Bali, Indonesia

Green School Bali

Building environmental sustainability into the very foundations of the school



WORLD'S BEST SCHOOL Environmental Action







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Introduction

Green School Bali is a mission-driven, action-based school located in the jungles of Bali. Opened in 2008, it was created to reform the way we approach schooling in the 21st century in order to address the need of the hour – educating for a sustainable future. At its core, the school embraces concepts not often explored enough such as; environmental stewardship, community, creativity, and compassion. The school has developed its own curriculum to provide students with opportunities to engage in meaningful, real-world experiences that make a positive difference. Educating sustainability is at the core of every experience at Green School – with environmental action in the day-to-day lives of all community members.

The school has developed its own curriculum to provide students with opportunities to engage meaningfully in lifelong, real-world experiences that make a difference. This one is based on its "Three Frames of Learning". The Experiential Frame: learning by doing. The Proficiency Frame: learning strong Literacy, Mathematics and Science components. And the Thematic Frame: integrating all subjects into a single unit. Green School Bali believes that education should spark an everlasting love for learning, community and environment in students as well as prepare them with the appropriate skills to become the changemakers of tomorrow.

School Profile



Country: Indonesia



Region: Bali



School type: Private - international school



Location area: Rural

Student population: 301 to 500



Prize Category: Environmental Action

"We're a community of learners making the world sustainable." - Sal Gordon, Principal, Green **School Bali**



CONTEXT AND CHALLENGE

Green School Bali is a pre-K-12 international school located in a rural village in the province of Bali, an island of Indonesia, with more than 420 local and international students from forty different nationalities. The school was opened by John and Cynthia Hardy in 2008, in response to increasing concerns that education was not keeping pace with the changing world, and to a desire for their children to feel connected to nature, embrace environmental stewardship, and prioritize strong values as much as academic proficiency. Facing a more precarious future than ever, the Hardy's sought not to make schools more sustainable, but to make communities, cities and eventually the world more sustainable, starting with schools.

The school's principal Sal Gordon carries the torch of that founding mission today, explaining how COVID helped shed more light on a general lack of climate education and lack of interrogation towards colonialcentred perspectives and biases in the education system.

John Hardy went on to read Alan Wagstaff's "Three Springs", which spoke of a school living community and was so inspired by the vision the author proposes that he wanted it to bring to life in Bali. From here, The Hardys watched Al Gore's 'Inconvenient Truth' and it pressed them to move forward with their community and ecology-centred project.

Today, Green School Bali inspires students to connect with nature and local communities, to develop skills, values, and competencies holistically, aligned with the reality that children face in the 21st century. In their own words, the school's mission is to be "a community of learners making our world sustainable." Gordon speaks to this, expressing how "we aren't just learning about sustainability, we are learning for sustainability."





"I think all the students here are incredibly lucky because there is this great atmosphere of learning about the things you care about, interacting with the environment, and learning some of the core values of success in life, which are respect, kindness and understanding."

Dr. Jane Goodall DBE, British author, Primatologist, Ethologist and Anthropologist, during her visit to Green School Bali in 2014.

EXPERTISE AND APPROACH

Education at Green School Bali is founded on strong pillars of learning, with the flexibility to embrace solution-based thinking and action when students encounter problems and challenges that interest them. This is referred to as a 'living curriculum'. This approach provides clear, evidence-based, guideposts for the development of each learner while having systems built in that enable the curriculum to evolve as the world evolves. They believe in the development of a different kind of IQ. Rather than Intelligence Quotient, they refer to IQ as Intelligent Questioning. The staff at the Green School Bali encourage students to actively pursue questions about what interests them most in their own lives.

The school engages students in a systems-thinking approach to sustainability. This means teaching students the nature-based, societal, economic, and wellbeing-based factors which inform our assessment of sustainability. This approach, in turn, necessitates students' connection to the school's surrounding community and natural environment as they explore ways of becoming changemakers. From here, teachers can integrate more traditional areas of study like mathematics, science, art, and literacy, among other subjects, into the projects students, decide to pursue. Putting students in the "driver's seat" of their own education fosters an authentic love for learning in them and an ability to have fun and be reflective in the process. The learning programme at the school was designed by educational experts who aligned with the founding philosophies.



This student-led curriculum is structured around what they call "The Three Frames of Learning." The first frame is the Experiential Frame, in other words 'learning by doing' rather than basing all learning on instruction, books and theory. This is based on research which shows that the most impactful learning experiences happen when students, and their surrounding community, can activate their learning and create a true impact in the world. It works as a hands-on approach which ensures educators are making use of creative teaching approaches, and designing programmes which ensure student involvement and engagement. Secondly, comes the Proficiency Frame. This frame comes from understanding the value of traditional, knowledgebased learning approaches and the importance of students developing strong proficiency in more traditional school subjects - like Literacy, Mathematics, and Science. They believe that being knowledgeable and having strong "academic skills" are prerequisites for changing mindsets. In this way, it is fundamental to equip learners with skills in communication, problem-solving and critical thinking. The third and final frame is the Thematics Frame. This entails taking all subjects, namely Mathematics, Science, Literacy, Art, History and Music, into a single integrated unit. This was constructed so that the learning programmes reflect the complexity and connectivity of life more profoundly - the "systems-thinking" approach. In this way, the school believes subjects shouldn't be taught as separate, unrelated units or classes. Gordon explains how, "as the students get older, the lines between the different frames blur," meaning that as students develop so does their capacity to develop complex, critical thinking skills.

