

India • Quality Education' as an enabler for the SDG's

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National Policy of Education (NPE) 1986 (modified in 1992), in which "Protection of the Environment" is stated as a common core around which a National Curriculum Framework (NCF) would be woven.

In India, environmental education is mandated by the Supreme Court of India and overseen by the National Council of Education Research and Training (NCERT). The National Curriculum Framework, developed by NCERT, includes a "Protection of the Environment" component comprising of a graded syllabus for EE for class 1 to 12 standards. At secondary school level, an infusion model has been adopted for imparting EE, which means environmental education is now imparted in most schools and colleges in India. At present, at the national and sub-national level, the government has adopted the SDGs as a guiding framework to steer development actions. NITI Aayog⁸², a governmental portal in India, plays a central role in the country's SDG efforts. "Schools accredited by India's Central Board of Secondary Education (CBSE)⁸³ are now in compliance to new Education Policy 2020 which has proposed the revision and revamping of all aspects of the education structure to align it with SDG 4 Quality Education and the aspirational goals of 21st Century education" (Swarnima Luthra, headteacher). Both schools featured in this example states that the changes support ESD being

further integrated into the curriculum. "This has aided the school to integrate this into the pedagogical approaches. The school has also received State level recognition for the sustainability programs done by our students" (Padma Jyothi Turaga, head teacher). Most schools in India are funded and run by the government. However, the public education system faces serious challenges including a lack of adequate infrastructure, insufficient funding, a shortage of staff and scarce facilities. Since many government schools do not provide adequate education, Indian parents aspire to send their children to a private school. Some expats choose to send their children to private Indian schools. "The Centre for Environment Education (CEE) works with local, state, national and international agencies, organisations and governments in India and in various other countries to help create a sustainable future"⁸⁴. Both schools are private schools that are run by their own management.

Contribution (1) by head teacher Swarnima Luthra and eco-club coordinator Renuka Rawat: Adarsh Shiksha Niketan (ASN) Upper Secondary School, Dehli (established in 1975):

The ASN school vision is to have an intellectually possessed an amiable society, spreading the light of education all over the World, moulding every individual environmentally conscious, socially endowed, making the planet 'Earth' worthy for living. The mission is to create an awareness to evolve environmentally and socially the pristine World through well devised curriculum, excellent infrastructure,

ASN schools vertical gardens - making every space count and breathe! / Yoga sessions conducted on regular basis ensured students practice self-care, physical fitness, developing a healthy mind in a healthy body. Meditation, breathing exercises and prayer are an integral part of the daily routine for all the learners



Key WSA Principles in action at *ASN upper-secondary school***Vision, Ethos, Leadership & Coordination**

- School vision directly linked to sustainability core values
- Top-down accountability and support from both the national curriculum and school leaders
- International collaborations also strengthen the schools vision and keep the way they lead and coordinate current

Curriculum

- SDGs actively incorporated into the curriculum
- Alternative forms of assessment 'for the leaning and not of the learning' – ppt, article writing, role play (alternatives to exams)
- Global citizenship and social entrepreneurship incorporated into teaching

Institutional Practices

- Eco-friendly campus: numerous sustainability-oriented school practices in place; rainwater harvesting, solar panels, school garden, vertical garden, bio-gas plant, composting
- Signs throughout the school to promote and nudge responsible environmental behaviour
- Ongoing waste management campaign involving community and other schools
- Best practices for the school are based on multiple approaches of the SDG's.

