

INTRODUCTION TO LONG WAY HOME

*“There's a fount about to stream, There's a light about to beam, There's a warmth about to glow,
There's a flower about to blow; There's a midnight blackness changing Into gray; [Humans] of
thought and [humans] of action, Clear the way.”*

~Charles Mackay~

The creation of this document comes after 17 years of learning *how* to build the Long Way Home (LWH) organization. In 2005, co-founders Matt and Adam and the Comalapan community¹ had no idea that their partnership would create an organization that has repurposed over 1,000 tons of trash, generated 304 local jobs, hosted over 3,000+ international volunteers, and now serves 123 K-11 students. They had no idea that by 2020, the organization would nurture a democratic education ecosystem - ‘Hero School’, which would nurture a democratic education ecosystem - 'Hero School', which connects green construction, formal education, equitable international volunteerism, and active participation to address 21st century challenges. In those 17 years many lessons were learned and we, the LWH organization, now feel confident in the democratic education ecosystem that we have created. This document therefore serves as a review of the Hero School model and a guide for how to adapt it in other contexts.

This document is primarily written for progressive educators and education organizations. Whether you are working within or seeking to enter the education sector, this review and guide provides deep and practical insight into how LWH has innovated within formal and informal education. We hope that this document will illuminate the key lessons we learned in those 17 years of development, so that other individuals and/or organizations can learn from our story, avoid the pitfalls we experienced, and nurture their own democratic education ecosystem.

***Clarifications** – The term **Democratic Education ecosystem** refers to the entirety of LWH programs and operations. The term **Hero School** is the LWH model/name for this ecosystem.*

All financial figures in this document are updated through 2020 and stated in United States Dollars (\$). Non-monetary statistics are also updated through 2020.

Financial data reflects total Cash InFlows and total Cash OutFlows in order to reflect the full Cash Flow of funds feeding and being generated by the organization. However, titles on graphs are labeled as Income & Expense for a general understanding by a broad audience.

¹ Comalapa is situated within the department of Chimaltenango.

WHO IS LONG WAY HOME?

On Sept 15, 2004, after a lengthy application process initiated by Matt Paneitz, and conducted pro bono by Jennifer Bridges J.D. and Martin Levine CPA, the Internal Revenue Service assigned LWH an employee identification number and granted us tax-exempt (501c3) status. The first step in the application process, according to the *Nonprofit Kit for Dummies*, was to name the organization. "Long Way Home" was chosen as a result of scrolling through catchy song titles.

The next step was to assemble a Board of Directors. Matt, the future Executive Director, called five colleagues, told them of his plans to return to Guatemala after the Peace Corps, and asked if they would serve on the LWH Board. After incorporating the non-profit in Oregon, all five agreed to meet in Manhattan in July 2004, where they adopted the bylaws, assigned Board positions, recorded the organization's first meeting minutes, and celebrated the birth of LWH.

Parque Chimiya

Our initial mission statement was to break the cycle of poverty among youth by creating educational opportunities, cultivating civic interaction, and encouraging healthy lifestyles. To that end, from 2005-2009 we built Comalapa's first public park - 'Parque Chimiya' (in partnership with the local NGO 'Chuji Tinamit. Park visitors will find a grass soccer field, a basketball court, a community kitchen, a playground, botanical gardens, a tree nursery, stone retaining walls, a driveway, as well as a remodeled volunteer living quarters. Parque Chimiya is where we established our presence in Comalapa and earned the respect of its citizens through hard work.

Although the park is sustainable, well attended, and an overall success, it was obvious that recreational opportunities were not a top priority. People, including the LWH staff and volunteers, were spending a disproportionate amount of time carrying firewood and water to their homes. People were consistently requesting employment from the LWH team. The rivers and streams were polluted, kids had runny noses due to indoor smoke inhalation, incidents of diarrhea in children were high, many people had homes made from corrugated metal, and the roads were constantly blocked due to landslides. It was time for us to modify our strategy and our mission.

Green Building and Campus Construction

Matt's proposal for our next project was the construction (using conventional materials) of an orphanage/school that could feed, educate and house 350 kids, financed through biodiesel production. In early 2008 Matt called LWH's current construction manager (and his old Peace Corps buddy) Adam Howland and asked him to work up an estimate for the project. Rather than give an estimate, Adam packed his 1989 Ford F-350 with tools and drove to Guatemala from upstate New York. Not long after, Adam showed us a book about building sustainable houses with tires, written by *biotect*, Michael Reynolds. Rather than a biodiesel-financed orphanage, the group discussed building a vocational school out of recycled and natural materials.

Before we could commit to building a vocational school, however, we had to answer some basic questions. Our pilot project, the construction of a small home for a local family, provided us with these answers:

- Yes, materials required for green construction can be sourced locally;
- Yes, both boys and girls can contribute;
- Yes, it's design warms and cools the inside naturally, more so than a cinder block house;
- Yes, the process is ecologically sound;
- Yes, using alternative materials means increased labor needs and thus job creation;
- Yes, it is aesthetically pleasing;
- Yes, people do enjoy building with tires;
- Yes, there is room to innovate;
- Yes, the buildings perform well during earthquakes;
- Yes, this process addresses the issues identified while building the park;
- Yes, this process can be replicated;
- and Yes, we would be updating our mission statement.

