

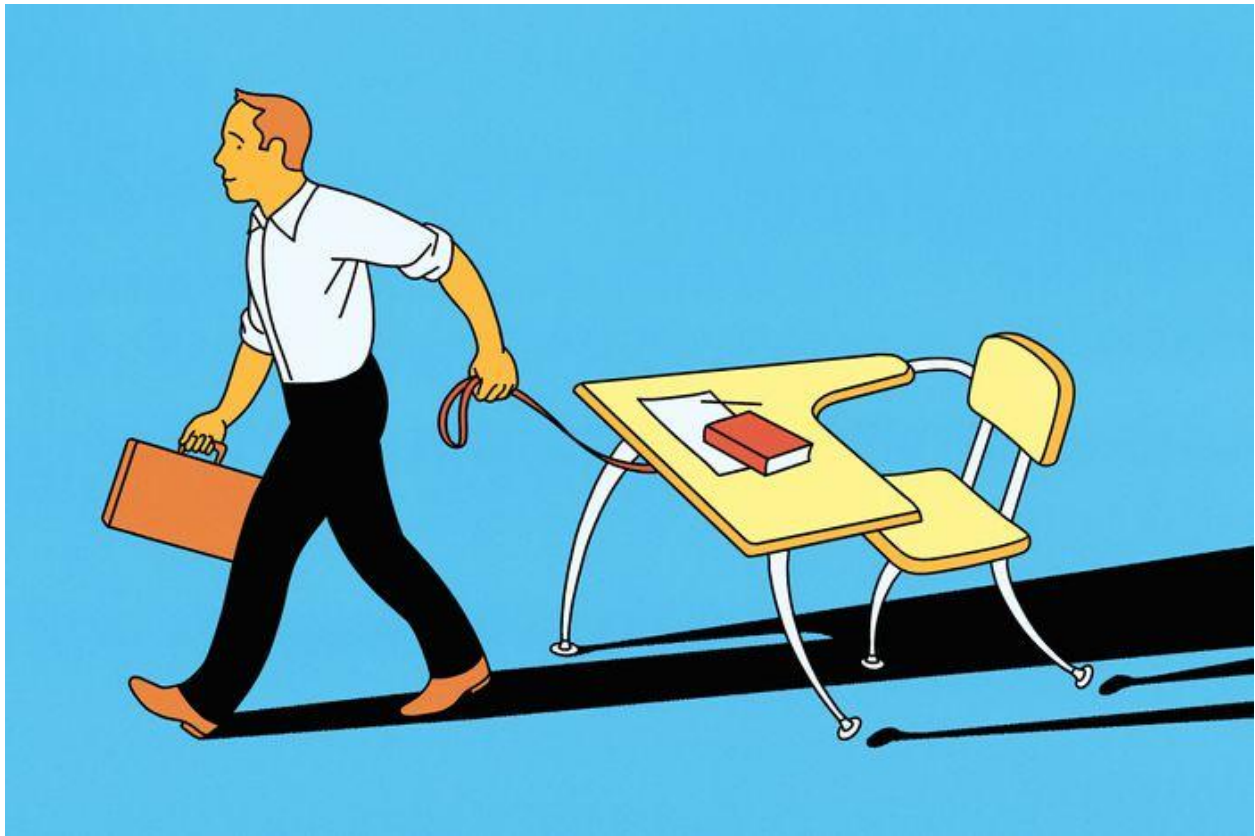
# Rethinking Higher Education: Why Independent Student Projects Matter More Than Ever

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I am a freshman at the University of Pennsylvania.

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Apr 09, 2024, 08:25pm EDT



Is a traditional college education really helping students, or is it simply dragging students down in this day and age? Source: [WSJ](#)

As my first year at the University of Pennsylvania comes to a close, I find myself drawn towards what Mark Twain once [said](#): "I'll never let my schooling get in the way of my education."

In agreement, I have found that the traditionally-oriented university curriculum that exists at Penn – rigid and inflexible, grade-focused, and lecture-based – to be ineffective for students. Even among my research lab at Penn Medicine, which is ranked as the 3rd best medical school in the world, I have heard countless variations of "Undergrad was pretty useless, I don't even remember what I learned there."

If the main goal of college is to prepare students for a future in their career, I daresay that the traditional college education is failing us. Instead, it is the students, who themselves scour for internships at nights, who themselves learn applicable skills over the weekends, who themselves fit in independent research time in-between the dense walls of blocked time for classes, to be the prime factor in their success. Rather than hindering this, university administrators need to embrace the value of student independence. **Elite universities need to provide greater opportunities for students to pursue independent real-world projects for self-learning.**

One reason is because traditional rigid course structures [often fail to align with students' genuine interests and career aspirations](#), forcing them to slog through irrelevant course requirements. You may assert that your class is important (it likely is!) but for specific students, it may be irrelevant. Countless students nationwide lament how their "chemistry lectures are completely useless for learning computer science," to cite one example. The rigidity of this one-size-fits-all approach dampens enthusiasm for learning, leading to poorer outcomes.

