FreeTechLib at Pink STREAM
United States
University of North Carolina at Chapel Hill (UNC-CH)
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SECTION I:

Through the establishment of FreeTechLib at Pink STREAM (FTLPS), we aimed to expand the accessibility of STREAM (Science, Technology, Robotics, Engineering, Arts and Math) educational opportunities to local refugee girls in Chapel Hill and Carrboro, NC. We intended for this project to help refugee girls develop their technological literacy through building specific skills and to become motivated to pursue further learning and paths in STREAM fields, including industries that are continuously growing but lack equitable representation.

Project Inspiration and Description
Many refugee girls and women face barriers in pursuing their education given disparities resulting from their social status as refugees, negative gender biases, and arduous circumstances such as low socioeconomic status or a lack of literacy opportunities. This population's challenge in acquiring education has been exacerbated by the COVID-19 pandemic.[1] It is estimated that roughly half of all refugee girls in secondary school will not be able to continue schooling post-pandemic.[2] The project leader, Fariha Rahman, has worked with the local refugee population in Carrboro, NC as a volunteer interpreter and patient navigator with Refugee Community Partnership (RCP); through this work, she has observed refugee children's greater reliance relative to their peers on volunteers to help them use the technology that enables them to participate in extracurricular experiences in addition to completing their standard academic work. As the founder and leader of Pink STREAM, a nonprofit working toward educating and empowering K-8 girls in STREAM fields, Merve Rida Bayraktar had also noted that lack of accessibility to technology has impacted students' participation in their courses and workshops. This limited access to technology, combined with refugee children and parents' limited technological literacy, creates challenges in learning and benefiting from resources and opportunities that otherwise could be available to them in their new home communities.

In response to these challenges, we envisioned the establishment of FTLPS as a free technology library that would enable Pink STREAM to make their classes more accessible to refugee girls through a new engagement, first with RCP, and eventually with others who lack access to the technology. We used funding from the Davis Projects for Peace to purchase 11 computers and 30 robotics kits that will enable us to offer an *Electronics and Robotics Course* and other future courses without relying on participants' ability to provide the technology themselves. We have not yet needed to pursue additional funding to implement this phase of the project.

RCP is a visionary, grassroots nonprofit based in Carrboro, NC that serves refugee families. As project leader Rahman already had an established relationship with the organization by serving as an interpreter

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[1] Refugee Women in Science: Overcoming obstacles to realize dreams. USA for UNHCR.
https://www.unrefugees.org/news/refugee-women-in-science-overcoming-obstacles-to-realize-dreams/
[2] Malala Fund releases report on girls' education and COVID-19. Malala Fund.
https://malala.org/newsroom/archive/malala-fund-releases-report-girls-education-covid-19

and patient navigator, it was simple to establish a strong working relationship with them for this project. Throughout the summer, we developed a plan to purchase appropriate devices and offer a Pink STREAM course series with refugee girls connected to RCP. Working over the summer and during a new COVID-19 surge meant that we faced unexpected issues with communication delays and uncertainty about what sort of programming would actually be possible. This made us reevaluate whether we would be able to accomplish the project successfully. However, with clear and consistent communication, we were able to overcome these issues. We worked most closely with Meagan Clawar, Director of Community Initiatives, to determine the dates and times, location and setup of an initial four-day course on robotics, circuits and technology utilizing FTLPS. Because of RCP's standing summer camps for their youth throughout the summer, the four-day course series will be offered on Sept. 18, Sept. 25, Oct. 2 and Oct. 9 on-site at RCP's offices as an extracurricular activity first for 10 refugee girls in K-8. RCP will have volunteers from their organization present to help with facilitation of the class, and we will be collecting feedback from participants through an interactive poll at the end of each session. We are hopeful that connecting RCP and Pink STREAM for this particular course offering will open the opportunity for additional offerings in partnership between the two organizations in the future.

FTLPS has enabled RCP to provide a unique opportunity to the refugee girls that it serves, and Pink STREAM will be able to offer other courses to diverse populations who may have not been able to take the courses due to their inability in obtaining technology. Adopting the format of a library enables greater sustainability in allowing the devices to be reused by other participants in Pink STREAM programs, including the broader refugee community and other under-resourced populations. In addition to RCP, Pink STREAM has taken steps to connect with the Sudanese Youth Community, another local refugee aid organization that may be able to use FTLPS's devices for a Pink STREAM course for refugee girls.

Defining and Achieving Peace: The Potential Impact of FTLPS
Davis Projects for Peace seeks to support projects that "...build understanding and break down barriers which cause conflict." This phrase in particular aligns with our conceptualization of peace, as FTLPS promotes peace by helping bridge the digital divide and promoting educational equity, especially locally in NC, by making technological education more accessible to an underserved population. In the short-term, FTLPS will provide a cohort of refugee girls with the opportunity to engage with technology and explore different STREAM fields through the series. In the long-term, this service will not only break down the barrier created by the lack of technology education but will also increasingly promote children's understanding of future opportunities available to them. Furthermore, this project will contribute to empowering women, specifically girls, which has often been cited as a way to establish peace and stability according to the World Bank.[3] This project furthers Pink STREAM's mission, as they believe that education is crucial and that inspiration is the source of education. Increasing the accessibility of Pink STREAM's programs that are designed to educate, inspire and empower will help promote peace by increasing literacy and accessibility to technology for all regardless of their background.

Personal Impact of Project
As we made purchases for FTLPS, we realized how limiting the affordability of technology can be and how privileged we are to be able to purchase and utilize technology daily. It reaffirmed our understanding that significant disparities still exist that need to be addressed, which has further motivated us to dedicate a portion of our careers respectively to address such disparities.

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[3] Sancho-Crespo, C. (28 March 2018). Can gender equality prevent violent conflict. World Bank Group. https://blogs.worldbank.org/dev4peace/can-gender-equality-prevent-violent-conflict

Individual Reflections

Rahman: *Through this project, I discovered the difficulty and necessity in addressing disparities that perpetuate inequity. Throughout this process, I have become increasingly motivated to work towards creating an equitable future, where no one is hindered by their circumstances in realizing and achieving their aspirations.*

Bayraktar: *Pink STREAM's focus on addressing the gender gap has expanded to target other social gaps through this project. With the resources and understanding we gained, we will be tackling the technology gap alongside the gender gap moving forward.*

SECTION II: Images