Title: Re/Build: Civic Data and Design for Global Youth

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Re/Build: Civic Data and Design is a transnational educational project to inspire and inform future urban planners and builders. Making use of international partnerships, it networks youth, including refugee youth under 25, across traditional barriers for project-based learning.

Summary

Messages of extremism say there is no future. Understanding and designing our cities now will make our future. Refugee youth are crossing borders, taking terrible risks, and adapting to temporary and unfamiliar urban settings. Resourceful individuals escape and try to survive where schools are fragile, burdened, or non-existent. Because children are not learning basic skills, "success" skills, and social skills, how will they operate in new societies? Any schooling they receive is very valuable, but it often involves rote skills taught in environments with few resources or pedagogical expertise. The solution I offer is project-based learning (PBL).

The refugees and other youth in networked "sister" schools provide the *data* through observations and measurements where they live: in camps, temporary housing, small towns, and urban areas around the world. Diverse participants in diverse settings inform the networked schools. Then youth participants and experts team up to apply *design* thinking to solve pressing engineering problems. They will also envision new democratic processes while learning reasoning and cross-cultural communication skills, and very importantly, refugees will be better prepared to rebuild the societies they had to flee.

Youth can do this in the best way learning theory has given us, by interacting with peers and experts. Project-based learning is a natural application of collaboration tools, so more interactions are available virtually. We can find opportunities to help refugees access the complex language, math, and technology skills, and at the same time foster a powerful growth mindset to build future societies.

What are the key outcomes and impact of this solution?

1. A forward-thinking, entrepreneurial mindset for all involved, psychological openness that counters extremism and complacency. Levels of engagement in the learning activities would measure this, but the most direct outcome is long-term engagement in processes for city planning and civic leadership.
2. Cross-cultural interaction that will apply language skills and foster self-reflection and youth engagement in global citizenship. This is measured by the amount of individuals interacting and accomplishing tasks.

3. Integration of project-based learning into global citizenship education, including quantitative reasoning. The desirable outcome is integration of project-based learning into global educational initiatives.
4. Better “smart” cities and civic processes in the future. This is measured by the qualities of civic infrastructure developed over the next 10-20 years.

City planning is a great opportunity for global learning as described in this Atlantic video: https://www.theatlantic.com/video/index/512744/how-will-growing-cities-adjust-to-the-population-boom/

What actions will realize these goals?

The project I propose has two parts: *data* and *design.* Teams of novices (youth) and experts (educators and professionals) join forces across long distances and, if possible, also face-to-face. Following are several steps in the PBL process influenced by inquiry-based education and community-based research:

1. *Ask questions:* Participants begin by asking questions that can be answered by collecting data in their environments on all sides of socio-cultural divides. The focus is on measurement and visual records of the built environment in refugee camps, temporary housing, and urban areas, wherever participants live. Examples of questions include the following:
    1. Where does your water come from?
    2. What materials are used to construct your house or school?
    3. Where does your trash go?
    4. Who provides electrical power and how does it get to you?
2. *Collect data:* The questions will lead two or more research teams to record data and compare those data. There can be many participants in data collection.
3. *Set goals:* Then participants design a final project that makes their data interesting and useful to their communities of various scales, i.e. improve water conservation and safety, reuse plastic, design for equity of access to services; evaluate the electric grid, plan urban design projects, etc.
4. *Pair mentors:* The next step is to arrange mentoring relationships (novice with expert) within the teams and practice social or ‘soft’ skills along with hard skills.
5. *Evaluate resources:* Participants will need to use language and technology resources, human and machine, and gradually become proficient in their use.
6. *Pipeline:* Develop workflow and calendars for collaboration.
7. *Document and Share:* Share information so that creative synthesis and reflection on the process can occur.
8. *Showcase:* Plan ways to bring the activities to public and other decision makers’ awareness.
9. *Next steps:* Locate educational and professional resources for the future.

