MARQUETTE UNIVERSITY

ITSO GOOD

Senior Reflection: mAPPing My Future

As an undergraduate I have had a real hard time with trying to figure out what I want to do. In the past, I chose a major I knew nothing about just because it sounded cool, because I truly had no direction, drive or even the slightest clue as to how college would shape my life.

Fast forward to the middle of my sophomore year. Picture a bored 19-year-old college student who has resorted to social media for some brief entertainment (what a surprise, right?). Somehow I stumbled upon an article about the "booming empire" where people have been successful in developing iPhone apps. I really couldn't tell you what happened, but something really clicked for me that day. I was intrigued. I must have read that article 15 times over the week that followed. I had immediately picked up some paper and a pencil and began drawing the wireframe for my first app idea. However, the ideas wouldn't stop; they started to come from the random daily routines that I have had for years. Something as simple as ruler measurements or even as complicated as city traffic patterns would spawn an idea or two.

I began to teach myself the basics of programming. I learned simple web and markup language like PHP, HTML5 and CSS from online manuals, campus library books, and interactive sites for beginners. Soon thereafter, I started working on designs in Photoshop, rough requirements documentation, and detailed mockups for my first ideas, though I had decided to take an interesting approach for my first actual application. After doing my best on the simple framework for the app, I hired a developer to finish it for me. I figured I would learn a lot from examining the code for a fully functioning social app – finished by someone more experienced. But most of all, I was excited and I wanted my app on the market as quickly as possible. This was a mistake in itself. My interfaces were poorly designed and the app was far

Inside this issue:

KEEP CALM AND JUST DO IT

Steps to a more Entrepreneurial Campus

"Unfortunately, my experience was far from romantic. Though eventually rewarding, balancing school with a new venture was a stressful, time-consuming, financially draining, and lonely endeavor."

One of the biggest draws to the field of Entrepreneurship is being able to literally change the world. Everyone knows how Apple disrupted the way we interact with personal computers and phones. Companies like Starbucks and Panera reinvented the world of fast food. Netflix changed how we watched TV. Even Tesla is reinventing cars. And the list goes on. While selling a company and getting rich is certainly fun, there's something more inspiring about changing people's lives for the better.

That's why I decided from a young age I wanted to run my own business. It took me 21 years, but eventually I pulled it off for the first time in 2012. I co-founded DineInTime, which provided restaurants with digital waitlist software (which nearly every prominent restaurant has today, but in 2012 we were the first to the Milwaukee market). After DineInTime broke apart, I co-founded Hour40one. Today I run a web design and development business from my apartment in between classes.

I've found society has a too - often romanticized view of student-entrepreneurs. Visionaries like Bill Gates, Michael Dell, and the founders of Facebook all began their ventures while still in school, and have been inspiration for millions to start companies of their own. People imagine happily working for no one but themselves, taking on projects they're passionate about, and making lots of money.

Unfortunately, my experience was far from romantic. Though eventually rewarding, balancing school with a new venture was a stressful, time-consuming, financially draining, and lonely endeavor. I definitely didn't take advantage of all the resources available to me, but I had wished there were more structured programs on campus to foster entrepreneurship. After all, startups create jobs, introduce innovative technology, and move society forward. Reflecting on my experiences, I have a few ideas to help our campus promote them.

Treat student ventures like paid internships

There seems to be a misconception that most student-entrepreneurs are rolling in profits. In my experience, the exact opposite was true. While I never invested a dime of actual capital in DineInTime, I probably spent a few thousand dollars paying for travel expenses, software, and food for meetings. Since the early-stage company had no revenue and only meager investment, I didn't get paid, either. If my parents hadn't been heavily supporting me, I might have had to quit the company early to find a part-time job.

DineInTime never ended up bringing in much revenue, but did bring me something more valuable—hands-on learning. And that's the reality for many student-run businesses. While many will fail, the educational value they provide simply can't be replicated in a classroom. It's unfortunate if willing students can't take part in the process of entrepreneurship because they need a paid internship or part-time job to cover living expenses.

