Lessons from the Global Convergence Lab: Higher education's role as a partner to post-disaster communities

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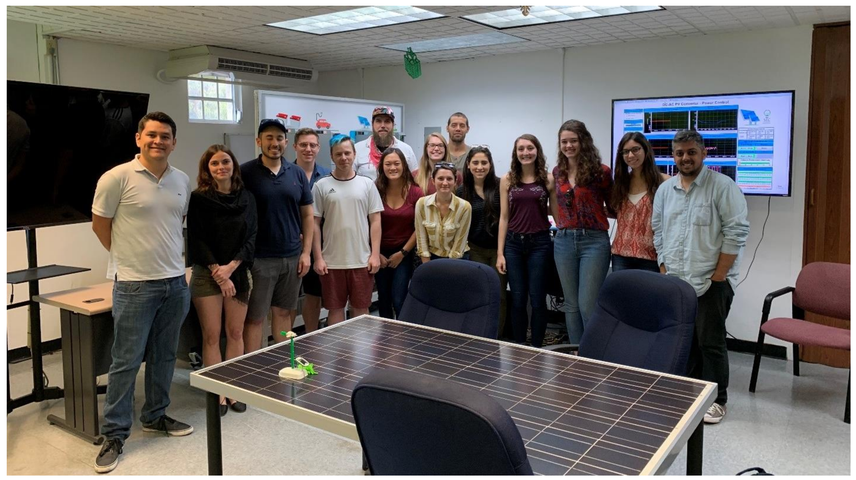

Figure 1. University of Minnesota students at the UPR Microgrid lab with Juan Felipe Patarroyo Montenegro, UPRM PhD student, and Professor Marcel Castro-Sitiriche.
Photo from: https://www.umnconvergencepuertorico.org/energy-transition-blog

ARCH 5250: Global Convergence Laboratory

A graduate interdisciplinary research course: ARCH 5250 was an interdisciplinary course co-taught by faculty from the School of Architecture, Humphrey School of Public Affairs, and University of Puerto Rico-Mayaguez. The course was designed to be a collaborative research project, utilizing partnerships between the University of Minnesota, University of Puerto Rico, local community members and groups, and private sector partners in order to explore issues around energy transition and resiliency in Puerto Rico.

Students and instructors met with local experts and community groups while in Puerto Rico from January 3rd - January 18th, 2019. Meetings included presentations from Resilient Power Puerto Rico, Ponce Neighborhood Housing Services (NHS), Casa Pueblo, Unidos por Utuado, and other local Puerto Rican professionals, researchers, and students.

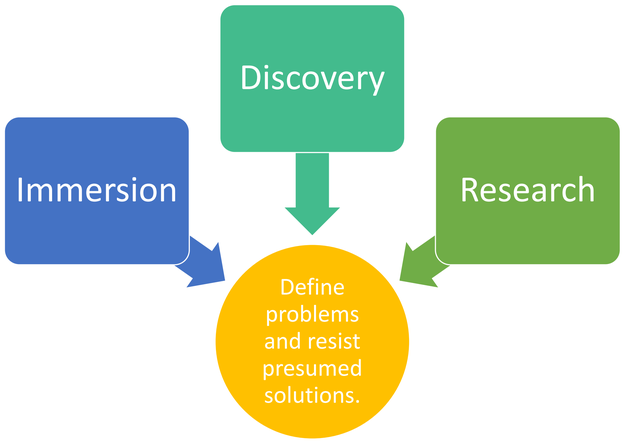

Figure 1. Course design and goal.

Our time in Puerto Rico was designed to consist of elements of immersion, discovery, and research. The design of the course was intended to provide space for students to identify specific questions in relation to energy transition in Puerto Rico, and begin exploring solutions grounded in local expertise and experiences.

Challenges

Interdisciplinary communication
The experience of working in an interdisciplinary group of students and faculty was at times difficult. This course emphasized the ways in which individuals can become immersed in their respective fields and how that immersion can prevent effective communication of ideas across disciplines.

Intercultural communication
We also experienced challenges related to intercultural communication and cross-cultural work. Thus, the course also included reflection on these topics. The Intercultural Development Inventory (IDI) is an important tool used in many industries (in both the private and public sector) to think about intercultural competence and cross-cultural work. Our group used this assessment as a tool to facilitate discussions about our own cultural backgrounds and how those impact the work we were doing in Puerto Rico. Throughout the course we were encouraged to reflect on our experiences. Included below are a few of the guided reflections questions that were available to aid reflection.