Our updated mission: to use sustainable design and materials to construct self-sufficient schools that promote education, employment and environmental stewardship. To that end, since 2009 the LWH collective, through trial and error (mostly error), has transformed 1000 tons of trash into the Centro Educativo Tecnico Chixot (*chee-shoat*²) school campus - Hero School CETC.

Education

The decision to build the school campus coincided with the establishment of a partnership with an existing local primary school, Tecnico Maya. Our agreement was that LWH would build the campus and Tecnico Maya would administer the school and progressively educate the students. By the end of 2011, construction of the first four classrooms was complete and the doors opened for the 2012 inaugural primary school class. When it became clear six months into the school year that Tecnico Maya would be unable to fulfill their commitment, LWH applied to the Ministry of Education for a new school charter, assembled a teaching staff, enrolled 47 students, and assumed full responsibility for the education provided by the new Centro Educativo Tecnico Chixot (CETC) - Hero School CETC.

Our Mission and Vision

LWH's mission and vision has necessarily evolved since 2004 in response to its changing role. Its mission, vision and goals were redefined in 2019 to better account for the development of its democratic education ecosystem. To respond to the work and potential of our democratic education ecosystem in action, LWH went through the process of redefining its mission, vision, and goals in 2019. The result was as follows:

Mission - Through green building, employment, and education, LWH mobilizes people to actively participate in democracy and create innovative pathways to economic and environmental justice.

² Comalapa's Kaqchikel name.

Vision - LWH envisions communities equipped to innovate and act responsibly in the face of local and global challenges.

Goals –

- Educate the (future) electorate through a participatory, empowering, and emancipatory learning process.
- Cultivate a reciprocal learning ecosystem of democratic engagement, environmental and economic justice – a democratic education ecosystem.
- Act with integrity and accountability on the frontlines of grassroots change.
- Empower critical thinkers to take meaningful action in a complex world.
- Build environmental awareness and act to mitigate the ongoing climate crisis.

The overlapping objectives of our mission and vision are visualized in the diagram below:



WHY WE DO IT?

“The truth will set you free, but first it will piss you off.” - Gloria Steinem

In 1992, government leaders around the world received a document endorsed by 1,575 of the world’s most prominent scientists (including 99 of the 196 living Nobel laureates in the sciences) titled *‘World Scientists’ Warning to Humanity*. To avoid causing “vast human misery” this document called for a widespread transformation of human behavior “to stop the ever-increasing environmental degradation that threatens global life support systems on this planet.”³

³ IPCC (1992) *Climate Change: The IPCC 1990 and 1992 Assessments Report* [online] Available at: <https://www.ipcc.ch/report/climate-change-the-ipcc-1990-and-1992-assessments/> [Accessed 16 August 2021].

Continuing environmental degradation as evidenced through scientific data collection on variables of freshwater availability, marine life depletion, ocean dead zones, forest loss, biodiversity destruction, climate change, and human population growth led to a *Second Warning to Humanity* in 2017. The 15,371 signatories concluded that “with the exception of stabilizing the stratospheric ozone layer, humanity has failed to make sufficient progress in generally solving these foreseen environmental challenges, and alarmingly, most of them are getting far worse.” The United Nations Intergovernmental Panel on Climate Change (IPCC) estimates that we have 11 years (and counting) to prevent further irreversible damage to the planet.⁴ That leaves us with 7 years, now in 2021.

What exactly does “far worse” look like for a country such as Guatemala, one of the most war torn, crime ridden, malnourished, and impoverished countries in the world? When exacerbated by extreme and unpredictable weather patterns, increased scarcity and insecurity is a likely outcome. Without a widespread transformation of human behavior, “vast human misery” is guaranteed.

Take employment as an example. In Guatemala unemployment is often concealed as underemployment, since many of those technically considered to be employed actually have temporary and unstable jobs below the minimum wage and excluding any benefits.

The situation of underemployment and unemployment in Guatemala:

- Rate of employment with benefits: 13%
- Average wage is \$70/month below the \$323/month minimum wage
- 58% of the population have incomes below the extreme poverty line
- Indigenous people (most Comalapans), youth, and women earn 23% below the national average
- More than half of workers in rural areas do not receive wages, benefits, and social security required by law
- 65-86% of the workforce works in the informal sector, outside basic protections of the law⁵

With such unjust economic realities, the climate crisis, and the growth of unsustainable consumption, strategies for localized and climate-responsive community development need to be created for marginalized Guatemalans. Guatemala is not anticipating the kind of radical and economically redistributive revolution capable of establishing a tax-base generating, poverty-alleviating middle-class. As a result, it needs to lead the charge in building true, democratic communities with the skills to produce local solutions and opportunities for the new context we live within. This is why our work and our provision of full-time employment for local Guatemalans is so important.

⁴ IPCC (2018). *Special report - Global Warming of 1.5C*. [online] Available at: <https://www.ipcc.ch/sr15/> [Accessed 16 August 2021].

⁵ *Guatemala Labour Market Profile* (Rep.). (2014). Retrieved 2019, from Danish Trade Union Council for International Development Cooperation website: https://od.dk/sites/default/files/undervisning/arbejdsmarkedsprofil_0.pdf

How We Do It?

The community is our classroom and the campus our laboratory. LWH seeks to establish purpose in this classroom, a purpose that improves well-being and creates a more financially secure community.

Through community wide participation, active citizenship, courage, Deweyan theory of democratic education, the spirit of deliberation, and secure funding mechanisms, we bring an ecosystem of local and global actors together to unite under the common purpose of generating community and increasing community and planetary well-being.

