

Cross-Cultural Co-design to Encourage Community Independence

Building Bridges for a More Sustainable Future
IQP C20 Dwenase, Ghana

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WPI

Developing Community Independence through Co-design



“Many, many things on this trip have not gone according to plan; this will not, either.”

The process of co-design allowed our partners to create lasting change in their community.

Evolution of Bridge Design through Community Engagement

Bridge I



Bridge II



“Originally, we had one bridge with no concrete. Now, we’ve got two bridges, both with concrete.”

Use of local materials helped to make the bridge design more replicable for future use.

Growth and Adaptation through Community Engagement

“Working on the second bridge, the [local workers] on site now know what to do, what not to do, and why they’re doing it.”



Communication, planning, and flexibility were crucial to formulating the design and construction process.

Project Outcomes

- Co-designed and constructed two bridges in Dwenase
- Created replicable designs for use in future construction projects by local residents
- Worked to encourage a self sustainable and independent culture in Dwenase
- Inspired students for potential future careers

While the true impact and sustainability of our project cannot be measured for years to come, we have seen the hope and desire our partners have to improve their community.





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