Building Hope Through Education, Service, and Construction
Kaihura, Uganda
Duke University

Project Lead: Kennedy Robinson (Home Country: United States, School: Duke University)
Student Team: Julia Saunders; Ethan Rheude; Alba Uriarte; Vanessa Lin; Kala Siddalingaiah (Home Countries: United States, Schools: Duke University)

In the United States, access to a high school education is ingrained in society. While Uganda’s population is significantly younger than that of the United States, only 37.8% (2016) of students complete through their fourth year of secondary school in Uganda versus the 86% (2018-19) of students that finish public high school in the United States (Knoema Uganda Regional Education Statistics; National Center for Education Statistics). The dependence on subsistence agriculture for a living, lack of resources for special needs students, and the cost of secondary schooling, including indirect costs such as transportation, books, and uniforms, leads many students to drop out of school after elementary years to work (Barriers to Accessing Education in Uganda by Charlotte Bruley-Richardson). Only one in nine students with disabilities before the pandemic had access to basic education according to UNICEF’s 2020 Annual Report. With Uganda’s population rapidly increasing, more secondary school facilities are needed, especially ones that are affordable and inclusive to care for students with special needs and women in under-resourced, rural areas. To begin to tackle this growing need, the Duke Engineers for International Development (DEID) team aims to partner with the rural community of Kaihura to construct a secondary school that would expand admission to higher education for women, students with special needs, and orphans of the HIV/AIDS epidemic. On the surface, the main impact of this project will be to create the essential infrastructure needed for a secondary school. However, the many other positive impacts that this piece of infrastructure create, including economic development, decreased risk of conflict, increased quality of life, diversity of workforce, etc., are the foundations of peace.

Uganda currently has one of the world’s lowest GDPs per capita at $2,200 in 2021 (CIA World Factbook). Having more accessible secondary education is critical to breaking cycles of poverty according to the Human Capital Theory, which relates increased training and education to higher income earnings (International Encyclopedia of Education). Increasing earnings can alleviate food and housing insecurity, diminish monetary barriers to health care, and increase an individual’s ability to pursue personal interests, leading to increased sentiments of fulfillment. The positive impacts of a higher education extend to family members of children attending school and other community members. The combination of the economic and psychological benefits of stress relief from further education can be powerful in lifting individuals, families, and larger communities out of poverty. As the whole community continues to grow together, there is less risk for conflicts, opening the door for many individuals to finally feel at peace. Peace is both the relief of trauma from violence and physical conflict and the presence of sentiments of unity between a group of people. Debraj Ray and Joan Esteban demonstrated in the Annual Review of Economics that an increase in income per capita often correlates with lower rates of conflict. Having a higher income increases the opportunity cost to engaging in conflict since more is at stake by leaving one’s work.

Increasing secondary education availability to girls can have an even larger impact through increasing the productivity and diversity of the workforce and increasing transmission of knowledge in the home (Women’s Education in Developing Countries by Elizabeth M. King and M. Anne Hill). Historically, women’s education has simply not been prioritized in Uganda. Improving access to secondary education for women provides both the economic benefits it does for men and can decrease tension and conflict resulting from the marginalization of women, again building peace for all members of society. Additionally, having facilities with enough space to allow students a comfortable environment is imperative to their time in school being impactful. With space for students to sit and work, they can better focus on tasks, and with more classrooms, students can have more one-on-one time with teachers, allowing their education to be more personalized to areas they might be struggling in. In these ways, investing in school infrastructure provides a foundation to sustainable economic growth and increased quality of life that can
lead to stronger unity within a community and lower the likelihood of strife.

Before implementation, during this spring semester, students in our CEE315 course will design the proposed school house with the supervision of our licensed faculty advisor and the local Ugandan engineers. A small team of engineering students will then travel in the summer of 2023 to work with local community members to construct the first floor of this school. The school will become the continuation of the primary school Hope Academy, allowing over 350 students to receive a secondary education. DEID is dedicated to partnering with communities to work on engineering projects that will improve their standard of living. One of our long-standing partners is the NGO Bringing Hope to the Family (BHTF) who has indicated a need for a secondary school in Kaihura in the Kyenjojo District where they work. To facilitate this partnership, our faculty advisor traveled to Uganda in the summer of 2022 on an assessment trip to talk with the local engineers, BHTF directors, and to survey and take notes on the construction site for the school. One of the most important parts of a successful, sustainable development project is creating a respectful and communicative relationship with the people we are working with. DEID has worked with BHTF for almost ten years, helping them construct classrooms for their vocational school, a maternal health clinic, and a vehicular bridge for an isolated town near Kaihura. Having this long-term relationship has built trust, excitement, and community investment in the projects as well as helps DEID to best support the needs of Kaihura. In addition, the implementation of the project is intentionally scheduled to collaborate with the population. During the construction phase, local residents will be on site working with students who are all under the direction of the Ugandan engineers. The project will span three years with the first floor and foundation constructed in the summer of 2023, the insulation and ceiling of the first floor in the summer of 2024, and the second floor and roof in the summer of 2025. This schedule allows the first floor of the school to begin to be used before the second floor is finished and forms deeper relationships between the travel team and local town since students will be able to return multiple years. It also gives BHTF time to staff the school and develop a maintenance plan.

With Uganda ranking 10th in the world for HIV/AIDS, Kaihura has also been heavily impacted by the epidemic, which has left many children orphaned (CIA World Factbook). These children are dependent on the support of the community to obtain the education and developmental support they need to be able to make a living. BHTF has supported these children and children with special needs through their Child Welfare Program, Hope Again Children’s Home, and Hope Academy, especially women, who weren’t able to receive training for the workforce. Adding a secondary school will allow the NGO to expand the number of students they can support, which would directly impact that student’s future and indirectly impact the entire community as they contribute to its economic growth.

Not only will these experiences impact the community of Kaihura but also the future engineers on our team through providing technical experience. It will create more empathetic engineers who are mindful of the people and places they work with. Constructing this school side-by-side with local villagers promotes unity among the residents there and across cultures for both Duke students and the Kaihura citizens through this shared experience. Meaningful connections like these are key components to breaking down stereotypes and prejudices, fostering greater empathy and peace. Promoting partnerships across communities coupled with the economic benefits of education, the construction of this secondary school will not just result in a building but also a peaceful mindset for the younger generation of engineers and children in this community.