

The University's Vital Entrepreneurship Role July 19, 2017

Chairman Chabot, Ranking Member Velazquez, I appreciate the opportunity to testify before the committee today. I wish to discuss the vital role of higher education in the nation's entrepreneurial economy. I will describe how universities cultivate business leaders and provide examples of how Miami University promotes entrepreneurship so our graduates don't just get great jobs – they create them.

Although a physicist, now that I've launched two companies based on my research discoveries and helped create start-up communities and ecosystems at three universities, I understand entrepreneurship differently -- it reaches far beyond the business world.

I now define entrepreneurship as **"seeking potential**, **seizing opportunity**, **and synthesizing solutions for societal impact**." I know that relationship-building is key to its success. By this definition, my role as president of Miami University is entrepreneurial, especially in these days with so many pressures to enhance quality and reduce costs. The entrepreneurial spirit must go beyond the confines of the business school and the President's office to be a central part of the entire university. Just to give you a recent example: When Forbes ran, an article headlined "Why Ohio Is The Best State In America To Launch A Start Up"¹ earlier this year, it featured two of our graduates who as science majors joined our Institute for Entrepreneurship as undergraduates and went on to found OROS Apparel.

The entrepreneurial mindset is as vital for success in the 21st century as the pioneering mindset in the 19th century and the manufacturing mindset in the 20th. Once, a typical career was one job at one hometown company with a gold watch upon retirement. Now, disruption occurs at an accelerated pace.

¹ Taylor, Peter Lane, Forbes Magazine, "Why Ohio Is The Best State In America To Launch A Start Up" Accessed July 7, 2017: https://www.forbes.com/sites/petertaylor/2017/02/20/why-ohio-is-the-best-state-in-america-to-launch-a-start-up/#7339343b1d94

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Entrepreneurial thinking equips us to respond to such rapidly changing circumstances by evaluating options, imagining possibilities, and taking risks.

Universities play a vital role in the start-up ecosystem. Universities provide start-ups with human capital and innovative research solutions, critical components for successfully executing new ideas. This is what John Kenneth Galbraith meant when he said universities would be as important to the 21st century as banks were to the 20th.

The critical question facing universities is: how do we maximize our role in the 21st-century entrepreneurial ecosystem for the benefit of our state, our nation, and our global society? Traditional higher education was designed to make students experts in one subject – to go deep but not broad. That is no longer sufficient in today's economy, where students need both breadth and depth to sustain them through multiple careers.

That's why Miami's teaching philosophy involves the "T-shaped person," a concept first advanced by the marketing company IDEO. In addition to developing depth in a specific subject, our students gain breadth and experience in entrepreneurial thinking and emerging technologies. We treat such skills as coding, social media, and search engine optimization in the same way we treat writing, math, communication, diversity, and inclusive excellence – fundamental skills that all college graduates, regardless of major, require in the new economy.

The entrepreneurial spirit and philosophy at Miami is embedded in every major – not limited to the business school or science, technology, engineering and math (STEM) disciplines. In fact, more than half of our students in entrepreneurial activities at Miami are outside the business school. They can take an entrepreneurship class or co-major, unite the breadth of liberal arts with the depth of discipline knowledge, work in a laboratory with a professor to create value from basic research, and engage the diversity of people and perspectives on campus that make lifetime connections. Exemplary programs offered by the Institute for Entrepreneurship and the Armstrong Institute for Interactive Media Studies, called AIMS, draw students from 79 majors across the university, and their graduates are in great demand.

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Miami's universal approach to entrepreneurship exceeds the conventional higher education mindset on experiential learning. We believe there is no substitute for the messy, complex, sometimes risky, tension-filled aspect of the compromise-driven world of real business and value creation. No classroom can replicate real projects, with real stakes that require real results. This approach has transformed our traditional internships into interactive apprenticeships where students make quantifiable contributions to the entrepreneurial ecosystem.

These apprenticeships provide our students with year-round opportunities to engage in real-life experiences with start-ups and major national corporations. There, they must make the same kinds of choices and trade-offs that you and I have faced in our business careers. We challenge our students to become change agents for both current and future organizations.

Among other things, Miami University has a permanent presence at Cintrifuse in Cincinnati. Cintrifuse is a start-up catalyst, a public/private partnership that exists to build a sustainable tech-based economy for the Greater Cincinnati region. Our students are embedded, full-time, at Cintrifuse and with local start-ups. Miami students are part of actual start-up teams, bringing the depth and experience of our university to help them succeed. Through this partnership, our students have worked directly with such Cincinnati companies as The Brandery, 84.51, Frameri, and Roadtrippers, to name a few.

In addition, Miami offers the San Francisco Digital Innovation Program, which is ranked 5th in the country in Technology Entrepreneurship. In this program, students spend an entire semester living in Silicon Valley. Four days a week, they are in an apprenticeship at a start-up. Like any nascent entrepreneur, they do everything from ideation to product development to cleaning up the office at the end of the day. On the fifth day, they visit executives and thought leaders at companies such as Google, Apple, and Facebook. We were the first undergraduate program of this kind in the Bay Area, and we have since replicated the program in Ohio and Texas.

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The results of our approach to entrepreneurship speak for themselves, and we are extremely proud of our students' successes:

- 1,500 Miami alumni currently self-identify their job title as a founder or co-founder on the social network LinkedIn;
- More than \$2B in venture funding has been raised by Miami-affiliated high-growth companies since 2011; and
- 94 Miami-affiliated high-growth companies have exited through acquisition since 2011.

Universities have an important role to play in the entrepreneurial ecosystem. We can be critical players as the testing ground for the next generation of innovators. This involves not only focusing on what happens in the classroom but also giving students the breadth of knowledge in entrepreneurial thinking and emerging technologies necessary to thrive in any career. That includes opportunities for invaluable real-world experience that will prepare them to create their own business or excel in one.

Thank you for allowing me to present the University's vital entrepreneurship role in the 21st Century, I will end with this statement: Training in entrepreneurship provides both tangible and intangible outcomes. Universities often benchmark their graduation class by counting those with jobs six months after graduation – at Miami that number is >95%. Beyond that, we want to be known for those graduates who create jobs for others, sometimes thousands or tens of thousands of jobs. That we can measure.