How are we making the connection between climate change and education? Initially, we thought that taking full responsibility for the education of our students meant that Hero School CETC would prepare our students to either enroll at a university or adopt a vocation. Yet, given the aforementioned context, shortly after LWH assumed full responsibility for Hero School CETC education, we started exploring alternatives to the rote-memorization based approach to education. We instead pursued an applied learning curriculum that involved our building team and the community.

According to reference material available for Guatemalan rural development, LWH's development knowledge of Comalapa, Hero School CETC staff and student-led surveys, recommendations to drastically improve living conditions in Comalapa include:

- Building ventilated stoves to reduce respiratory illness,
- Implementing waste management systems to reduce gastrointestinal illness,
- Improving access to potable water,
- Building retaining walls,
- Replacing adobe walls with earthquake resistant construction,
- Increase participation in secondary education,
- Improve employment opportunities.

How did we orient our organization to address these recommendations?

- We developed a project-based curriculum for 7th- 11th grades in which students and teachers build stoves, latrines, and ferro-cement water tanks in Comalapa and surrounding villages.
- These projects are implemented after a student-led community survey as well as student and teacher presentations, consultation, and approval from the community members.
 - Surveys were conducted as an applied portion of the Social Studies class. They evaluated living conditions from home-to-home in Xiquin Sanaii. This village was chosen as the first project site due to a recent Engineers Without Borders (EWB) project that established a strong relationship between LWH, Hero School CETC, and the community.
- Builders then guide the student projects alongside teachers.
- Volunteers lend muscles and funding to the student projects.

Plans for expanding this project-based curriculum include:

- Comprehensively developing the curriculum for all Hero School CETC grades (K-12) in 2022 with yearly refinements beginning in 2023. Curriculum development seeks to produce these expanded learning outcomes:
 - Students and teachers will study the project throughout the year, from planning to implementation to post-project evaluation, while also accomplishing national education requirements.
 - Builders will take the students' survey results and build out more complicated infrastructure projects.
 - After a three to four-year involvement with a village, all infrastructure projects identified in the survey will be completed and the students and builders will restart the process in another village.

What do we hypothesize this curriculum and coordinated work will accomplish?

1. Increased pressure on local and national politicians to improve democratic procedures.
2. A classroom curriculum will be created that supports both the growth of the students and their capacity to engage in applied community development.
3. Students graduate having built a stove, a ferro-cement water tank, a latrine, a retaining wall, a latrine, and a house.
4. The curriculum's purposeful direction is likely to increase students and teacher satisfaction, leading to improved learning and attendance, resulting in improved grades and attendance.
5. Students might decide to wear lab coats...as though they are scientists investigating how to improve living conditions in the lab - their community. Or capes...as though they are local heroes, working to solve the problems that are harming their fellow community members.
6. Students and teachers that build for and with the low-resourced families in the villages around Comalapa will have an improved self-esteem as they see that they have the capacity to implement relevant and timely solutions to community needs.
7. The students and the teachers will look up to the builders and their craft, giving the builders increased self-esteem.
8. Volunteers will contribute to and learn from unique and relevant community development and take lessons learned from LWH back to their home communities.
9. All of us, working together with a common goal will develop a more informed global citizenry. A community that has been looking at local and global issues and studying how to solve them, merging the classroom with real world action.
10. The technology for green building will improve as we continue to build.
11. By teaching and building resources for sustainable living, we help to address the climate crisis.
12. Between the teacher and student investigations, builders improvements, and volunteer contributions, the final projects will improve from year-to-year.
13. The LWH ecosystem will create participatory and active democracy within a strong community.

Ecosystem Diagram

Below is a visual and text-visual attempt at capturing this Hero School model.

