drivers of the sustainable practice in the society.

Objectives

1. Promoting environment-friendly practices in the college that aid in curbing wastage and pollution, encourage environmental conservation, promote biodiversity, strengthen ecological balance, and reduce the carbon footprint of the college.
2. Developing green infrastructure and adopting green technologies
3. Training faculty in adopting and implementing sustainable practices
4. Sensitizing students to the significance of sustainable practices, affording the opportunity to learn such practices and enabling them to become the drivers of sustainable practice within and outside the college campus.

Practices

ZHDC acknowledges the significance of sustainable practices, in pursuance of which, we have managed to put in place a system to implement practices and policies that promote it. Through its academic departments and dedicated societies like Aranya, the Nature and Environment Society, Parimandal, society of the Department of Environmental Studies, and the Garden and Greening Committee, the college organizes activities and sensitizes the students about the significance of sustainable living. The following are some of the practices put in place by the college administration, individual departments and the stated societies under its supervision.

BODMEL-Environment friendly method

We are proud to state that a new compact glass apparatus, BODMEL, has been fabricated by the faculty members of our college for determination of melting point, boiling point and for simple distillation of small volumes of liquid organic compounds. Distillation is the traditional method of choice for determination of boiling point, which requires a large volume of liquid organic compound (roughly 80–100 mL) of concentrated sulphuric acid bath in a Kjeldahl's flask or Thiele's tube. BODMEL, on the other hand, only requires a small amount of concentrated sulphuric acid (about 2 mL) and similarly a small amount of liquid organic compound (about 1-2 mL) to determine the melting point and boiling point respectively. The newly fabricated miniature glass device BODMEL (abbreviated so for performing three functions viz., determination of **BO**iling point, **D**istillation, and **MEL**ting point and with a single piece of equipment) is safe to use, simple to set up and delivers accurate results.

Significance of BODMEL: It drastically reduces the amount of chemicals used in our teaching laboratory at a very affordable price, making it a very efficient lab equipment for a developing country like ours where resources are limited and therefore should be used judiciously. Further, it provides an implementable and cost-effective solution to the large-scale waste disposal problem faced by numerous colleges, universities, and schools that have on-site laboratories regularly producing a range of waste products and chemicals, none of which can be disposed off in an environment-friendly manner. One need not be reminded of the unspeakable horror and health hazards waiting to happen if such waste matter manages to leak into our surface and subsurface water bodies. BODMEL offers a viable solution to restrict the disastrous effects of such eventualities.

Sangeeta Pandita, Sarita Passey, BODMEL: A Compact Apparatus for Simple Distillation Boiling Point and Melting Point Determination, *Journal of Laboratory Chemical Education*, Vol. 2 No. 3, 2014, pp. 50-52. doi: 10.5923/j.jlce.20140203.03.

Activities organised by the Nature and environment society

- The orientation Program for developing awareness of the significance of waste segregation and the harmful effects of plastic was organised by Aranya- the Nature and environment society in association with Chintan Environment Group
- An Inaugural Lecture was delivered by Dr Monalisa Sen on Various Aspects of Urban Biodiversity
- A collection drive was organised for Plastic and E-waste collection by Nature and environment society in collaboration with Chintan Environmental group
- National Conference on Water Sustainability: Conservation, Policy, Ethics and Science was organised to provide a comprehensive perspective to the students.
- A paper reading competition on the topic "Can the environment be a political issue?" was organised

Activities Organised by NCC

- Under Swach Bharat Abhiyan, Nukkad Natak was organised on the need for cleanliness in our life
- NCC, in its conservation efforts, also organised a Plantation Drive— 'Plant Greenery' in the premises of our college.