Pedagogy & Learning

- Integrated project-based learning is central to ESD
 - School grounds and gardens as a classroom
- Interdisciplinary teaching focus

Community Connections

- Strong community outreach programs that involved all community stakeholders
- Mentor and exchange workshops set up with other schools and community members
- Involved in government organised events connected to sustainability, good health and wellbeing
- Joint sustainability campaigns (for example waste management) with other schools and community members
- Awareness raising beyond the school is a major focus at this school

Capacity building

- Continuous professional development of all staff is prioritised including regular capacity building workshop
- School's capacity made stronger by being part of the International Eco-School network, both local, national and international partnerships like CEE

innovative teaching learning practices with an entrepreneurial dimension. Our school, since its inception, upholds its core values - **social responsibility, cultural consciousness, global citizenship and environmental consciousness** which support the vision, shape the school culture and is well reflected in the teaching, ethical conduct of our learners and even in our infrastructure. The school's vision, mission, core values and whole school engagement are aligned to achieve sustainable mindsets through positive change in behaviour and actions in all the stakeholders. After the launch of UNSDGs in 2015, we realised the potential in the SDG framework as a learning tool for our students. Therefore, we redesigned and revamped our educational goals in alignment with UNSDGs. Principal Luthra believes that 17 UN Sustainable Development goals can serve the purpose of both the educational themes and learning tools for making education relevant and in context with real life.

Extensive discussions, brainstorming and meetings amongst the head teacher and teachers are carried out regularly for the planning and (re)designing of the school's pedagogical plan to create a multi-faceted curriculum which integrates real life lessons into the classrooms

through curriculum linkages and connections. By imparting sustainability-oriented education effectively through school culture and practices, the school has endeavoured to align the integral drivers - curriculum, pedagogy, and whole school engagement. This has transformed the school's learning environment into the hub of research and action on SDGs where every student at the school has understood global goals, how they impact their lives and what they can do every day to help their country achieve these goals. The assessment is focused on 'for the learning and not of the learning'. Different types of formative assessments like – Quiz, role play, PPT presentation, recitations, article writing, performing art and art activities are carried out at all class levels.

We believe the following suggestions can help realise the objective of facilitating quality education to all: **1.** A school with *good infrastructure* goes a long way in improving the interest of both students and teachers alike. It plays a role in improving the attendance of students too. For this same reason, it can be said that investments in school infrastructure play an enabling role in solving many access-related problems of students to the school system, thereby improving their academic performance too. **2.** Some

flexibility and responsiveness in the curriculum is needed to allow for adjustments and modifications considering changing and new circumstances or priorities. Sometimes such adjustments can be minor in that they do not affect the curriculum structure; sometimes they require a form of modernisation to ensure that the curriculum remains current and relevant, reflects new developments in society and adequately prepares learners for life; and sometimes they call for innovation that brings new approaches and solution; and large scale, system-wide reform that entirely reshapes the existing curriculum. **3.** It's necessary to seek *policy change* in schools or school systems to enhance or protect the educational benefits to students, the physical and psychological health and safety of students and school staff, or the management and integrity of the system. **4.** *Changes in pedagogy* are reflected in experimentation with active and collaborative forms of teaching and learning tied to community-based public problem solving. New community-based, engaged pedagogies—most prominently service-learning—connect structured student activities in communities with academic study. **5.** *Changes in curriculum*, in educational content, in expectations for students, in teaching methods, in class size, in teacher independence – all these and many other factors can lead to a better educational experience for students.

Our WSA, SDG 4 Quality education whole school approach report⁸⁵ goes into more details, however, our eco-friendly campus and integrated project based learning are what we feel best showcase the holistic approaches to suitability orientated education at our school. The integrated project-based learning is a part and parcel of our teaching strategy, action research projects, the *in-situ* school practices (Annual Green Drive, Health and Hygiene drives, awareness programs like Special assemblies, Celebration of Earth Day, Tiger Day, Observing Earth Hour, Audits on land, water, energy & air etc.). Revamping Curriculum & Pedagogy (for example – designing lesson plans, adopting integrated project-based approach, creating inquiry-based classrooms, designing hands-on activities, stimulating and creative worksheets) with the clear objective of imparting sustainability education, is the foundational starting point which comes at no extra cost. It only requires effective engagement of teaching faculty and principal to its best of their abilities. Practices like observing earth hour, check on water and electricity consumption patterns and wastage, intra school cultural and literary activities, and class wise assemblies on pertinent social and environment issues are also beneficial with no cost implication. The following measures with little investment have proved to be beneficial directly or indirectly in the impart of sustainability education; installing eco-friendly measures like solar panels, rainwater harvesting systems (under subsidised promotional projects from government); installing sensor taps, half flush options, sprinkler system for optimum use of water; creating and maintaining herbal garden

