

FROM IDEA TO REALITY: Your school project might earn you more than a good grade

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Parker Mitchell was uninspired. An engineering student at the University of Waterloo in Ontario, Mitchell had spent his last undergraduate co-op term improving door hinges for a 1998 Saturn automobile. That's a fine task for an engineer, and yet he felt something was missing.

For his final-year project, he went looking for a more fulfilling topic -- and he found it in some notes belonging to his professor's late colleague, an engineer originally from India. The notes described the challenges of water and sanitation in India, and the statistics shocked Mitchell: one billion Indians live without access to clean water; 2.5 billion people worldwide live without adequate sanitation. So, for his project, he decided to create a household device that could provide enough clean water for a family of four and would cost less than \$15. He had no idea at the time that it would eventually lead him and his classmate, George Roter, to veer from their expected career paths and found Engineers Without Borders -- an organization that over the past decade has helped bring better agricultural technology to an estimated 10,000 farmers in developing countries around the world.

The fact is, plenty of real-world, practical ideas that go on to spawn successful careers often get their start in the ivory towers of academe. The classic school-project-turned-success story, narrated by business professors the world over, is FedEx -- a company conceived in a Yale University economics paper. As the tale goes, FedEx founder Fred Smith received a failing grade for the project but, hoping to prove his prof wrong, went on to launch what is now one of the largest package delivery companies in the world. There's as much fiction as fact in that story, of course -- Smith has said he earned a "gentlemanly C" -- but it neatly captures a dream shared by many university students: the brilliant concept (and therefore pupil) spurned by a professor but welcomed by the wide world as a success.

The FedEx route is rarely direct, of course. Mitchell, for instance, realized early on that a low-cost water filter would never solve India's water problems. "I learned that technical solutions are only one small part of what is needed," he says. Myriad factors in India meant that his filter would never be used for its intended purpose. But the experience changed his perspective on engineering as a profession. Could engineers put their skills to work by solving the problems facing poverty-stricken parts of the world? With that question in mind, Mitchell and Roter set off to learn about the organizational, cultural and social elements that would allow them to apply engineer-like problem-solving to the challenge of

lessening world poverty. Now, Mitchell still sounds surprised that he ended up the co-CEO of a prominent NGO. "If someone had asked to put bets on people most likely in 10 years to be leading something, my name would have been in the bottom third of the list of everyone in my class," he laughs.

Like Mitchell, Melissa Kluger had no idea where her education would take her when she started law school at the University of Toronto. After she completed an undergraduate arts degree at Queen's University, Kluger enrolled in law in 1998 because she loved the university environment and "was looking for an excuse to stay in school."

At U of T, she was surprised to discover that no publication existed for law students. So -- as she had done at Queen's, where she started a student creative writing magazine -- she jumped at the chance to create a new student publication. "It was a time when there were a lot of opinions and emotion, and students needed a forum to talk," she recalls. "Students were winning competitions, publishing papers, winning sports events -- the kinds of things a community is built on. I felt compelled to fill this gap for our student community and our legal community."

That her interest in publishing could translate into a viable career did not occur to her, at first. Upon graduating from law school, she practised media law for three years. But she missed the creative process: "As much as I enjoyed working with journalists, I really wanted to be one of them." As a young lawyer, she noticed a similar gap as the one she'd noticed at Queen's and U of T: a lack of publications building on the community of young legal professionals. So she left private practice in 2005 and launched Precedent, a magazine for young lawyers that reflected their lifestyles. "I needed to know about how to prepare for a motion but also about what to wear, where to take a client for lunch and what kind of wine to order," she says.

Kluger produced a prototype, but launched Precedent only when she had enough advertising revenue to fund production costs. The magazine was in the black from its very first year -- an impressive feat, considering that the average new magazine isn't profitable for seven years. Now in its third year, Precedent is distributed to over 20,000 lawyers in Ontario.

Kluger believes her law education was excellent preparation for a career in publishing. Aside from the obvious knowledge of legal issues, she says she learned valuable "soft skills" that could be applied in

many careers -- "how to apply for jobs, network, be professional, have a great conversation, follow up with people." She also felt confident making the risky jump with a legal degree in hand: "What was the biggest risk? It wouldn't work and I would have to become a lawyer again."

The soft skills essential to making an idea a reality can be learned in any university program. Take the case of Wilfrid Laurier graduate Mike Morrice. He pursued a double degree in computer electronics and business with the original goal of obtaining a management position. "When I was 17, the plan was to be a high-tech marketing manager," he says. "It was throughout my undergraduate experience that I realized the opportunity for my career and my passions to align."

Morrice's passion was to do something about global climate change, and he convinced a professor to allow him to research ways to govern carbon emissions. He came to the conclusion that carbon pricing was inevitable. "There is going to be a price on carbon emissions very soon," he explains, "so rather than talking about whether a tax or a cap-and-trade market is the best way to go, the more important point to focus on is: what are the business implications and where does business have an opportunity to be a part of the solution?"

Morrice, like Kluger, identified a gap that needed to be filled. In a second research term, he and classmate Chris DePaul wrote a business plan. The result? Sustainable Waterloo, a non-profit consulting organization that helps local businesses prepare for carbon pricing and in becoming more environmentally sustainable. They launched the organization in 2007 while in their final term of their undergrad degree, and within months had attracted the support of the cities of Waterloo and Kitchener, Ernst & Young, the David Suzuki Foundation, Wilfrid Laurier and Waterloo universities, politicians and dozens of companies. After only seven months of volunteering to get the organization off the ground, Morrice received his first paycheque.

Like Morrice and DePaul, many relationships that turn into key professional partnerships are forged on university campuses. Such was the case for Jared Smith and Ted Couri, who met when they sat next to one another during a lecture at the University of Alberta in Edmonton. The two business students started talking about their career plans -- both were set to take over their fathers' businesses -- and hit it off.

Together they got involved in AIESEC, a student-run organization that facilitates international co-ops, and eventually became president and vice-president of their chapter. "The students organization was the catalyst of what would become a business together," Smith says, noting that they were able to attract more funding and job opportunities than any other chapter in Canada that year. "We knew that there was some magic there because of our success together."

So after graduating and gaining international work experience -- in Latvia for Couri, in China for Smith

-- they decided to start a business together. The pair believed that marketing was the key to success at AIESEC and wondered whether companies would outsource their marketing needs in the same way they outsource tech. They set up a laptop on a TV table in Smith's mother's basement and founded Incite Solutions. Now 10 years old, the company has nearly 30 employees, won the 2008 BDC Young Entrepreneur Award and in 2008 was named in Profit as one of Canada's 100 fastest growing companies. "My grandfather used to say: if you want to be incredible, surround yourself with incredible people. University is one of the best environments to do that, to go out and establish relationships," Smith says. "These people end up being your co-workers, your employers, your suppliers, your advisers, your mentors. The people we met 13 years ago at the University of Alberta are still a huge part of our business today."

What's the common factor in these stories? Morrice speaks of business strategy and marketing skills when asked how he applied his education to the launch of Sustainable Waterloo. But he's clear about what he believes to be the most important soft skill he gained in university: "Being really passionate. That has gotten us so very far." Mitchell agrees. "I don't know anyone who has made a choice that has made them excited, that their heart tells them is the right thing, who has come to regret it," he says. "But the number of people who have regretted making the choice that their parents wanted them to make or that society suggested they take -- I know a lot of people who regret that."

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