Furthermore, the traditionally common “class lecture followed by dozens of psets” learning approach has been criticized for its [inability to prepare students for real-world career experiences](#). Additionally, with the rise of AI, students have been breezing through those “psets”, particularly in classes deemed irrelevant to their career goals. For example, computer science majors may use AI to complete their chemistry assignments without actually learning the material. After all, is it even relevant to their future careers?

Ironically, universities may be unintentionally fostering this behavior by prioritizing GPA prestige and degree status over genuine education and learning. Imagine a scenario where a student who writes an essay on their own receives a lower grade compared to a classmate who "GPTed" their entire essay. Wouldn't that disparity be demotivating for the student who put in the effort to create original work?

Well, for my friend in Penn's writing seminar, it was. "Why should I put in twenty times the effort if I'm just going to get a lower grade for it?"

It is likely that more students will rely on these tools to navigate through their rigid and inflexible general education requirements, focusing solely on maintaining that perfect 4.0 rather than acquiring true knowledge.

Students need to develop critical thinking and problem-solving skills, but those skills cannot and no longer should be developed by memorizing lecture formulas and coasting through assignments. Rather, educators and professors must encourage and allow students to pursue career related independent projects they are interested in, thereby intrinsically motivating the students to learn for the sake of learning, rather than for a grade.

A major benefit of adopting this learning paradigm is allowing students to actually mirror a real-world experience of their future career. For example, last week I was invited to a dinner with Contrary Venture Capital, a top-tier venture capital firm. We discussed the effectiveness of Penn's Entrepreneurship classes and came to a single conclusion: working on 10 page "business canvas" worksheets is simply not a real-world reflection of what entrepreneurship truly is.

As a student pursuing entrepreneurship through an independent project (running my own startup), I find that I am learning far beyond what traditional lectures coursework could possibly offer. Could a couple of case-studies reviewed from class teach me how to apply oscilloscope measurements to software specific to my company? Could it teach me the design process or the manufacturing process for silicon chips?

Probably not.

Even the simple experience of pitching to hundreds of investors and raising millions in funding isn't taught at all. Sure, one could learn the *theoretical* best way to pitch, but one must pitch to know how to pitch.

By diving head-first into running my startup, I have acquired a diverse, real-world applicable skill set and soft skills that can't be taught through 10 page worksheets: what it feels to "[move fast and break things](#)," how to work out cofounder disagreements, or dealing with the stress that inevitably comes when you're weeks away from running out of cash.

Furthermore, allowing students to pursue their own interests can oftentimes lead to a deeper learning experience. When students are given the [opportunity to explore topics they are passionate about, they are more likely to take personal initiative](#) and engage in self-directed learning. This approach results in a better education, as students are intrinsically motivated to acquire knowledge and skills relevant to their interests.

In my case, entrepreneurship became not pages of case studies to memorize, or memorizing formulas to calculate churn rates. Rather, it became something I can call my own. It became something I now work on full-time on top of my education – managing interns, 40 hours of manufacturing and R&D a week, raising millions in capital – ultimately learning far more than I would've if I stuck with the traditional way of teaching entrepreneurship in university education.

Some may raise concerns about the [logistical complexities](#) involved in weaving project-based learning and independent studies into the traditional educational fabric — pointing out the challenges like the need for faculty with niche expertise and the need for additional funding.

I disagree.

I firmly believe that elite universities are the only institutions uniquely capable to overcome these specific obstacles. The Ivy League and similar caliber universities, arguably, are the deepest reservoirs of unparalleled talent and financial resources, surpassing those found in most other contexts. Furthermore, by forging strategic alliances with the business world, educational institutions can create a symbiotic relationship that serves not only the immediate stakeholders — the schools, the industries involved, and, most importantly, the students — but also the broader community by driving innovation and skill development.

Universities such as [Drexel](#) and [Northeastern](#) have indeed set a commendable precedent by valuing the role of independent real-world experience in higher education. Their highly acclaimed cooperative education (co-op) programs demonstrate the feasibility of integrating academic study with professional practice. These programs permit students to alternate periods of academic study with terms of full-time, paid professional employment in their field of study, thus providing a seamless blend of theory and practice. This approach not only enriches a student's education, but also significantly enhances employability upon graduation as co-op students regularly accept return offers.

It's a compelling model that enables students to broaden their educational experience while enjoying the merits of independent, real-world learning.

And it's about time for other elite universities to follow suit.



**Maxx Yung**

I am a freshman studying Materials Science and Engineering with minors in Computer Science and Entrepreneurship at the University of Pennsylvania. After six years of research at SUNY Old Westbury Neuroscience Institute, Stanford Medicine, and Penn Medicine, I have been able to travel the world to present my findings at MIT, Stanford, Regeneron, and the American Academy of Neurology. After founding several small businesses generating over \$20,000 yearly revenue, leaving as a cofounder of a \$100k pre-seed backed AI startup, I am now leading Nanoneuro Systems, where I am building the future of sustainable AI and paving the way for AGI and biocomputing. Raised over \$1.5M in non-equity grants and currently raising a pre-seed round with a valuation of \$14M.