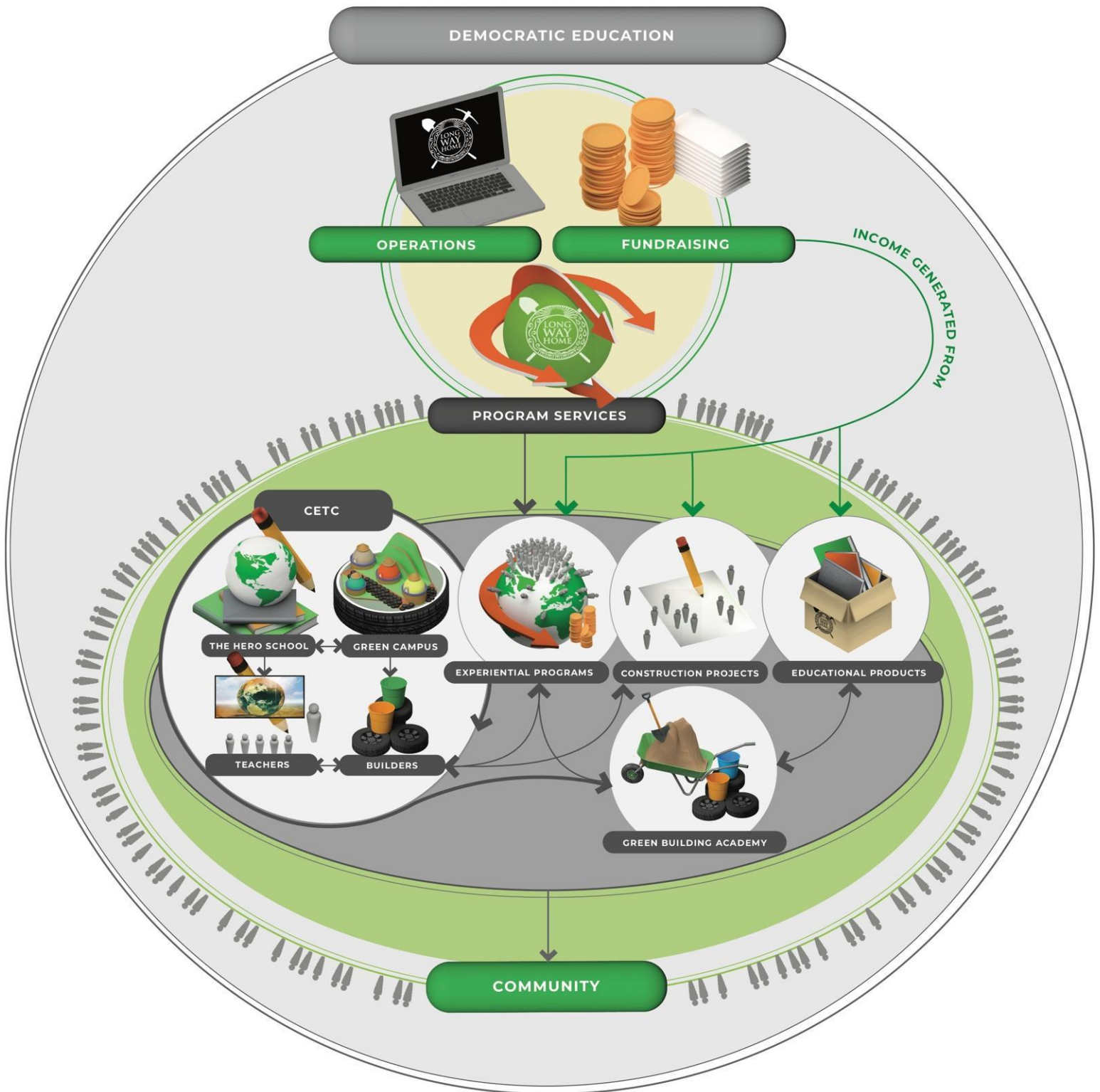


Figure 1: Hero School model - Diagram - Visual

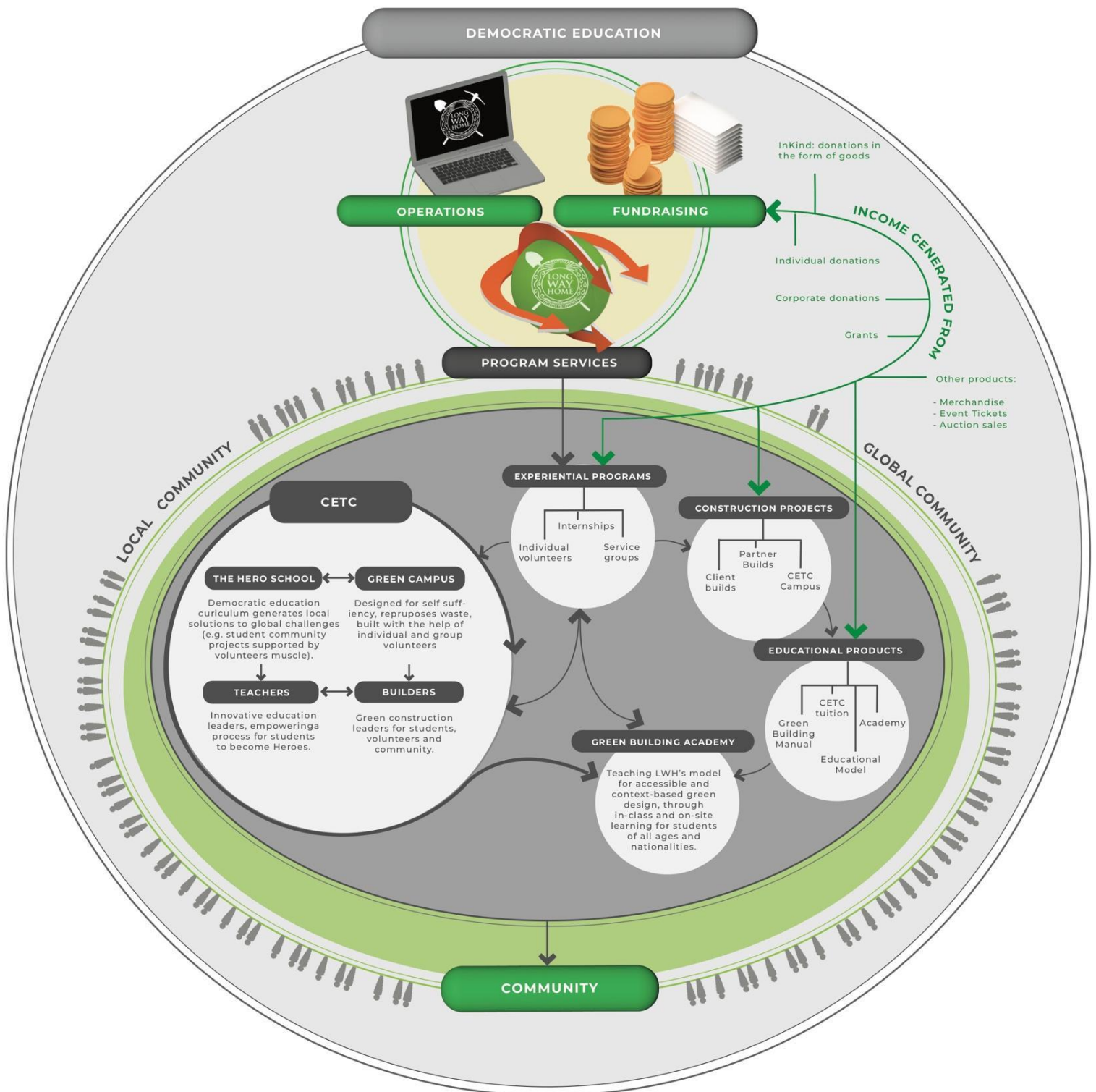


Figure 2: Hero School model - Diagram - Text

WHO IS HERO SCHOOL CETC?

Hero School CETC is the founding and primary center of investigation and realization for the LWH mission. Using local data, the Hero School model and curriculum engages students, teachers, builders and volunteers in community action that responds to local challenges. Take respiratory-related illnesses for instance, perhaps the most significant public health challenge facing Comalapans. According to Comalapa's Health Clinic records in 2011:

- 60% of all visits were due to respiratory-related illnesses, and this figure climbs to 73% for infants under the age of one.
- 38% of all reported deaths were due to respiratory-related illnesses - including five infants under the age of one.

The attendants at the Health Clinic Statistics Office stated that this situation was due to a combination of smoke inhalation from indoor cooking and cold temperatures in the houses. Conceivably more ventilated stoves would reduce the number of visitors to the health center and quite possibly, deaths in children under five. LWH reviewed this data and sought to respond to it in the classroom through a Deweyan democratic education approach. As Noddings (2013)⁶ explains, John Dewey defined subject matter in terms of the material used in resolving a problematic situation:

It consists of the facts observed, recalled, read, and talked about, and the ideas suggested in course of or development of a situation having a purpose. This statement needs to be rendered more specific by connecting it with materials of school instruction, the studies which make up the curriculum. (p..)

LWH decided to address this problematic health situation in the classroom by making stove construction the focal point of the state-mandated curriculum for the 7th grade, and dividing the responsibility between these courses: Art, Science, Social Studies, Computers, Dance, Budgeting, PE, Home Economics, Kaqchikel, Spanish, English, Math, Music and Theater. By complying with the class schedules mandated by the Ministry of Education in Guatemala, this problem-solving curriculum is available to the public through Hero School CETC. Furthermore, formal accreditation allows the Hero School student to earn the grade level certification while going much deeper in their learning process than their peers at schools solely focused on traditional classroom models and achieving state requirements.

To develop curriculum at each grade level, the Hero School CETC Curriculum Development Committee followed the 7th grade problem posing/solving framework and the Curriculum Activities Development Guide (available upon request). The principal variations from grade to grade are the development related projects which address other problematic situations in Comalapa. 8th grade students build a *ferro-cement water tank* to address the water collection, storage and distribution issues facing Comalapa. In the 9th grade, a waste management system will be explored through the construction of a *dry compost latrine*. In the 10th grade, a *tire*

