

Leading Matters Los Angeles
January 24, 2009
Session Notes

Entrepreneurial Design for Extreme Affordability

David Evans, '03, MS '09, (Stanford Program in Design), Teaching Assistant at the Product Realization Lab

James Patell, Hoover Professor of Public and Private Management, co-director of the Product Realization Network

The Design for Extreme Affordability class has been taught now for six years to 250 students in 17 departments. Outside partners range from non-governmental organizations such as IDE to projects started by Stanford graduates such as D.light and David Dodson's project. The course teaches human-centered designs, a prototyping culture and process mindfulness.

For the projects that are started, companies are started to continue them, or the projects are passed off to another organization such as IDE. In the case of treadle pumps, 15,000 have been sold—3,000 of them immediately.

IDE founder Paul Pollack has transformed the course. He believes that poverty alleviation requires four revolutions: water, agriculture, markets and designs based on affordability.

Past projects have included:

- an origami-inspired asthma inhaler that brought the cost down from \$50 to 30 cents;
- drip technology;
- a handheld corn shucker, coming to the market now;
- a low-cost baby incubator that's culturally appropriate (white symbolizes death in Asian cultures); and
- low-cost LED lights, which won \$250,000 in a venture capital competition and have been so successful they are now a partner for the course.

David Evans

I worked on a device to increase the usability of stoves in Ethiopia. I discovered that the average woman spends six hours a day collecting sticks. Later, I found that their ceramic cooking vessels frequently break—four to seven times a year. (Because of the culture there, it took me a long time to notice that.) This breakage means that 10 percent of a household's income goes toward replacing the vessels.

The idea was to create a metal ring that encircles the vessel, preventing it from breaking so easily. I prototyped it at the design school and came up with a product, then went to Ethiopia to make sure it works. I tested it on a local community so they could see it for themselves.

I found a partner to manufacture it, and we are now taking the product to market.