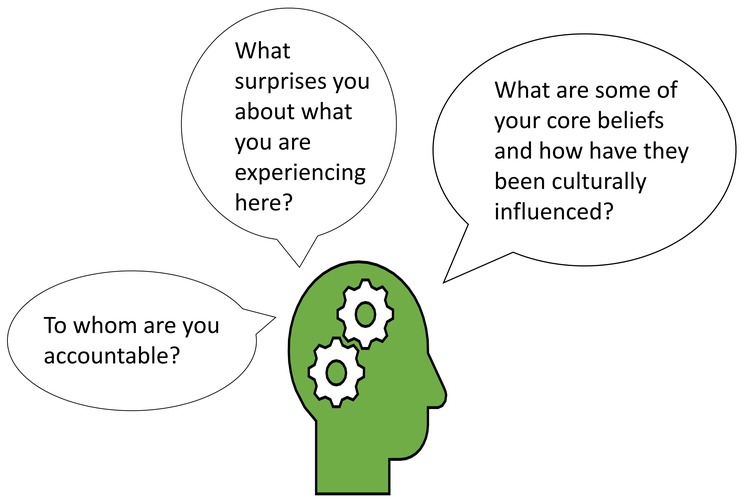

Figure 3. Select examples from reflection questions used in the course.

Personal Takeaways

I left this experience with a new appreciation for the importance of interdisciplinary work and the importance of culture when approaching local and global problems.
"The idea that sustainable energy and energy transition challenges are not purely a technical problem but a socio-technical problem was new to me. As a comparative and international education graduate student who has discussed at length the ways in which culture impacts education, in hindsight it seems a bit obvious to realize that culture would also play a big part in energy transition in Puerto Rico." Quote taken from final course reflection.

Key Lessons: Recommendations for the Future

A few themes arose from the multiple discussions and presentations throughout our time in Puerto Rico. These themes speak to essential components of how universities can better engage and partner with communities in post-disaster contexts.

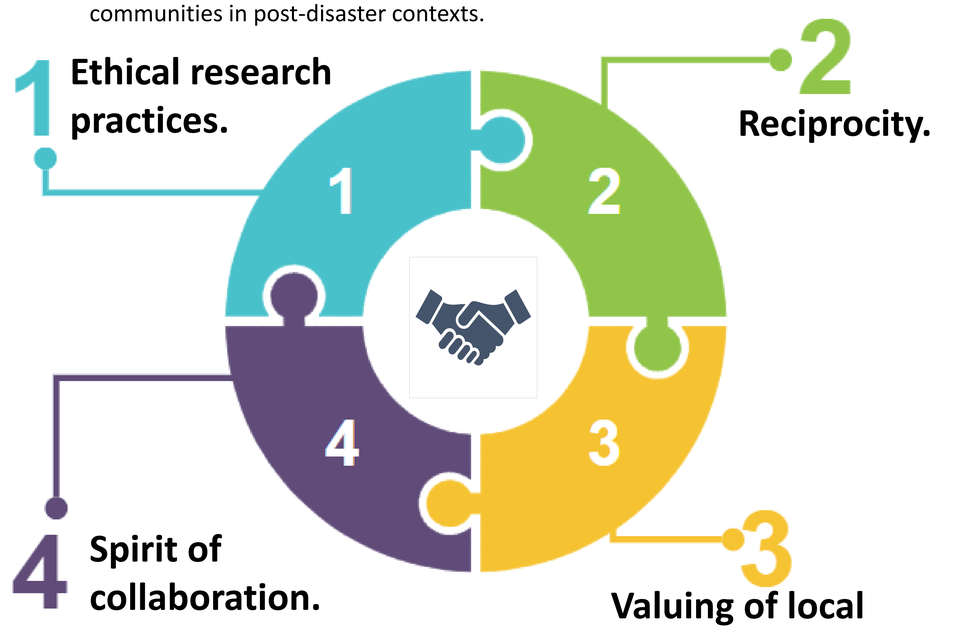

Figure 3. Diagram of the important components of effective partnerships between higher education institutions and/or community organizations.

1. **Ethical research practices.** This refers to a call for university (both local and outside universities) faculty, staff, and students coming to vulnerable communities after disasters to reflect critically on their motivations and practices, and the benefits of their research. How do mainland students/researchers/instructors engage with individuals and acknowledge potential power imbalances in their work?
2. **Reciprocity.** How can universities ensure the research they do can be utilized in the participating communities? Is there agreement on the expected outcomes of the partnership and research projects?
3. **Valuing of local experience/context.** This component returns to the original course goal of moving beyond presumed solutions. In order for viable solutions to be found to problems around energy transition or community resiliency, these solutions must be grounded in local experience. This component is also closely related to the fourth topic of **collaboration.**
4. **Spirit of collaboration.** A final theme from my experience in Puerto Rico was the importance of an attitude of collaboration and facilitation. A part of ethical research, especially in post-disaster communities, involves empathy and collaboration with research participants. It involves recognizing that the research impacts and involves them, and is not something simply enacted on passive participants. This requires researchers approach their work without positioning themselves as the sole expert or source of knowledge and instead create spaces for local individuals to share their perspectives and expertise.