What if we provided stipends for student-innovators working on new ventures? This wouldn't be free or easy money. Rather, regular paychecks would be dependent on students meeting weekly with a faculty mentor, as well as logging hours and work done. Offering paid entrepreneurship experiences would get more students into startups and level the playing field with other professional training opportunities like internships and co-ops.

Speaking of internships, student-entrepreneurs should get academic credit. The same requirements would

Tech Startups vs. Taxis

Uber and Lyft aim to revolutionize transportation, but not without drama
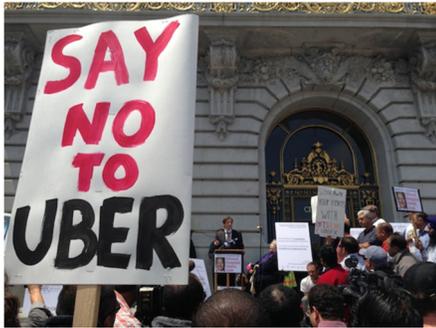
The city of Milwaukee has plenty of good qualities for residents and visitors alike: a beautiful lakefront, trendy restaurants, exciting nightlife, amazing festivals, a no-hassle airport, and low cost of living. Halfway decent taxi service, however, is not on that list.

Milwaukeeans who ride in taxis are usually in for a disappointing experience. In 2011, there were just over 300 taxis operating, meaning the wait could be excruciating—an hour or more at times. Additionally, I've heard passengers complain about drivers being rude, driving in circles to run up the meter and, worst of all, refusing to accept credit cards. With these issues, it's not surprising that both Yellow Cab Co-Op and American United Taxi have 2-star ratings on their Milwaukee Yelp Pages.

That all started to change last winter. In a move that had taxi companies shaking in their boots, ridesharing service Uber opened for business in Milwaukee in February 2014. A similar service called Lyft launched here last April. Sidecar is another competitor in the ridesharing space, but hasn't yet launched in Milwaukee.

While Uber, Lyft, and Sidecar are called "ridesharing" services, they operate pretty much like taxis, with a few small differences. First, you can't hail an Uber or Lyft car by waving it down—users have to download the respective app and request a ride from there. This categorizes the services as "pre-arranged rides" (even if it's been pre-arranged 30 seconds in advance), a classification that has helped the companies avoid taxi regulations in many cities.

Second, ridesharing cars aren't yellow or marked (besides the occasional Lyft car that sports the company's iconic furry pink mustache) and passengers receive information about the driver, car model, and plate number when they request a ride. The

vehicles are the personal cars of drivers, many of whom have a full-time job elsewhere and just drive to earn a little extra cash. Finally, no money or cards physically change hands after a ride is over—the passenger has their

credit card information on file with the company and they are charged automatically.

Other advantages of ridesharing services including rating systems that keep passengers and drivers in check, the ability to split fares between multiple passengers, and the ability to track an arriving vehicle via GPS. In my personal experience, I've also encountered drivers offering free bottled water and prepackaged snacks for passengers.

Yet perhaps the most lucrative aspect of ridesharing companies are the prices—Uber and Lyft are significantly cheaper than their taxi counterparts. A ride from Marquette to downtown on Lyft or Uber, for example, costs $2 less than a taxi, according to whatsthefare.com. On long trips, those savings can really add up.

Uber, Lyft, and Sidecar weren't born out of the Taxi industry—they're tech startups out of Silicon Valley. And like most new technology—they're faced their fair share of opposition. When ridesharing services were first introduced in Milwaukee, regulators insisted they were operating in violation of taxi ordinances. The city council, along with the Milwaukee Police Department, even planned to ticket Uber and Lyft drivers.

That all changed in July, however, when the council passed legislation allowing ridesharing services to operate legally—with three conditions. First, Uber and Lyft drivers are now required to get a public passenger

IT Hackathon 2014

This past fall in the application development IT course, students were able to participate in the first hackathon on campus. The hackathon was for the entire class. Students were able to pick a role on the class project - ranging from business analysts, testers, project managers, developers, and database designers. Various competing teams connected to create artifacts (including user stories, wireframes, logos, a product canvas, test cases, technical designs, database models, and a project schedule) prior to the class hackathon. Each sub-team had an appointed team lead. This allowed students to interact with other class members with similar IT career interests and learn from each other.