and green spaces in the school campus, constructing compost pits and leaf composts; holding theme-based exhibitions on students work; and organising awareness programs within and outside school like tree plantation, inter school competition etc. Certain measures which the school has taken up at substantial costs are incorporating Continuous Professional Development Programs (CPD) and Capacity Building Workshops through experts in the field of education; collaborations with international and national organisations; organising cultural exchange programs, inter school meets and events; adopting latest edu-tech solutions like installing View Sonic Interactive Panels.

Contribution (2) by head teacher Padma Jyothi Turaga, Deputy head Kiran Khanna, teacher B. Rakesh and Eco-Schools coordinator Chetna Bhardwaj: Delhi Public lower secondary School (established in 2016):

Our school has been working with Sustainability-oriented Education since establishment of the school in 2016. This has led to increased awareness amongst students for the environment through various initiatives and methods where inclusive learning is combined with some form of action taking and activism. For example; waste management; learning through life skill lessons; campaigns for social causes, such as, campaigns for tree planting and a campaign against the use of firecrackers during festivals to avoid pollution.

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Teacher professional development workshop: Multiple webinars are hosted by the school management for the well-being of its staff members. A recent webinar by Sukhabodhananda focused on the concept of inner peace and development and how to combat stress at work.

The school has also encouraged and adopted various ways and means of engaging with sustainability-oriented education, some of which are connected to becoming an Eco-School and a School of Excellence (SOE). This included, for example, (a) Practising Reduce, Reuse and Recycle, (b) Activities and learning about saving energy and water conservation, (C) Learning about healthy lifestyles, and (d) ongoing projects based on sustainability.

As 21st century educators, we are morally and ethically bound to instil a sustainable oriented education and lifestyle. We recommend the whole school community to switch to sustainability-oriented practices like introducing green habits (switching off the power supply when not in use, adopting the 3 Rs as a way of living), to both organise and attend environmental awareness campaign and webinars, and to initiate environment positive thinking and behaviour. This happens both in and beyond the classroom, active participation of students plays a part of this and is promoted in various ways. For example, taking care of the classroom and school grounds: Students are given leadership roles such as becoming a “Green Crusader” where they take up sustainability related responsibilities within the school and in the community. There efforts are also acknowledged and rewarded.

Examples of a WSA in practice at our school • One fun example is our Math Garden initiative. The teaching-learning session involved the growing of fenugreek and other herbs in the shape of mathematical operations and numbers to help explore these concepts through nature. Through this we tried instil the value of love for nature and math.

Making our school green through the policy of donating saplings on birthdays has been a success. We have also made the switch to eco-friendly practices, such as; waste segregation; composting; growing vegetables and herbs in the school garden; growing flowers to increase pollinator; and making bird feeders to attract birds especially the house sparrow. Other relatively low costs investments include; installing rainwater harvesting and drip irrigation systems; and planting of trees on and off campus. Our most expensive sustainability investment has been solar panels. However, in the long run it helped us to reduce our electricity costs. More detail explanations can be found in our schools [SDG 4 report](#)⁸⁶, where many more examples are presented.

Another example includes our commitment to finding and intergating alternative **Pedagogy and learning methods**. We have enjoyed being part of the world-wide movement towards the commitment to [Fair Aware School](#)⁸⁷. As a part of our commitment, special Fair-Aware Assemblies are conducted every week in the school. The aim is to spread awareness among the school children about how the food

Key WSA Principles in action at *Dehli Public School*

Capacity building

- Professional development of all staff in topics connected to multiple SDGs, including the health and wellbeing of their staff (combatting stress)
- A monthly network set up to share best practices and teaching methodologies with 2 other Delhi public schools
- Peer to peer micro-teaching sessions led by teacher for teachers to learn from each other
- National mandates for 50 hours teacher professional development each year

