



Before the Continental Crossings project, people living in and around Yavina, Peru, had to use this makeshift walkway—two braids of twigs and reeds.



Peruvian children join Continental Crossings member Avery Bang during a ceremony to open the new bridge.



Peruvians test out the new footbridge that was designed, financed, and constructed by Continental Crossings.

Providing safe passage

Engineering students build connections in Peru

Where once hung nothing more than two large, crude braids made of twigs and reeds—one braid served as a walking surface, while the other acted as a handrail—now runs a span of planks laid along durable cables, complete with a wire barrier

protecting travelers from the waters below.

Five University of Iowa civil/environmental engineering students—Irund (Sergio) A-wan, Avery Bang, Jenna Kusmirek, Tara Olds, and Ryan Wallace, collectively known as Continental Crossings—designed and helped

construct the footbridge near the rural community of Yavina, Peru.

The 15-meter span, in a country thousands of miles from The University of Iowa, means the world to the people who will cross it as part of their daily routine.

Schoolchildren in the area, who already have to walk two hours to school, are relieved to no longer navigate the tricky walkway. Children not tall enough to reach the guide braid were forced to crawl along the lower braid—a risky proposition, as the crossing had claimed the lives of at least two children in recent years.

“When the bridge was finished, scores of children were carrying banners that read, ‘Muchas gracias por la puente’ (‘Thank you very much for the bridge’),” Kusmirek says. “One small child was parading around with an upside-down Hawkeye pennant held high on a stick. It was all very touching.”

The project took shape thanks in part to Olds’ inquiries about engineering firms that did work in developing countries. She established contact with Ken Frantz, founder of Bridges to Prosperity, a nonprofit organization seeking to empower poor communities in foreign lands by building footbridges. An opportunity in Peru was available, which the Continental Crossings team embraced.

The students discussed the project with College of Engineering faculty, including P. Barry

Butler, College of Engineering dean and professor of mechanical and industrial engineering.

“The Continental Crossings team demonstrated the engineering skills necessary to conceive, plan, and execute a project with many challenging aspects,” Butler says. “In addition, they chose a project that highlights the important role of engineers in making the world a better place.”

In November 2006, with Bridges to Prosperity and the College of Engineering supporting them, the students conducted on-site topographical, hydrological, and soils surveys, and visited members of the community. The students returned home, designed the structure, and raised \$18,000 to cover building materials and travel costs for a return to Peru in mid-2007.

During the construction phase in late May and early June, they helped Peruvian laborers haul bags of cement and wooden planks to the bridge site, pour concrete, and lay planks across the bridge’s cables.

The UI students marveled at the strength and endurance of the Peruvians, who carried the

100-pound bags of cement several hundred meters on their backs while crossing the braids. For perspective, three members of Continental Crossings worked together to transport one cement bag from the storage facility to the bridge site.

The Continental Crossings team saw a year of work come to fruition on June 7, as the bridge was christened with a jubilant ceremony. The children certainly were pleased—they lined the bridge, jumping up and down with shouts of joy—and the adults weren’t exactly reserved in their celebratory bliss, either.

“At the ceremony, the teachers spoke to us, telling us how grateful they were, the children were, and the adults of Yavina were,” Olds says. “We felt how much it meant to them. They gave the most touching speeches I have heard in my life. The teachers also played music, some children sang songs to say thank you, and we danced with the teachers and school kids as well. It was a great celebration.”

The Peruvians weren’t the only people swimming in satisfaction.

“I believe that the ramifications of this project will certainly

propagate throughout our lives in more ways than we can even imagine,” says Kusmirek, who is now pursuing a master’s degree in architecture in Denver, Colo. “We made it happen.”

Many of the Continental Crossings students had studied abroad, something that influenced their interest in the project in Peru. Phil Jordan, director of professional development in the College of Engineering, says the study-abroad experience can shape students’ goals and open their eyes to new issues.

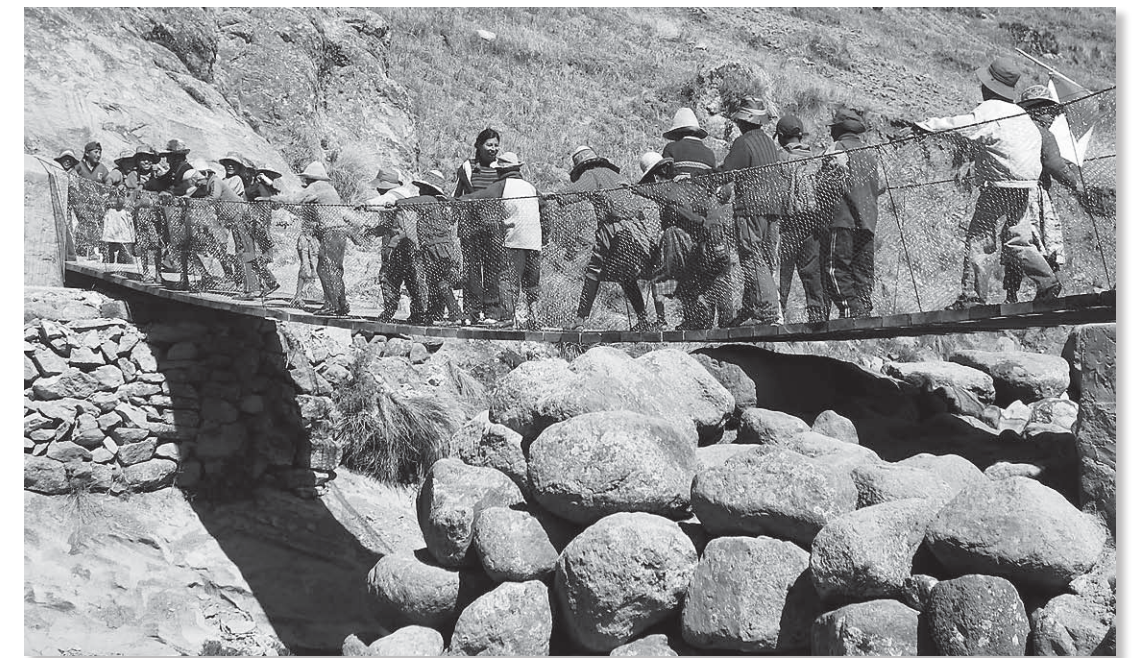
“The opportunity to apply professional engineering skills while effectively using communication and organizational skills in a new culture is a powerful combination for learning,” Jordan says. “Students with a study-abroad experience such as Continental Crossings know what engineers need to do, technically and personally, in order to make a difference.”

—CHRISTOPHER CLAIR

For more information and to see a video about the project, visit Continental Crossings’ web site at www.continentalcrossings.org.



Members of Continental Crossings lay planks across the cables of the new pedestrian bridge near Yavina, Peru.



Continental Crossings members (from left) Jenna Kusmirek, Irund (Sergio) A-wan, Avery Bang, Tara Olds, and Ryan Wallace hold a University of Iowa pennant as they stand atop the new bridge.