⁶ Noddings, N. (2013). *Education and Democracy in the 21st Century*. Teachers College Press.

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retaining wall will be an introductory approach to construction in earthquake-prone areas. In the 11th grade, a *larger tire-walled water cistern* will be tackled. In culmination, the 12th grade we will combine the lessons learned from the previous projects and construct a *house*. Each project is completed for a local family identified as in need of this item by the student-conducted living conditions survey. Hero School CETC, from the creation of its campus and curriculum to its innovative engagement of community in action, is the primary generator of LWH impact.

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This democratic education ecosystem has diverse impact on an array of individuals and communities. Our impact can be measured across three main forms of development – empowered democracy, environmental and economic justice. Additionally, sustainable construction has global relevance, given realities of climate change, environmental destruction, and their ripple effects. LWH’s ecosystem model is relevant for adaptation by communities around the world to improve human and environmental well-being as well as generate high quality economic and educational opportunities.

CHALLENGES IN QUANTIFYING OUR IMPACT

Due to the long-term nature of our vision and mission relative to the age of our organization, at times it is difficult to measure impact through numbers. It requires attending to “slowly-changing, fundamental variables that create memory, legacy, diversity, and the capacity to innovate in both the social and ecological components of the ecosystem” (Folke)⁷. For instance, the emergence of democracy within a district or country may not be seen politically for generations, especially within Guatemala’s complex and inefficient political landscape. Specifically, given that the generation we are educating at Hero School CETC is under 18 years old, manifestation of impact on an economic and social level will take time.

Nonetheless, the engagement of our students, teachers, and builders in our work is a demonstration of active participation and grassroots cultivation in itself. We measure our impact beyond observations and anecdotes, through the following methods:

- LWH financial and statistical data
- Surveys conducted in San Juan Comalapa, Guatemala
- Public studies and research

CREATING IMPACT THROUGH OUR MISSION

3400+ individuals specifically in Guatemala impacted by our Democratic Education ecosystem

\$798,800 spent on local employment and **304** jobs created in Guatemala

Community challenges of **waste, water supply, security, sanitation, and health** addressed locally

More than 1,000 tons of trash repurposed as Green Building materials

⁷Folke, C. (2016) Resilience (Republished). *Ecology and Society*, 21(4):44.