I sought to demonstrate how easy it is to find and incorporate sample code from various sources particularly for some of the seemingly complex features that appeared out of reach for students who are new to development. In addition to the group projects, we were able to use this semester-long class project to demonstrate some of the planning, design, and rapid prototyping approaches that the group projects should follow.

Four developer volunteers from the class went on to compete on building a mobile application version of the class project. They showcased their business case and technical artifacts, while demonstrating their working applications in front of a panel of 3 IT professors and 3 industry experts. Most students were able to follow along and apply some of the concepts that we studied in class to build an application that the entire class selected as an innovative idea. The winner won an iPad 4, the runner-up received an iPad mini and the second and third runner-up both received an Android device.

Winner: Zoha Khatoon '15

"The Hackathon truly enhanced my programming capabilities. This experience has provided me with the knowledge and confidence in software development, which I would not have otherwise received."
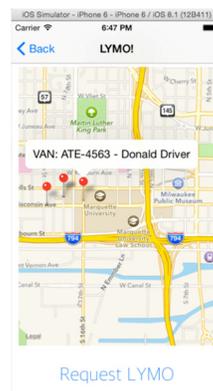
Second: Brady Gerndt '15

"Mr. Addo's hackathon provided students with a challenge that stands out from what we would encounter in conventional coursework. We worked to find a solution to a relevant and current issue, and carried away with us a tangible application and tons of experience."

Third: JieHui Huang '16

"Although it was fun to learn the new platform, it was also very challenging to build the solution using C# and Xamarin. I'm glad to have had the chance to use Xamarin to build an Android Mobile App, because I really like the Android system."

Fourth: Hanzhen Shi '16

"Devoting myself into this hackathon was an amazing and rewarding experience. I would've never thought that I could finish an entire application in four weeks. This experience taught me little changes can make a big difference."

mAPPing my future (cont'd)

from user-friendly. I learned a lot from my massive failure.

Since then, I have come to realize that the best way to create a good mobile app is to do it yourself and back it with some market research and user testing. Over the last year and a half I've been learning programming languages like Objective-C, .NET, SQL, and most recently Swift, from Apple. In the process I've been able to get three apps into the Apple App Store, one of which is also available on Google Play for Android.

Brinkly (iOS only, free) is an anonymous social network that allows users to create and post in anonymous groups. These groups can be either public or exclusive: limited to friends, campuses, or even cities at the creator's choosing. Users can also tag group members in public posts, or start anonymous chats with group members while remaining nameless.

Brinkly is a modified version of my first ever app that failed. After some modification, the rights to its original were sold to a California startup, and Brinkly is a byproduct that came from the leftover frameworks. The app is free with no ads and bolsters just

over 600 users. Development was assisted and took nearly 6 months.

Carpenter Square (iOS only, $1.99) is a utility application aimed to simplify the use of the Pythagorean theorem

in carpentry and construction. These professions often need to square a corner by first measuring it, converting these measurements to decimals, performing the Pythagorean theorem, then re-converting these values back into metric units. The app automates this process and outputs measurements down to 1/16 of an inch. Recently, the app has been generating an average of $10/week in revenue. Development took just over three weeks.

Captain Tom: Fly Your Plane (iOS and Android, free) was created as a tribute to a dear friend and a passionate pilot, Tom, who passed away due to ALS, a crippling neurodegenerative disease. It is a simple game where players must steer their plane through flocks of birds in the night sky, but are only able to see oncoming obstacles in the plane's spotlight. Currently my most popular app, 'Captain Tom' has 1200+ downloads and is solely funded by small banner ads at the top of the user's screen. Development required some assis-

tance for graphics, and took nearly five months in total.

Additionally, I am currently developing a fourth app that will allow users to instantly populate their iPhone calendars with entire schedules from sports teams, institutions, academic calendars, and more, as well as any unique user created calendars submitted to my website.

