Two years ago Amos Winter was a Public Service Fellow in Tanzania researching wheelchair use in the developing world. His experience led to a lasting interest in serving wheelchair users across the globe, particularly those who travel on bumpy, unpaved roads in developing countries. That continuing interest led Amos, a graduate student in Mechanical Engineering, to teach SP.784, Wheelchair Design in Developing Countries, in the spring of ’07. Students in the service learning class learned engineering skills to improve wheelchairs in the developing world. The class propelled several of Amos’ students to apply for Public Service Fellowships themselves.

Tish Scolnik, a freshman in Mechanical Engineering, traveled to Tanzania to put her class knowledge to use. Working with wheelchair workshops in Arusha and Moshi, Tish helped to design a three-wheel chair that could be folded to take on the bus. Wenxian Hong, (‘10, Course 2), also on a fellowship, worked with Tish on the three-wheel foldable chair. Given that conventional wheelchair users are often turned away by bus drivers, it was especially heartening to hear “one user relate[d] his experience taking the mini-bus, and how the first bus driver that came along accepted him right away,” says Wenxian.

Tish also met Dr. Henry Nyamubi, Director of the Kilimanjaro Association of the Spinally Injured, who proposed another challenge: design a wheelchair that can provide a way to generate an

Continued on following page…
Tish poses with the folding three-wheeler and small business wheelchair prototypes. From left, Tish, Agnes Michael, Daniel Namkessa, and Lucas Tanaki.

Photo: Beat Mrema
Mobility redefined

Continued from page 1

Shirley Fung and Mario Bollini also received Public Service Fellowships to take their skills on the road. Shirley (G, Course 6) traveled to Moshi, Tanzania, where she worked on communications related to the wheelchair workshops. “I found out what these workshops really need is a simple Web site, so that they can be easily looked up on the Internet,” explains Shirley. So she developed a guide entitled “How to Make a Web Site at an Internet Café” which includes a tutorial on how to start a blog using free services on the Web. In the two months since, more than 15 groups have created websites using her guide.

For Mario (’09, Course 2), who traveled to Kenya to work on a new drivetrain design in collaboration with the Association for the Physically Disabled of Kenya (APDK), the fellowship offered a chance to apply the engineering theory he learned during his first two years at MIT “designing, developing, and testing a product. …I was also given a full appreciation of how small technological improvements, even those designed by students, can have an enormous impact on users in developing countries,” says Mario.

From a small business wheelchair to an improved drivetrain, these Public Service Fellows have enhanced not only the lives of others, but their lives as well, in ways that surpass their own expectations.

...one user relate[d] his experience taking the mini-bus, and how the first bus driver that came along accepted him right away.

Wenxian Hong

Mario assists a Nairobi handcycle user testing the new handcycle design prototype.
Investing in the future

An IDEAS Competition idea based on sand, gravel, and a plastic bucket now serves over 25,000 people

Funding student initiatives is one of the most potent aspects of our work. While advice is valuable, when we “put our money where our mouth is,” students are truly enabled. Small investments generate manifold returns: each dollar contributes to positive community change as it educates MIT students, who often generate both social and actual capital. The impact of investing in student initiatives is enormous, with over 250 MIT students supported by PSC grants, fellowships and awards annually. The Kanchan Biosand Filter exemplifies the effect. Winning the first IDEAS Competition in 2001 gave the team a $5,000 start. Today, team members have accrued years of field experience and over $200,000 from external grants. The filter, which removes pathogens, arsenic and turbidity from drinking water using sand, gravel, and a plastic bucket, has more than 3,500 units operating throughout Nepal, serving over 25,000 rural people.

Public service funding literally transforms lives, including those of the students. Nicki Lehrer, for example, leveraged small PSC grants into a nonprofit, Children of Guayaquil, learning life lessons not available through her Course 16 major. Through the ingenuity and compassion of MIT students, small investments become the capital of the future.

SALLY SUSNOWITZ
Director, Public Service Center

From TB to clean air

Students take on the major cause of child mortality

Last year, alumnus Mohammed Abdul Latif Jameel funded the Yunus Innovation Challenge to Alleviate Poverty, named after 2006 Nobel Peace Prize winner, Muhammad Yunus. Through this challenge, MIT students developed technologies and strategies to increase adherence in rural developing communities to the difficult tuberculosis drug treatment regimen.