OUR IMPACT

1. IMPACT ON EMPOWERED DEMOCRACY

Across all aspects of our organization, we create a connected thread of empowered democratic experiences where participants are invited to think critically and work collectively. An integral part of our mission is to create empowered democracies beyond the walls of the K-12 school, to weave democratic principles into the lives of our builders, teachers, volunteers, and staff.

Participants of our education ecosystem:

Our Hero School CETC K-12 students are engaging with the Hero School curriculum through project-based learning focused on green building and community development, learning to be leaders in their own communities.

12 grade levels
75 primary students (grades K-6), 31 middle school students (grades 7-9), and 17 high school (grades 10-11) students in 2020.
Attrition rate of Hero School Comalapa is much lower than the average of other schools in Comalapa



Our Hero School CETC K-12 teachers and school staff are collectively evolving the curriculum through their own exploratory learning process of what it means to live democratically.

27 teachers and school staff

Our green building team has honed their skills and developed our green building model over years of innovation, adaption, and solution-oriented approaches.

9 active, full-time green builders

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An equal and just economic and political system requires an electorate educated in the importance and principles of democracy. We therefore ensure that this type of education is



accessible. In Comalapa, 76% of survey respondents have difficulty paying for tuition.⁸ We are removing this barrier with a very low-cost tuition of 15 Quetzales (\$1.95 USD) per student per month.

Individual volunteers and volunteer service group participants are encouraged to become more actively engaged learners and global citizens, and are invited to learn about our democratic education ecosystem.

Participants of other LWH programs from our college credit bearing Certificate in Critical Pedagogy & Sustainability and course 'Project Based Learning' are taught by our Executive Director, Matthew Paneitz.

There are also Hero School affiliates in Livingston, Guatemala, Victoria Falls, Zimbabwe and Uttarakhand, India in the process of developing the adaptation of our green building & Hero School model.

2. IMPACT ON ENVIRONMENTAL CONSCIOUSNESS

As green construction is our methodology for environmental stewardship and a form of democratic engagement, we have imbued this in all aspects of our organization.

Creating environmental consciousness and stewardship through:

2000+ green building volunteers staying for 7 days to up to 6 months
Our Hero School CETC green built campus (complete project details on our website)

⁸ Boege, S. (n.d.). *Continuation of the Socio-Economic Study of the Families of Tecnico Chixot* (Rep.).

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Total waste material repurposed for building projects:

Hero School CETC construction has repurposed 15,764 tires, 9,100 glass bottles, 24,645 trash bottles, for a total of ~500 tons of non-biodegradable waste.

All building projects, including the Hero School CETC's campus, have repurposed ~1000 tons of trash with 45,000 tires repurposed

Other green building initiatives:

Our Green Building Academy is a month-long program for participants around the world to learn our green building and democratic education techniques. Although important to LWH's mission, it is not necessary to implement when adapting our model.

32 Green Building Academy graduates from around the globe (e.g., South Africa, France, Guatemala) across 3 academies
60 planned Academy participants for 2022-2023

A Guide to Green Building: Fundamentals of Sustainable Design and Construction:

Our book is publicly available to purchase, and is intended to put the power and knowledge of green building in the hands of anybody committed to sustainable living.

42 copies sold since publication in April, 2019, as of June, 2019

These are just some of the ways in which we promote environmental stewardship. Additionally, our broad range of green building projects create economic sustainability for the organization and community.

3. IMPACT ON ECONOMIC JUSTICE

Ultimately our vision of democratic engagement is to empower the electorate to create and participate in democratic action in their community, in order to achieve economic and social justice. We also provide employment opportunities through additional construction projects. These projects are not tangential to our mission, but chosen and carried out to benefit community members and/or further our green building reach. This is an economic opportunity for a marginalized community that also serves the social welfare of the same and other marginalized communities.

Other green building projects:

8 water systems with Engineers without Borders, affecting 1380 families in Guatemala	Multiple retaining walls , including for a church, a health clinic, and various schools in Guatemala
Water cisterns for 2 Comalapan families	Supported the construction of an orphanage center for 175 people in South Africa, <u>and</u>

