U of T entrepreneurs make science fun for kids around the world

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The sciences often fail to capture the attention of young students – particularly in areas of the world where education resources are scarce. Even in low-resource countries that teach the sciences, many classes focus on rote memorization instead of interactive, hands-on demonstrations.

Pueblo Science, a not-for-profit company led by science PhD students and grown out of an innovative entrepreneurship program at the University of Toronto, has taken notice and action. Members of Pueblo Science recently returned from a successful trip to the Philippines where they promoted a hands-on approach to science education by sharing inexpensive and fun science kits they had developed in Canada.

The kits, which can be replicated locally, include materials and instructions for both teachers and students, and the Pueblo members worked on training teachers from remote villages on their use.

“The training and kits we provided to teachers this year will potentially spark science interest in more than 9,000 high-school students,” says Mayrose Salvador, president of Pueblo Science. “Teachers who participated in our training program were very excited to learn about fun experiments that they can incorporate into the current curriculum.”

Back home, Pueblo Science is now working with local Canadian schools to raise awareness of their kits and get them in the hands of local educators.

Pueblo Science is just one of many successful entrepreneurial start-up companies emerging from the annual “Technopreneurship” (or Techno, for short) workshop at the University of Toronto. Conceived and organized by the Institute for Optical Sciences (IOS), the workshop targets dynamic science and engineering graduates, teaching them the entrepreneurial skills required to transform their discoveries into products and services that ultimately benefit society.

This year, the third annual Technopreneurship workshop – called Techno 2012 – begins on June 18 and runs until July 13. The intensive four-week workshop will cover themes such as intellectual property, financial management, networking, presentation skills, product development and others.

Participants in the workshop register as teams of 2 to 4 people; the majority of time at the workshop will be spent developing the plans to actually create a new tech-based company. Following the workshop, students are able to move forward with a strategy for their tech-based company.

“We have amazing students, generating leading edge-research results, but there is a big gap between generating revolutionary science and creating value to society,” according to Professor Cynthia Goh, Director of the IOS. “The Techno program serves to bridge that gap by providing education, supervision and...
mentorship. Students lead the creation of new start-ups based on university knowledge.”

During the workshop, students have the opportunity to attend various lectures, network with others, and hear from past Techno workshop graduates. As the workshop progresses students often make major adjustments to their initial technological ideas – a sign of great progress in their understanding of real world and market needs.

At the end of the workshop, teams prepare a final pitch of their new company. For many students, this will be their first time presenting in a business setting and will offer a chance for them to meet leaders in their industry. This workshop is the launching point for the new entrepreneurs to begin their journey growing their company with the continued support of the IOS.

The IOS is based at the University of Toronto and supported by faculty members from a wide range of faculties and departments, including Chemistry, Physics, Materials Science and Engineering, and Electrical and Computer Engineering. While the initial mandate of the IOS is to advance the science of optics, the institute’s work on entrepreneurship training and industry relations has generated results and interest from many areas.

The Techno workshops have been successful in each of the past two years, generating about 10 companies each year. One of these success stories is Pueblo Science, a graduate of the 2010 workshop.

“Techno 2010 opened the door for Pueblo Science to gather scientists with a strong desire to impart their passion for science to the next generation!” says Salvador. “After Techno 2010, our IOS mentors’ support was nothing short of amazing: they helped us to find space where we prototype, manufacture, and assemble our kits. They also gave us invaluable advice on structuring our business plan and looking for funding.”

With such a record of success, Techno 2012 is shaping up to be another key tool for helping young technological entrepreneurs.

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