Their 'REAL' pedagogical framework defines how teachers create learning experiences. All learning experiences at Green School are REAL: Relationship-driven, Experiential and Evolving, Authentic and Activated, and grounded in the Local community and culture.





The school goes beyond green or environmental studies, they plan their programmes through a sustainability lens. These include the Sustainability Compass, which focuses on nature, society, economy, and well-being, as well as the United Nations' Sustainable Development Goals and Permaculture principles. These are modified and taught according to the developmental age of the learner.

As members of a tight-knit community, the school seeks to model, teach and honour what they call their iRESPECT values, which include responsibility, empathy, equality and of course, sustainability. These are paramount in the teaching experience the school provides, where children are shaping their understanding of the world as individuals and as a part of a larger community. Today, parents speak about how the school values have positively affected their children, with one of them mentioning how "Green School has been magical for my daughter. Her creative spirit, kindness, and curiosity for the world are nourished daily. She is blossoming into her best self."

The campus is the classroom at Green School Bali. A space where students discover problems and create solutions to conserve and regenerate, within the campus, for the entire school community. The building material for the school structures is mainly bamboo and grass roofs; the most abundant and regenerative materials locally available. Students work on the school grounds, raising crops, taking care of animals and learning key life skills including composting, recycling and tending to the campus as a complex ecosystem.



The food students eat will often be produced on the campus grounds by students and is fully organic, classrooms are built out of sustainable and recyclable materials and even the toilet facilities are now integrating composting toilets to reduce water usage. Kate Druhan, Head of Community and Environment at Green School Bali, mentions how the school does "the small things and the big things, "Everything from your plate being a banana leaf and your straw a papaya straw through to a very high-tech micro-hydro system that generates enough power, on its own, to power almost the entire campus."

Above all, learning about environmental action at Green School is one of the primary outcomes for the school and its community. Lessonsarning experiences/units, projects, initiatives and events are designed for the school community to demonstrate respect for and make a positive impact on, the environment. The evidence is everywhere - the sustainable bamboo campus design, surrounding permaculture gardens and rice fields, the Ayung the river that fuels the school, the Seedsto-Table curriculum, the Student Ocean Ambassadors Program, Reef and Mangrove Restoration, Recycling Center, Carbon Zero team and so much more.

The school has been visited by esteemed environmentalists like Jane Goodall and Alexandra Cousteau. Its students and alumni have presented at the United Nations and COP conferences. Its Green Educator Network equips teachers all over the world via courses on educating for sustainability. When comes to environmental action, is embedded into the fibre of what this school does every day. Green School Bali lives its mission of a sustainable future in an incredible amount of ways.





"Green School has been magical for my daughter. Her creative spirit, kindness, and curiosity for the world are nourished daily. She is blossoming into her best self."

- Parent, Green School Bali

On the way to Zero Waste

OUTCOMES AND RESULTS

Initiatives

The school has taken the approach that learning is everywhere and that learning can be applied to real problems and that real solutions can be developed and sustained - with students at the centre. Some examples of these include the establishment of a selffunding recycling and composting centre that serves both the school community and the surrounding villages. The centre has processed more than 15 tonnes of recyclables since opening and every community member can be involved. The BioBus school transport service takes cars off the road and is fuelled by used cooking oil collected by our High School students from local restaurants and hotels in Bali. This is both a used cooking oil waste management solution and an emissions-reduction solution.

Operation Rain or Shine is a renewable energy project that has involved the youngest learners from 3 years of age up to Grade 12. With many elements from solar to microhydro to pedal power, this initiative has allowed our school to generate 90% of its energy from clean, renewable sources (depending on the weather).

The school's own mangrove sanctuary is a long-term regeneration and carbonsequestration project, adding another rich 'classroom' for scientific inquiry and applied learning. The Innovation Hub, or "iHub," is a space where learners can design and rapidly prototype sustainable products including surfboard fins made from plastic bottles or bicycles made from bamboo. All of these initiatives are just a few examples of the many and growing number of studentled projects for environmental action that takes place at Green School each year



Outside the classroom

Outside of school hours, school Principal Gordon mentions projects such as the Kul Kul Connection program. While the school already hosts local students during normal school hours, young learners in Bali are compelled to complete the National curriculum, which is quite different from what the Green School offers. Gordon says in order to still benefit from what the school has to offer, "more than 300 students (pre-COVID) would come to the school after hours, once or twice a week". Here they can learn critical skills such as English and Sustainability, some of which are taught by the day. These students pay by bringing in their recycling and are integrated into other extra-curricular activities as much as possible. This includes a regular community market, trash management collection, composting initiatives, and organic offerings with

systems in place that can lead to rapid production of compost.