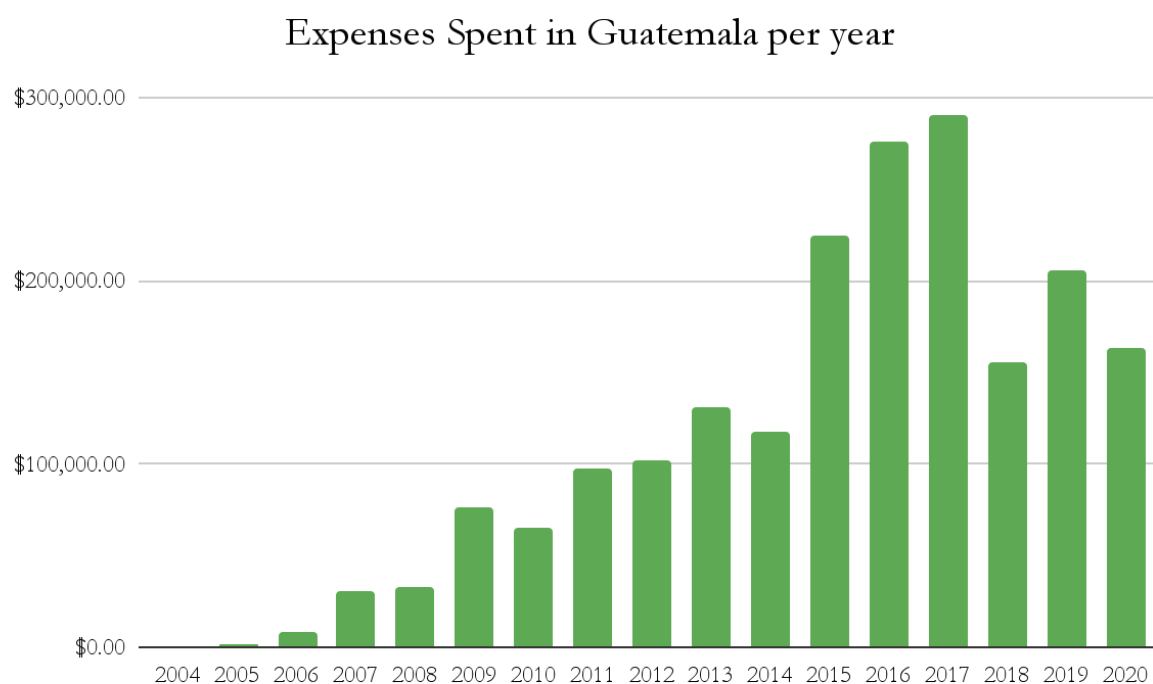
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	also in Venezuela (classroom and retaining wall)
2 Latrines for a health clinic and a primary school in Guatemala	Built a school for 300 students in Guatemala, and supported the construction of schools in both South Africa and Sierra Leone
3-5 houses for local Guatemalan families	Health center for volcano relief in Guatemala for 500 people, using ~300 tires and ~3000 eco-bricks

Table 1: Other Green Building Projects

Economic stimulation in Guatemala

71% (\$1.8M) of our total expenses were incurred in Guatemala despite the costs associated with being an entity incorporated in the U.S.. Local spending benefits local economic empowerment.



Graph 1: Expenses Spent in Guatemala by Year

Local employment is an important part of this democratic process of empowered engagement. By actively and economically involving community members through their work in shaping both our organizational processes as well as their own community, we provide a platform for locals to become heroes whilst also earning a fair wage.

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304 local jobs created**\$798,800.10** spent on
local employment**= 70%** of all our
employment costs

REPLICATING THIS IMPACT

Impact along these three dimensions – empowered democracy, environmental and economic justice – will appear differently depending on the context, culture, and community. Therefore, direct replication of impact is not possible. However, our education ecosystem can be adapted and modified to fit your context, creating the opportunity to generate similar impact. LWH has created a portfolio of programming since 2004, and although all has been significant to meeting our goals, we will only explain in detail how to implement the foundation and fundamental components of this ecosystem. Recommendations for adaptation will be included in this explanation.



WHAT WE DO & HOW TO ADAPT THIS MODEL

Thus far we have introduced who we are, the challenges we are addressing, and our resulting impact thus far. Below we will dive into the different elements and parties of our education ecosystem, demonstrating our own journey in developing these components, and how you can adapt this ecosystem to meet your own goals and serve your own communities.

Hero School key elements:	For each element, we will explain:
Education	What we do
Green Campus	Impact generated
Builders	What we would do differently
Volunteers	Adapting this to your <i>Hero School</i>
Community	Financial resource requirements

EDUCATION

What we do

The Curriculum:

Integral to Hero School is the formal K-12 curriculum. This curriculum utilizes the green construction process to teach Deweyan principles of democratic participation while also satisfying national curriculum requirements. Content and learning are relevant to context and oriented towards action to ensure that students cultivate critical problem-posing and solving skills in order to address the interconnected challenges of the modern world – climate change, economic injustice, environmental degradation, and the subsequent impetus for emigration these issues engender. The curriculum is built on the assumption that democracy and self-determination are inexorably linked and that education can be a vehicle of empowerment in the pursuit of freedom for individuals and communities.

In light of Guatemala's oppressive conditions ([see section *Why We Do It?*](#)), our curriculum supports the creation of a democratic society, in part, through an educational process where teaching and learning is participatory, empowering, and emancipatory. Democratic education provides pathways for individuals to think critically, work cooperatively, and assume the roles necessary to build a socially just and sustainable world. It can therefore be an effective force for change. In a democratic education setting, students, teachers, and community members can become *heroes* who courageously assume roles as responsible citizens and agents of creative change.

Principles of Curriculum

Learning the application of technical skills and their scientific theories.
Developing problem-solving skills in their economic, political, and cultural context.

Implicit and explicit communication: Intrapersonal skills and the ability to identify an orator's social background.

Analyzing a problem and resolving conflicts in varied situations.

Operating from a horizontalized vision of mutual respect and supporting the revindication of ancestral knowledge.

Learning to work as a team and to cooperate with the local community in order to endure varied situations and adapt to new environments.

Performing tasks with social responsibility.