Vision, Ethos, Leadership & Coordination

- Leadership and communication are seen a key for a child's success. Students are given responsibilities to children from a young age, at class level (monitors) and school level (Student council)
- School vision and ethos directly linked to social responsibility and concern for the environment

Curriculum

- National curriculum (2020) is linked to the 3 pillar of sustainability – environment, society and economy

Pedagogy & Learning

- New learning approaches, such as, Fair (trade) Aware school assemblies, human Library
- National Geographic courses for teachers result in innovative teaching methods
- Peer to peer learning of knowledge between teachers
- Art, music and dance integrated into lessons

Institutional Practices

- Students learn that failure is a steppingstone towards learning
- Health and wellbeing practices for both students and staff
- Birthday garden in community, comprising all the saplings donated by the students on their birthdays

Community Connections

- Multiple ongoing school-community relationships have been established; Health camp for the local community and all school staff; cooperation with local orphanage; other donations to local charities
- Much of the learning revolves around concrete actions and influencing environmental behavior and connecting with the community such as; heritage walks in local community; fruit and vegetables grown on campus distributed to the local community; saplings distributed to parents and students to plant at home

and trade systems work and how fair trade can connect farmers to markets and enable sustainable food and fashion choices.

We are also an [Eco-School](#)⁸⁸. This work starts in the classroom and expands to the community by engaging the next generation in action-based learning. Our educators and students are an active part of the Eco-School project where they engage in various activities in and beyond the classroom as previously mentioned - growing food and establishing vegetable patches, making toys from trash, making bird feeders etc. Teachers also take up various courses by the National Geographic Learning and implement them in their classrooms. Our mission with the [National Geographic learning](#)⁸⁹ is to bring the world to the classroom and the classroom to life. We have also found that integrating art, music and dance into teaching opens newer facets of learning.

The school has also introduced the **Human library**, a unique program where students interact with personnel/ individuals from various fields who visit the school and share their stories with the students.

In terms of **professional development**, multiple webinars are hosted by the school management for the well-being of its staff members. A recent webinar by Swami Sukhabodhananda focused on the concept of inner peace and development and how to combat stress at work. Also, a 'All hands' meet is conducted every month where teachers from all the three Delhi Public Schools meet and discuss on the syllabus and other teaching-learning methodologies.

According to the curriculum mandate, the staff members must go through a 50-hour training during an academic year so there is top-down accountability for continued professional development. Teachers also learn new sustainability-oriented teaching methods through

regular micro-teaching sessions, where teachers, and other staff, learn from their peers about the newer methodologies. Vertical and horizontal training is provided to staff members and we strive for every member to be provided with equal opportunities for growth within the organization.

Strengths/Prospects (from both schools)

- New curriculum/education policy integrates ESD
- SDG's play a major role in supporting the sustainability education
- Sustainability-oriented projects motivate students and encourage a positive attitude towards sustainability
- It takes complete commitment to deliver WSA sustainable-oriented education from all staff. Dedicated teachers have worked very hard to develop curriculum linkages and connections for a holistic approach to be possible
- Successful collaborations with national and international organisations to provide an interactive and dynamic platform to the learners and the necessary expertise

Challenges (from both schools)

- Motivation of community
- Budget restraints
- Bringing a change in mindsets and societal behaviours and attitudes is a long-term undertaking to bring on board students, parents and teachers together to work towards adopting sustainable habits and actions was a challenging task
- Pandemic and shift to online learning limited some of our whole school environment action projects and hindered community initiatives, but few projects like litter less campaign, biodiversity, social-emotional connect seamlessly integrated and modified for the online learning were a great success

Students in the school garden caring for tree saplings / Tree planting: The school takes pride in its Harithaharam program, currently over 4000 trees were planted in the campus. The school also has a fruit garden and vegetable garden of its own where the children grow vegetables that are then distributed to the community. As part of the Harithaharam program the school also undertook sapling distribution to parents and students. The school also has a policy of felicitating Chief Guests and dignitaries who walk into the campus with saplings to promote the green cause.