The school premises have been built with bamboo, which led to the development of IBUKU design studio and Bamboo U. These two organisations have expanded the use of bamboo in buildings beyond the school itself. The premises also host large events for ecological and social consciousness, such as in the case of Earth Day, where over 1000 people joined.





Outside the school

Following its 14-year trajectory, Green School Bali has produced an array of outstanding alumni who have spread their wings worldwide.

Two notable alumni are sisters Melati and Isabel Wijsen, who worked their way into the limelight when at ages 12 and 10, they launched a campaign called Bye Bye Plastic Bags, to rid Bali of plastic bags. The initiative ultimately led to an island-wide ban which has now transformed into a global movement in over 20 countries. This placed the students on the world stage, giving them the chance to share their vision at the United Nations, the World Economic Forum and Ted Talks.

Another student is an ecoanxiety researcher, youth climate activist and 2021 Forbes 30 Under 30 honoree, Clover Hogan, who advises Fortune 500 companies on climate action in addition to running her own non-profit, Force of Nature. Others include Nicholas Saye, who is currently manufacturing an independent line of sustainable products and Isami Said Rashid who now tours with his band all over the world, in countries such as Tanzania and the US, raising awareness for Borneo's burning rainforests. In fact, 36 of the school's graduates have had the opportunity to speak at UN conferences, while 7 of them have given TED or TEDx Talks.



Key Steps



Building a school for the future meant revisualising what a school looks like entirely. For John Hardy, students should walk through the front gates of the school, to develop a different idea of what the future could be. For this purpose, the Hardys chose to build the school out of bamboo, a fast-replenishing carbon-capturing local resource. This entailed expanding expertise on building with bamboo locally and eventually meant opening up IBUKU and Bamboo U.

The school campus helps nurture a love and respect for the environment for learners through its use of biophilic design, including classrooms that are open to nature and the school grounds. In the design phase, this meant including unconventional areas of learning, such as mud pits, where children experience the joys of getting dirty; animal enclosures, where they care for and learn from animals like chickens, bunnies and pigs; or permaculture gardens where they plant, care for and ultimately harvest vegetables and fruits to cook with. These spaces are what today define the Green School experience.



DEVELOPING A LEARNING PROGRAMME

The team of staff developing the school's academic infrastructure worked under the premise that students learn more from HOW they are taught than WHAT they are taught. For this, they decided to find themselves on student-led and handson approaches. Which meant ensuring that learners are empowered to take responsibility for their own learning journeys and select their own courses. During this phase, the three thematic frames, iRESPECT values and R.E.A.L pedagogy were developed. Curriculum design is supported by the Sustainable Compass, SDGs and permaculture principles, as aforementioned. But it is also founded on the notion of allowing students to pursue their passions, and explore the problems they would like to tackle while finding solutions for them. Examples of these include students creating surfboards from bottle caps collected through trash walks along the coast of Bali, creating a floor tile which generates renewable energy when you step on it, and campaigning for local restaurants to replace their conventional straws with bamboo straws made during the school's on-campus Innovation Hub, taking steps to conserve aquatic life through coral-reef replanting or even a student who developed sustainably-made cosmetics using natural materials when their sibling experienced a bad skin reaction.

Courses are designed to help foster Green School Skills, with a particular emphasis on adaptability, leadership, awareness, collaboration, and creative thinking. These are constantly subject to re-evaluation as the school continues to learn and grow.





CULTIVATING COMMUNITY

The third step for the school was cultivating a true community at Green School Bali. For the school, this is far more than sharing a common location or fellowship with others. The school transcends physical locations with a simple shared belief in a progressive and nature-based approach to education. This meant fomenting a culture of shared values, goals, and knowledge between learners from Bali, and from all corners of the world. The community wasn't just essential to growth within the school, rather Drurhan explains how families coming in from different contexts are given a social orientation when they arrive at the school. Many of the families at the school have moved to the island for the very purpose of having their kids attend Green School. With families being a foundational component of the school, Drurhan expresses how it is crucial that new members show respect and understanding to the local community, their ecology and culture, incentivising building relationships with them and contributing in positive ways.

From this community baseline, the school can activate projects and continue learning. Having a strong community foundation was critical during the pandemic. Through the community bonds the school has built, they saw an array of impressive initiatives arise from faculty and families in the time when COVID-19 had dominated the global stage. These included food banks, fundraising, creating care packages and sharing of resources and information. Each year, families joining the school take a carbon pledge with actions to reduce their carbon footprint and are supported to not only participate but also initiate parent-led projects around waste, water, energy and regeneration.





Advice and Guidance

Green School Bali embeds sustainability into everything they do. They encourage other schools to put their students at the centre of their programmes and initiatives, to empower them. They send a call to action, to join forces and to shift education. To promote creative and critical thinking, to bring alignment to subjects and activities with values that help us become better people towards ourselves and the planet around us. One last outstanding aspect that they have deeply integrated into their school structure is the community, both within and outside the school, to develop profound relationships and help students better understand the world around them, the problems they will face and are facing, and the solutions they could inspire.