I'm proud to say that I've found my passion in app development, IT, and technology as a whole. Although in their infancy, my apps have well over 2500 downloads collectively, and have generated nearly $10,000 in revenue. Although the numbers may not seem like much, I'm very excited that just over a year of learning and continued improvement has brought me such enjoyment. I can only hope the years to come are filled with much more learning and improvement.

Ryan Daulton '16
Information Technology and Entrepreneurship

apply here, and again, it would help convince people that entrepreneurship is worth their time. I was able to get academic credit for my experience at DineInTime, but the process was highly ambiguous and confusing. A structured program for giving academic credit to student founders would have made my experience more pleasant.

Bring Innovative Thinking Into the Classroom

I think part of the reason students are reluctant to try entrepreneurship is our learning attitude on campus is often focused away from innovation and trying new things. Though students sometimes dread it, many classes embrace writing, public speaking, and collaborative work as means to learning the course content. Why not add innovation to that list?

For example, while a Supply Chain course may have a group paper studying, for example, McDonald's supplier policies, it should also have a component where students learn about the company's procurement problems and try to design a solution based on feedback from various stakeholders.

Ideally, this wouldn't be a prepackaged case with a single solution, but rather be more open-ended in format. Students would be encouraged to pull knowledge from other areas—even seemingly unrelated subjects like philosophy and anthropology—and build creative solutions to problems.

In recent years Stanford's design school has developed a concept known as "Design Thinking"—which essentially embraces careful observation of people's behavior and uses that data to create more user-friendly designs—in everything from grocery stores to cars. Design thinking also incorporates an iterative process that facilitates brainstorming new ideas and revising old ones.
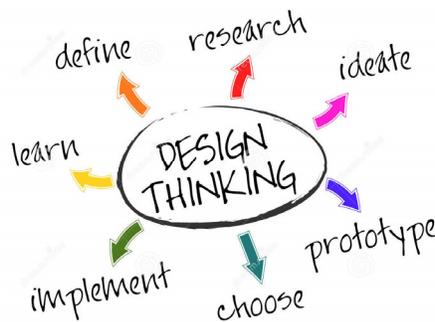
Schools such as Johns Hopkins, University of Minnesota, and the University of Toronto have integrated design thinking into their business curriculum, with much praise from employers. Perhaps one day we'll see Marquette on that list. Yet attracting employers is only part of the story—what if students were able to take the ideas developed in their classes and build companies with them?

Use Marquette University as a Test Bed for New Ventures

With almost 12,000 students, a wide variety of housing and businesses, a nationally-recognized athletic department, and complex, modern infrastructure, Marquette is essentially a small city of its own. And with a relatively open-minded, tech-savvy, and well-off student body, it could be the perfect test bed for student-run startup.

Ventures like Facebook, SnapChat and Yik Yak were born on college campuses and gained their initial following from students. Yet many colleges' administrative bureaucracy is unwelcoming to student ventures

Ventures like Facebook, SnapChat and Yik Yak were born on college campuses and gained their initial following from students.

Entrepreneurial Campus (cont'd)

or ideas. For example, in 2012 Students at Yale developed an innovative, user-friendly online course catalog YBB+ to compete with the clunky web site the university provided (much like our CheckMarq). The site was promptly shut down by the administration, who refused to even negotiate with the students that created it. There are countless other stories like this one in academia—probably even a few cases at Marquette.

Right now, I can think of countless problems on campus that potential startups could solve. What if there was a way to request a L.I.M.O. with an Uber-like app? How about if students could order food from Marquette Place online and pick it up on the way to class? What about software that uses video-interpretation algorithms to track the level of crowds at the Rec Center? Since it's my major, I'm biased towards IT solutions, but student-entrepreneurs could get hands-on experience solving problems like better-designed desks, lesson formats that optimize attention span, or effective ways to match roommates.

Bring the right people together

In one of our recent entrepreneurship class discussions, I realized one of the biggest frustrations that made me want a 9-to-5 job: the crippling loneliness of startups. I've spent entire days working on clients' web sites without even stepping outside Campus Town West or speaking to a single person. While that sounds like a dream to some, it gets old quickly. People don't realize the wonders small talk and casual interaction do to boost our motivation. Work can suck, but even having a sounding board for angry rants is hugely therapeutic.

