An Assembled Network | Dallas, Texas | Summer 2022
Previously called A Disarrayed Network
Project Leader: Adam Valencia, Hamilton College '22

Project Summary
The main goal of my project was to provide an introductory technology education course for low-income BIPOC high-school students, long-term frameworks for equitable technology, and encourage students to find community in their marginalized identities in the technology sector.

Designing classes with a cohort of 12 students with similar identities allowed them to be more expressive in what they wanted to accomplish throughout the program. The program consisted of hands-on technical workshops, instructor-led coding sessions, and group workshops.

Other Fundraising Efforts
During the program, I contacted various local vendors in the DFW Metroplex to provide daily lunches for the student participants. One of the local vendors provided a generous discount for our end-of-the-program ceremony.

The Inspiration for the Project
Low-income students of color pursuing an education in computer science, computer engineering, or other technologically oriented majors [technologists] in the United States face numerous barriers. Chief among them is the feeling of exclusion. Statistics can paint a narrative of inclusion where BIPOC technologists are present in tech but are not in leadership positions. When decisions are made about the use of technology in minoritized communities, BIPOC technologists are not present to object to ways that technology can harm their communities.

It is imperative that students feel prepared not only technically but also mentally to enact meaningful change. As hopeful and innovative as at-home education was during the COVID-19 quarantine, the shift from in-person to at-home learning was littered with inaccessibility creating a digital divide. For some, virtual learning is difficult due to intergenerational homes, lack of quiet spaces, limited access to WIFI or high-speed internet, and even caretaking responsibilities. Whenever software or products are shipped in the tech sector, it is always important to ask, "who does this help?" and "who will this hinder?" Innovation for the sake of innovation leads to communities continually being left out of conversations that can affect their livelihood.

When I saw an opportunity for this project, I knew I wanted to teach coding to minoritized students in the classroom. Additionally, I wanted students to think beyond coding and focus on what equitable tech meant to them. Some of the topics we talked about in the first two weeks focused on students' identities, what their identities meant to them, how technology affected their education and communities, and their goals for pursuing jobs in the technology sector.

Why The Problem Exists
In a period of rapid development, software and technology products are being shipped faster than most other U.S. industries. This has led to technology creating a massive influx of data to create social categories which can be sold to ad companies or used to craft "more accurate" algorithms. In this case, accurate means more economical. If BIPOC technologists continue to be excluded from the technology sector, more pervasive tech can continue to exist, justified by its "algorithmic accuracy." The technology sector provides high salaries in turn. When students don't have faith in their ability to feel included in tech, they can find themselves selling their abilities to higher-paying corporations, not worrying about the social implications they cause.

Why We Chose Our Host Site
L.G. Pinkston High School was a new high school built in the Dallas Independent School District. Students chose between pursuing an education in three job fields: Information Technology and Support, Health Management, and Management. The IT and Support curriculum is narrowly focused on using technology solely for job preparation. My program provided a more comprehensive understanding of how technology can create meaningful change.

What changes or adjustments did you make to your original plans, and why?
The name change was one of the first adjustments I made. In a program addressing inequity, I noticed that representing a "disarrayed network" symbolized brokenness. To fix this, I adopted the name "assembled." Superheroes are seen in the

media as "assembling" to combine their efforts to fight a problem. I thought, how was this any different from what we were trying to accomplish? Students should feel empowered to enact change internally but also in their communities.

The second change I made was focusing on high school students rather than college students. I found that high-school students are more eager to create a new path for themselves rather than college students already studying technology. Many low-income high schools in Texas are burdened by continual budget cuts and state testing requirements. This forces students to focus less on what they want and instead on what the state wants them to know. When students are never aware of what opportunities are present, they can sometimes revert to what they feel comfortable with. I wanted to set students on a path of "knowing thyself" in a period of their lives where they are consistently told to stick to the book. Advocating and expressing for oneself in a safe space with like-minded individuals is important for young technologists before entering a more professional homogenous field such as the technology sector.

Are there opportunities for continuing your work on this issue? If so, please describe.