This year the challenge involves the quality of air we breathe. Or more specifically, the air that the world’s poorest people breathe.

Indoor air pollution kills 1.6 million people per year, yet efforts to prevent, monitor, and improve the situation remain seriously under-studied relative to other global health issues on a comparable level. The devastating effects most affect women and children.

For children under 5, acute lower respiratory infections are the leading cause of death worldwide. Over half of those infections are related to indoor air pollution. Burning solid fuels, a practice common to 3 billion people worldwide, is the primary source of indoor air pollution.

Given the ingenuity and drive of MIT students, we have no doubt that they’ll succeed. Two $7,500 awards will be given to IDEAS Competition teams who solve this challenge.

Mark your calendar for the IDEAS Competition awards ceremony and reception on May 1 at 7:30 p.m. Check the web site: web.mit.edu/ideas for location details.
Initiating global leaders

Students in iHouse “retreat” into the New Hampshire woods

iHouse is a new residence-based program focused on helping students to act on their ambitions to make the world a better place. At the recent retreat students discussed their goals to combine a comfortable living environment with a support system for tackling the world’s problems. Students’ interests ranged from mechanisms for clean water to computer literacy among the world’s poor.

According to iHouse president junior Mythri Kumar, the students are currently getting to know each other. As part of the iHouse experience, dinners and study breaks are held featuring international cuisine and guests who speak about international development.

With 21 undergraduate residents working with support from each other, from PSC staff, from House Fellow Amy Smith, and from other faculty, staff, and students around the institute, iHouse represents a new living-learning community model at MIT for training global leaders.

In our own back yard...

Reshaping MIT’s approach to federal work-study jobs

Not only is it important to focus our energies around the world, but it is vital to consider US communities.

In September, the PSC began placing students in community service work-study jobs with the help of Linden McEntire, our new Community Service Work Study Coordinator. “The potential for MIT students to apply their ingenuity to the problems we face in our own country is significant,” says Linden.

Partnering with Student Financial Services, Linden will be developing relationships with community agencies in Cambridge and around the country to increase work-study positions for eligible students. Students are now helping high school students with MCAS preparation, teaching young children how to read at a local community center, and assisting with research at a non-profit to improve the environmental performance of local affordable housing. If you know of a potential work-study opportunity, please contact Linden at 617-253-8065.
Celebrating its 50th anniversary this year, the MIT Educational Studies Program (ESP) continues to bring together MIT students who want to teach and local area high school students who want to learn. From SAT preparation to duct-tape design to more intense courses on multivariable calculus, the various branches of ESP taught approximately 3,000 local area students last year, with little to no cost to the participants.

Lorlene Hoyt wins the Ernest A. Lynton Award for the Scholarship of Engagement for her work with MIT@Lawrence

“For me, teaching is an occasion to synthesize planning, knowledge and action,” explains Lorlene Hoyt, Assistant Professor in the Department of Urban Studies and Planning and this year’s recipient of the Lynton Award. Given to individuals who demonstrate the “scholarship of engagement in terms of disciplinary reach, strength of community partnerships, and complexity of student collaborations” according to the New England Resource Center for Higher Education (NERCHE), the award “recognizes the inextricable relationship between planning, research, teaching and practice,” says Lorlene. Lawrence, coined one of the “forgotten cities” by Hoyt, was once the world’s most prominent textile-producer. MIT@Lawrence, a HUD-funded university community partnership between MIT and the City of Lawrence, has received support from the Public Service Center and other MIT entities including the Educational Studies Program (ESP), the Center for Real Estate (CRE), and the Center for Advanced Visual Studies (CAVS). Students work with community members on issues ranging from predatory lending to SAT preparation.

At the institute

ESP opened its doors to students in 1957

Since 1991, more than 10,000 students have participated in CityDays!
Mentor a student... on an IDEAS Team in a service learning class project with a fellowship project

Call us today at 617-253-0742 or email psc@mit.edu

web.mit.edu/mitpsc

Why I give to the PSC...
“I’m excited when I hear about MIT students tackling a problem that will help a community, and I like knowing that I played a role. By supporting the PSC, I can contribute to the energy and commitment of our students as they help to create sustainable solutions to real problems in the world.”

Stephen D. Immerman, Senior Associate Dean for Student Affairs and PSC donor

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