A transnational educational project could be supported by various technologies, such as Google Earth. In addition to collecting data and project-based learning, participating learners can

experiment the multiplayer and multi-city version of the online game, SimCity. http://www.simcity.com/en_US/game/info/what-is-simcity Though there are concerns about the implicit values of the game, playing a game that allows decision making and collaboration should increase awareness of city planning: pollution, traffic, sewage, density, etc.

Who will take these actions?

The youth participants themselves are those taking the actions, but they will need access to tools and shared spaces. Those tools and spaces can be provided by agencies that share the mission of re/building civil society. Ideal youth participants are in school, accessing the Internet, and working with others students and staff.

Sister agencies, such as secondary schools and college programs will form short- and longer-term creative partnerships across distances and divides. These agencies should also seek to work with local refugees and migrants settled near them who already have working knowledge. They can be found in adult schools and community colleges or through refugee resettlement agencies. With more linguistic, cultural, and geographic diversity, participants' actions will be more informative and effective. Migrants are not a drain on social services. They are future global citizens willing to work and waiting to be educated.

These relationships could be formed at the level of state universities, departments of education, and UNESCO levels making use of sister cities for international collaboration. The project could work with existing NGOs, such as Engineers Without Borders. The organization in the US "builds a better world through engineering projects that empower communities to meet their basic human needs and equip leaders to solve the world's most pressing challenges…. for water supply, sanitation, energy, agriculture, civil works and structures." Re/Build could also work with educational nonprofits, such as the Buck Institute for Education. Another partnership could be the Envision magnet schools, such as the Metropolitan Arts and Tech and High School: http://www.es-cat.org

Timeline (9 -12 months)

1. Determine and plan with partners… (Spring 3 months)
    a. Tools for a strategic IT plan
    b. Access to schools where refugees are studying
    c. Teachers and professionals interested in project-based learning and civic design
2. Pilot the steps in the process described above (Summer 3 months)
3. Revise and plan for next iteration at a larger scale (Fall 3 months)

Target geography

The targets are transnational people who are on the move and also accessing IT. The target areas are where both engineering and education are most needed and among agencies most

receptive to innovation and engagement. They are needed now by societies and agencies hosting refugees and by the refugees most able to learn from their dislocation.

Several geographic regions are in need of educational interventions to rebuild civil society and repatriate refugees in the near future: Iraq, Syria, Yemen, and Afghanistan. The list could include Nigeria, Sudan, Burma/Myanmar, El Salvador and others. If people migrate seeking safety and opportunity, let them decide for themselves whether to resettle or return and re/build.

The goals of Re/Build are *mutual and equal* across national borders. This project seeks to enable exchange of practical values to reawaken a self-respecting rule of law that has been threatened by trauma and extremism. A progressive future orientation is what global citizenship should offer. In other words, intercultural project-based learning is part of an educational experience that will prepare for civic engagement and protection of human rights, which are far less accessible through passive means.

Agencies in California, especially in the San Francisco Bay Area, are already engaged in international work, project-based learning, service learning, and the standards of the Common Core: http://www.cde.ca.gov/re/cc/. There are good opportunities for partnership here.

What are the costs associated with piloting and implementing the solution, and what is the business model?

Working within an existing agency, such as a nonprofit is more efficient that starting a new nonprofit. The host agency's mission must be compatible and it should provide the following: office space and staff, communications infrastructure, access to participants, and technological expertise: $70,000. It needs a travel budget, i.e. $700 for each one-way flight, but participants from developed countries should provide their own airfare when possible. The project needs an additional project manager: $70,000 for a total of about $140,000 for the first year. (This is not my expertise.)

Resources

Common Core State Standards: http://www.cde.ca.gov/re/cc/
The Common Core emphasizes real world application of knowledge and skills, and the development of success skills such as critical thinking/problem solving, collaboration, and communication in a variety of media.

Project-Based Learning: http://www.bie.org/about/why_pbl

SimCity: http://www.simcity.com/en_US/game/info/what-is-simcity