Continuing the program next summer will be contingent on finding a lead educator. As of now, L.G. Pinkston High School is interested in continuing my summer "An Assembled Network" program. Students are interested in returning next summer to expand on what they learned. New students have also expressed interest in joining. This program is not focused solely on technology. Vulnerable conversations take place, and a positive environment is always fostered where everyone's identities, backgrounds, and thoughts are respected. Therefore, finding an individual who can advocate for the program's mission, the student's vulnerability, and crafting a programming curriculum is essential to sustain the program in the future.

How do you define peace?
Peace is a state of belief where people can be their sincere selves, free from hostility or violence towards their being. People can harmoniously study, express, and participate in their own lives while not infringing on other people's well-being. In this state, people can indulge in genuine happiness and prosperity.

In what ways might your project contribute to peace? What changes occurred? Short-term? Long-term?

A strong component of peace is that it is a state of belief. Although peace may be hard to reach, believing in peace means that structures can be created to foster it. An Assembled Network fostered peace by allowing students to be their authentic selves. Students were unblocked by economic barriers, encouraged to learn from failure, and celebrate their successes. Students were supported and heard. We had celebrations that applauded and highlighted the work of each student. Short-term, students were given tangible resources to continue the work they had spent the summer doing. Beyond tangible resources, a dozen young technologists are now mobilized to create change in their communities. As students continue to practice the lessons, they learned throughout the summer, people will continue to feel the effects of these students advocating for themselves and practicing equitable technology.

What did you learn about the dilemmas, challenges, or conflicts that underlie the targeted issues or utilized approaches/strategies?

As a community member, I crafted the curriculum, grounded in what to expect based on my own experiences. I learned just how important being an effective role model is. Daily, I saw how little faith students had in themselves at times and how they were continually afraid to make mistakes. I remember a session where I sat every student down and had them answer questions that ranged from "What are ways that let me know when you are having a bad day?" and "What is a song that is stuck in your head right now?" The next day, when students walked into the classroom, I played a few songs that they had said they enjoyed. after reading through every student's paper, I addressed some things that were said and changed how I presented the material. One of the students, Sima, said, "You know, you are not like any other teacher I have ever had in school ever?" I replied, "What do you mean by that?" The student said, "I don't know. You are just different. You seem like you care about what we have to say and don't just tell us what we have to know." I chose to ask these questions for a reason. Like Sima, I had consistently felt unheard in high school, always doing assignments that felt distant from what I wanted to learn. In college, my anthropology professor and role model started off her course with a similar approach. What seemed routine to her communicated to me that how I learned, what I liked, and what I wanted to accomplish mattered. For many low-income students, these small questions can make an enormous difference in how students show up and get involved in the classroom.

How has your project changed the way you think about the world? How has the project changed, challenged, or inspired you?

I now feel confident that I can create meaningful change. Before the program, I thought I had to be prepared for everything and anything that could happen. I felt that I should always have the correct answer and make no mistakes; I realized that I was practicing the very thing I was trying to teach the students not to do. Failure is okay, and any lesson learned is one step in the right direction. I became more accepting and in turn, noticed that students were more involved and sincere. Five-minute mental breaks went from being awkward silences to laughs and times to talk about how people's weekends went. On day 1, I had every student fill out three questions: "What is one thing I know about myself?", "What is one thing others don't know about me?" and "What is something I think about the instructor?" I noticed a strong trend where students devalued themselves and, although knowing nothing about me, applauded me for being educated and knowing everything. It seemed universal that students tend never to feel like they are enough in comparison to the educators. I continually tried to correct this by asking for opinions and acknowledging my mistakes. In being vulnerable with students, they realized that part of being an educator is willing to make mistakes and feel comfortable not knowing everything. As the program was completed, I saw a shift in the student's perspective of themselves and one another. They no longer saw themselves as just students looking at me bright-eyed and hopeful, waiting for answers. They were changemakers, students who could see a problem, collaborate, and trust in themselves to find a meaningful way to fix it.

Personal Statements

"The (un)hidden curriculum, in my program, was to move students from the constrained views of themselves, that is, institutionally crafted categories, on how BIPOC and low-income students participate in technology."