Universidad San Francisco de Quito

Community Engagement

Social and Environmental Innovation Projects for Ecuador (PISA for its acronym in Spanish)

Profile

- 8049 students (includes full and part time students)
- 1100 staff
- Peri-urban

About the project

Summary

This initiative pursues social-environmental innovation projects to improve quality of life in different communities in Ecuador using Human-Centered Design. We have worked very hard to make our university as eco-effective as can be and are actually the only South-American University which is AASHE certified. Nonetheless we know that going beyond our university walls is what truly ensures a sustainable future for all. With over 85000 hours volunteered every semester by our students and faculty, the community internships (PASEC) and Link (Vinculación) keep us engaged with our community but with PISA we are trying to take a step further.
In collaboration with École des Ponts' d.school Innovecteurs class, Universidad San Francisco de Quito began this project as a pilot seminar to work with communities using ethnographic research, fast prototyping and community level implementations to address their own identified needs. The initial case studies are in Galápagos and in an indigenous Andean community. In Pambamarca (Andes) a water collection system with a fog collector was implemented to increase the quantity of water available for agricultural purposes in a community where the irrigation channels divided those with and without irrigation. In El Progreso (Galápagos) a cleaning protocol and a filtration system in the collection tanks were installed to improve water quality and people's trust in running water from the government's system. Both projects are establishing microenterprises with members of the community that take care of the long-term sustainability of the projects.

Project partners

d.school at École des Ponts, Paris

The results

The problem

We are working on two projects in two locations, Galápagos and Pambamarca. In both locations, many NGOs, volunteering groups and even government initiatives have failed due to the lack of taking into consideration the users' wants and needs while imposing development projects. For us, it is imperative to not only include the users but to actually center the design on them. In el Progreso, Galápagos, a 700 people community, we worked to address the lack of trust in the available running water and the maintenance of the home storage systems. The second project, in Pambamarca, with 300 families as beneficiaries, initially wanted to address agricultural tools and yields. During the ethnographic research we discovered the lack of water accessibility in some areas of the community due to the existing water irrigation channels. The lack of water severely affects the agricultural productivity of the community.

The approach

Through collaboration with d.school Innovecteurs class, USFQ has institutionalized a Design Thinking seminar (PISA) that focuses on Social and Environmental Innovation and works with communities addressing their needs with locally developed solutions. Our goal is to use the design thinking tools to help implement solutions to the deepest problems in Ecuadorian communities. This includes ethnographic research methodology and immersion with communities, ideation procedures to come up with the best prototype, iterations with the community to assess the adaptability of the new tool or service and the feasibility and viability of implementation so that it could be self-sustained by the community. In the Pambamarca community, the chief of water, as part of the junta of water took over the installation of the project, while in Galápagos the league of water was formed by a group of interested community members who wanted to take on the entrepreneurship project.

Our goals

- Develop solutions tailored to community needs. In this case we have been working with two communities where the identified needs were water access for agriculture and trust in the drinking water system for which two different programs developed two different solutions.

- Training our students and faculty in design thinking methodology that includes ethnographic research and work with the communities even in the most technical portions of the project.

- Establish microenterprises that become sustenance for engaged community members who then not only offer products and services the community wants but solve environmental issues, particularly in terms of water management.

Obstacles and solutions

Communication- in the Pambamarca community, the indigenous population doesn't speak Spanish fluently.	Using ethnographic research methods like drawings and photography, we were able to discern messages without having to ask directly.
Outreach capabilities- With the lack of cellphone signal, it was very difficult to invite the community to come together for meetings about the project. - Pambamarca	Leveraged school convocation capabilities and 'mingas' –meetings with the community
Lack of trust- So many other organizations had come to the community (Progreso, San Cristóbal) and they had left with projects on paper but nothing to show for it.	Made immersive experience a priority. Follow through. We are having a very close follow up on the water league as we also have deep ties in the Galápagos Islands with our water research stations.

Performance and results

For the first problem in Galápagos, the team, including electronic, environmental and mechanical engineers developed a filtration system with the community with a cleaning protocol that could be managed through the 'league of water', a microenterprise formed with members of the community that would be providing this service at an affordable cost that the community agreed upon. For the second community considering the inequity in access in Pambamarca, the team, formed by mechanical, environmental and agronomic engineers, decided to work on a fog catcher that could use this resource available to all in the area. The prototype was applauded by the community and is being tested for its yield

in the highest part of the páramo (tundra weather highland) where fog is constant with a theoretical yield of 2lm^2/day in the system. A team of builders has already signed up to be the product implementers in the community with the chief of water. Each fog catcher can be installed for less than $70 and is a permanent installation with minimal maintenance requirements. Furthermore, the installation is being followed by a workshop on best practices for water management for all the community.

The future

Lessons learned

We believe the usage of this methodology will make better professionals of our students, improve communication to identify issues within the communities and moreover, expand the microenterprises to neighboring communities or others with similar needs. The community in Pambamarca particularly, has already expressed interest in selling the fog catcher in neighboring communities where they know it would be wanted and needed. Furthermore, during our community visits we are also able to address some of the larger issues and bring other faculties that are interested in providing help and care. In both regions we have an institutional presence with the GAIAS research center in Galapagos and with the Cangahua region where Pambamarca is we have agricultural development and restoration programs at the governmental level, therefore we can leverage resources based on other identified needs in our project.

Sharing your project

We expect to expand this project to more communities as the seminar grows. Through our own social media outlets we have already disseminated information about both projects. During this fall semester we will be holding a showcase of the projects to obtain support from our private strategic partners within the Design Thinking Center and also to recruit more students and faculties to participate in the spring semester project. Moreover, we are currently using the methodology to develop a project to improve walkability around USFQ and it has transformed our parking lot into a green area just since we started. We are also revamping the entrepreneurship course every student at the university has to take.

What has it meant to your institution to be a GUPES Green Gown Award finalist?

It means validation and motivation to continue moving forward with our commitment. We hope to inspire others to use social innovation for their community engagement.

Further information

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