Miscellaneous

- The college continues to focus on maintaining its green cover to reduce its carbon footprint. In the 62 nd Annual Delhi University Flower show, ZHDC won 56 prizes, including 7 cups from all the entries. College Rose and Rock gardens have been adjudged the second-best in the league.
- LT Panels with MCCB amp Capacitors have been installed in the substation of the college to optimize energy consumption.
- To prevent the abuse of soil and to promote organic practices, the college is strict about eliminating any use of chemical fertilizer or insecticides and relies on vermicompost units and organic pesticides to meet all the college requirements,
- The college accords high priority to safe e-waste disposal practices. Our successful association with Chintan continues in this regard. The college has installed separate bins for the collection of e-waste, which is subsequently handed over to Chintan for recycling and proper disposal.
- We have attempted to minimize the use of paper by incorporating the electronic medium for regular communication between the administration, teaching staff, students and non-teaching staff. To this end, we also re-use one-sided printed paper for rough use, and waste papers from the office, labs and store are recycled in the handmade paper unit of college by our students. Large quantities of paper are also recycled through Jaagruti NGO.
- Energy conservation is a high-priority area. The college building, therefore, has been provided with well-lit classrooms, laboratories, staffrooms and offices, to minimize the consumption of

artificial light. The old fans have been replaced in order to reduce the consumption of energy. The students and staff members are also advised to keep the electric switches turned off if not needed.

- The college has affirmed to make the campus a plastic-free zone and to this end, non-plastic plates and cutlery have been made mandatory in the canteen and for the staff kitchen. The college also regularly holds the sale of recycled cloth bags on campus as a part of its 'Say no to Plastic' drive at minimal prices.

Evidence of Success

The following are some of the encouraging results that have propelled us closer to fully embracing sustainable living.

- BODMEL, an innovative leap by two of our faculty members, has been a huge success for us and also for the country as it provides a safe and efficient solution to drastically reduce the amount of chemicals used in our teaching laboratory and also provides an implementable and cost-effective solution to limit the wastage coming out of our research labs.
- The college won 56 prizes in the 62nd Annual Delhi University Flower show held on March 1st, 2020, including 7 cups from all the entries. The College Rose and Rock gardens have been adjudged second-best in the league.
- The college has become a no-plastic zone on account of the 'Say no to Plastic' drive, collection drive and restriction on using plastic utensils in the canteen and for the faculty members.
- Likewise, the college now fully relies on organic inputs for the care of green spaces in the college, which includes the utilization of in-campus leaf litter and canteen kitchen waste of the college, recycled through vermicompost units, making us self-sustainable towards the fertilizer requirements of college gardens.
- E-waste management, with proactive assistance from the NGO 'Chintan', has been a very successful project.
- The college has also signed a contract with Azure Power Ltd for the installation of solar panels on rooftops to fulfil its energy requirements.
- The college has been running a 'Handmade Paper Unit' for the last several years and also regularly conducts workshops for the students and faculty to recycle wastepaper in collaboration with an NGO, 'Jaagruti'.

Problems Encountered

- Upkeeping many of the facilities for the conservation efforts and building new ones is capital intensive. For instance, there is a shortage of open areas for the upkeep and maintenance of garden plants. The college does not have a proper plant nursery for multiplying and raising plants. Consequently, plants languish in cramped spaces, resulting in severe losses due to human interference, lack of proper care and neglect.
- Moreover, a lot of precious and rare plants and seedlings also die due to the vagaries of the season in semi-arid places like Delhi. In this regard, a greenhouse facility is long overdue in the college.
- Given its significance, learning sustainable practices should be a must for all the students, but often students from many departments struggle to participate and get benefit from some of the significant programs organised by various societies and departments on account of the timings of such events clashing with their regular but important academic classroom sessions.
- Many of the outreach programs such as community plantation drives, afforestation drives, and participating in environmental impact assessment projects require the support and cooperation of civil society organizations and agencies other than the college administration. Often, maintaining the necessary coordination for attaining a common goal in such multi agency projects is difficult.

Resources Required

- To undertake newer environmental projects and to upgrade the existing facilities of our green campus, ZHDC requires dedicated logistical and financial support along with aid from the government and civil society organisations. We wish to develop a Green House Facility for maintaining rare and precious germplasm and need garden spaces to build plant nurseries.
- Likewise, capital allotment is required to advertise and advocate the usage of BODMEL in the labs associated with other colleges, universities and schools.
- To acquaint students with the best practices in the scientific research in the field of environmental science, an understanding needs to be arrived at between some of the eminent environmental institutions in India and ZHDC so that resources can be pooled for some of our students with proven merit to allow them to gain valuable undergraduate research experience in such institutions.