Learning how to implement, participate in, and sustain a project

The democratic education generated through these principles, represents a dynamic, interdisciplinary curriculum that guides student-driven, community-based projects that address genuine community needs. This active learning, engages students in field-based practical applications of classroom lessons, thereby preparing students for engagement in democratic life. Community-based projects fulfill the national education requirements while also practicing a radical development model. For instance, when 8th graders are planning for their building project, the geometry needed to construct the *Ferro-cement water tank* is learned in their mathematics class. In social studies class, students create and conduct community surveys to identify which families are in most need of a water tank. Hero School's democratic education-based curriculum goes hand-in-hand with LWH's innovative and evidence-based approach.

In a broader view, the Hero School curriculum provides a pathway for youth and adults to gain the knowledge, skills, and abilities necessary to shape their lives, their local communities, and ultimately their world. At Hero School, students access the knowledge to live healthy and free lives, learn the skills necessary to be financially independent, and develop the awareness to critically serve their families and communities.

The Teachers:

You might think that you need teachers who are already experts in democratic education principles and project-based learning to carry out the Hero School curriculum. However, Hero School focuses on cultivating *heroes* in the community. This includes the teachers who are already present in the community. LWH's flagship Hero School, Hero School CETC, operates in Comalapa where teaching is a respectable degree to be obtained locally, but where teaching positions are scarce. As a result, Hero School CETC hires from the local pool of nationally-accredited teachers, trains and then collaboratively builds the Hero School curriculum with them and adapts it to into the local context. We do not have the resources, nor the desire to hire non-Guatemalans to fill teaching positions. Empowering local *hero-teachers* who can sustain the democratic education cycle locally is a key goal of Hero School.

We have committed to a long-term training process where foreign education experts are only in the position of collaborative consultants. They do not micro-manage or jump in when they think things are moving too slowly. Teachers create the curriculum with the guidance of a national curriculum consultant and a democratic education consultant. These two consultants

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ensure that learning achieves the legally required outcomes of education institutions while also effectively teaching democratic education principles. They value that teachers understand how to move within the culture of their local education system. And through collaboration, a curriculum is developed that *will work* and be self-sustained locally.

Just as we seek to cultivate empowered democratic participation in our students, we seek to cultivate a process that does the same for our teachers. Just as we call upon students to become the heroes in their context, we call on the teachers to do the same and thereby model this for the students. This is the goal and power of our democratic education ecosystem.

Our impact through our *Hero School*

As described in the section, [*Why we do it*](#), **now is the time to act**. Future generations will need specific problem solving skills to continue to address the adverse effects of climate change. For marginalized communities these skills are even more critical as they will be disproportionately exposed to the negative effects of climate change. LWH and Hero School teachers and students are responding to this call to action on the frontline. By utilizing the green construction process as a foundation to empower democratic participation that serves the community, students actively convert a global challenge - waste and environmental degradation, into a local opportunity – critical infrastructure to improve standards of living. The school cultivates the student to become an active member of the global ecosystem, supporting its overall health. With the proliferation of global challenges, schools must cultivate active citizens with the motivation and skills to generate and share local solutions to these challenges.

At Hero School CETC, our flagship Hero School, democratic education principles are woven into learning through a guiding green construction project for each grade level. Students conduct living conditions surveys to identify issues in surrounding communities where situations of extreme poverty exist - three generations in one house often surviving on less than two dollars a day. In their 2016 survey in Xiquin Sanaii, results showed Hero School CETC students that the most urgent concerns for the community were: smoke inhalation, access to clean water, and inadequate sanitation and housing. Using these results as a guide, students complete a green construction project for families most affected by conditions of extreme poverty. This teaches students that despite their marginalized position, *they have the ability to change the world around them for the better*. In this curriculum, students not only learn how to design, plan, and execute large projects, but also how to *participate* in the democratic process of allocating resources to address local challenges.

Why is teaching such a popular job in Guatemala?

Teachers earn more than other workers at similar training levels

Three years of Teacher's College required for primary school teachers (in place of high school)

Three years of university required for secondary school teachers (after high school)

In a town such as Comalapa, where CETC is located, it is financially difficult for families to afford to send their child to a

Guiding Grade Level Green Projects

7th Grade
Smoke Efficient Stoves

8th Grade

9th Grade
Dry Compost Latrine

OUR IMPACT

39 built since 2017



Ferro-cement Water Tank
(Tinaco)
25 built since 2017



4 built since 2018



10th Grade
Tire Wall
2 built since 2018



11th Grade
Large water cistern
Starting 2023



12th Grade
House
Starting 2023

Impact on local education sector employment

\$318,194 spent on employment for
teachers

= **28%** of all LWH employment
costs

43 salaried jobs
created

Of costs of employment of teachers

By employing
key goals are
jobs are provided for

38% men	62% women
0% non-CETC	100% CETC
0.3% foreigners	99.7% locals
33% temporary	67% full-time

teachers locally, two
achieved. First, stable
the local community in

a profession with high demand for, but low supply of positions. Second, like the students, these teachers are also engaging in a democratic process that calls on and trusts them to guide students in identifying and addressing local challenges.

OUR IMPACT

Other forms of impact

From 2008, when construction started, to 2020, over \$1 million has been invested in CETC - modeling resilient and eco-friendly building, learning, and community.

In 2017, CETC celebrated its first K-9 graduation.

In 2019, 23 teachers and 4 administrators were employed by CETC, carrying out the curriculum creation process, and serving 128 K-11 students.

In 2019, CETC graduated its first high school class of 12.

The *Hero School* curriculum is completed for Grades 7 - 9. Development of the K-6 and 10-12 curriculum is planned for 2022.