These professional-social opportunities are often absent for student-entrepreneurs like me, who will many times work on their ventures alone. Friends, too, who have different academic and professional experiences, may find it hard to relate.

Let's create structures that bring enterprising students together. These would ideally also connect students with mentors and other students with skillsets that could help them build their dreams. Marquette has a Collegiate Entrepreneurs (CEO) club but it's not particularly active. Even a Facebook group where student entrepreneurs could connect and share experiences would be a step in the right direction.

The Bottom Line

Marquette, at first glance, doesn't seem like an edgy, innovative school - at least not to the likes of Stanford, MIT, or even UW-Madison. Yet, believe it or not, entrepreneurship and innovation are in our institutional DNA. The university vision statement says "Marquette graduates will be problem-solvers and agents for change in a complex world." And stamped all over campus are three powerful words: "Be the Difference."

I think a few new programs could make leaps in inspiring more student-entrepreneurs to "be the difference" and change the world with their companies.

Jon Gunter '15
Information Technology and Entrepreneurship

Yale University Censors Popular Course Evaluation Site

Posted Jan 16, 2014 by Anders Melin (@MelinAnders)

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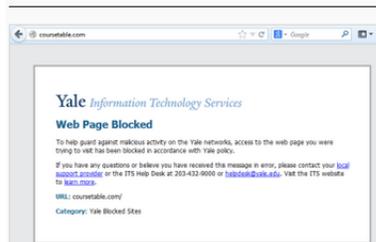
Yale Bluebook+, a student-created mock course scheduling tool with consolidated course evaluations and ratings, was blocked on the internal university Internet on Monday by the administration, citing non-permissible use of Yale's data and name. The block came less than a week after Gabriel Olszewski, the university

Ref: Techcrunch.com Jan 16, 2014

Tech Startups vs. Taxis (cont'd)

(Continued from page 3)

vehicle license, which requires a background check. Second, their vehicle must be inspected. Finally, they must provide proof of insurance. Even though it legalized their services, Uber and Lyft strongly opposed the ordinance, instead insisting upon a completely unregulated market for rides.

Ridesharing services have their own set of rules for drivers, as well. Lyft, for example, requires background checks, DMV checks, and a four-door, five-seat car under a certain age (which varies by state). The company also provides extra insurance for its drivers and has a driver orientation process. Additionally, drivers who

don't maintain a rating above 4.5 get kicked off the network. Uber and Sidecar both have similar processes.

Yet these restrictions have not kept the companies out of trouble. While Lyft has maintained a relatively clean record, several incidents have led Uber to make 24/7 Wall Street's List of "Most Hated Companies" in 2014. There have been news stories about people getting hit by Uber cars, including a 6-year-old girl in 2013. Even worse, a driver in New Delhi reportedly sexually assaulted a female passenger in December.

The misdeeds are not limited to drivers, either—Uber's corporate office has a record of less-than-ethical behavior. Ridesharing reveals a lot of information about people's lives and

The New York Times reported that Uber has been less than careful with its users' sensitive data. In one of the most cringe-worthy incidents, the company made a blog post in 2012 about how it tracked "rides of glory," which are rides home after probable one-night stands.

As technologists, it's often easy to shun the low-tech taxi companies for enforcing the status quo. After all, hailing a ride (and paying for it) on your smartphone is easy, simple, and—well—just plain cool. But as Uber and Lyft demonstrate, the high-tech sharing economy sometimes creates as many problems as it solves.

Jon Gunter '15
Information Technology and Entrepreneurship

What do you think of the Budweiser commercial in Superbowl 2015?

To learn more, see the next issue of ITSO on how to analyze data from Twitter.

Announcements

Recruiting Zone

This newsletter is available for job or internship posting. Please contact the Co-Editors ahmed.hollowell@mu.edu or jennifer.sotis@mu.edu

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(2014-2015)

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