

Breaking Professional Schools Out of Their Silos

How colleges are making career-focused education more interdisciplinary

By Michael Anft | APRIL 30, 2017

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Alex Garcia for The Chronicle

Leslie Oster (left), a clinical associate professor of law at Northwestern U., teaches a class in legal entrepreneurship in the master-of-science-in-law program.

As Francisco Gallegos Hoyos sought out a graduate program to supplement the bachelor's degree in bioengineering he had earned in his native Mexico, he knew he wanted to learn one specific thing — tech commercialization — but with broad horizons.

"I needed to have more than just an engineer's perspective to do what I wanted," he says. "I wasn't an entrepreneur, but in order to help people who are, I needed to learn about how laws and regulations affect businesses."

After considering several programs in the United States that combine science and business, he instead settled on the master-of-science-in-law program at Northwestern University's Pritzker School of Law. The one-year program's approach — it focuses on business, law, and the best ways to set up a science-based enterprise — suited his purpose.

"I got to study a little bit of everything," says Mr. Gallegos Hoyos, who will graduate in May. "As a result, I feel confident I can find a job helping Mexican companies that need to move into the U.S. to be successful. There's a real market for people with my set of skills."

His story reflects not only the career aspirations of advanced-degree seekers but also the wishes of many college presidents, deans, and faculty members who see an interdisciplinary professional education as a path to greater relevance, higher enrollments, and students better equipped to deal with the modern world's tangle of problems.

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Colleges are making law, business, and other career-focused programs more interdisciplinary

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While graduate schools at some of the nation's public research universities have long featured a small number of programs that offer a fusion of disciplines, several smaller universities have recently created specialized degree offerings that include two or more

disciplinary viewpoints.

"We're in the silo-busting business across academe right now," says Donnie Horner, provost at Jacksonville University, in Florida, which has formed a handful of hybrid graduate programs in the past five years. "The world is becoming more interdisciplinary and is forcing us to change to reflect it. The marketplace is telling us that students need to be well-versed in their discipline, but also technologically competent."

Employers now require more workers who can bridge the gaps between professions — engineers who understand business, journalists with computer-programming skills, health-care providers who can crunch data.

On college campuses, busting silos would seem to be rough work for professional schools, which traditionally have done all they could to narrow a graduate's focus. Faculty members and administrators are more likely to have become used to running professional programs in the same way for decades. Remaking programs to teach more than one discipline hasn't been easy, many concede.

Still, although professional schools have thrived with silo-style specialization, the idea is emerging that a sizable number of students need to focus on the niches between professions to get the best jobs and make the most impact.

Columbia University's School of Journalism, for example, runs three dual master's-degree programs, including one that includes intense study in computer science and data. The cross-disciplinary approach has improved students' immediate career prospects, says Sheila Coronel, dean of academic affairs. "Industry tells us that our programs are working to make better professionals out of our students."

Money, to be sure, plays a role in the trend. Individual donors and foundations have encouraged universities to use multidisciplinary approaches to take on the grand challenges of our time, such as global warming and health care.

Some universities have linked the idea of a no-silo graduate education to the need to improve the regional business outlook, and are spending large sums to hire and house more professors.

The University of Maine is raising \$150 million for the Maine Center for Graduate Professional Studies, in Portland, which it plans to open in 2021. Its schools of business, law, and public policy would be under one roof, with each faculty member teaching in two or more programs.

The idea, according to a website that explains the Maine plan, is to create "an integrated professional center as an economic growth engine for the state" and stop a brain drain of young professionals out of Maine.

Some scholars are skeptical about such aspirations for cross-disciplinary graduate programs. "Razing silos" — a three-decades-old buzz term in business and government as well as education — is a trend that has stalled, and with good reason, they argue.

"It's not a useful term," says Jerry Jacobs, a professor of sociology at the University of Pennsylvania and author of *In Defense of Disciplines: Interdisciplinarity and Specialization in the Research University*. "If you take a good look at universities, things are a lot less siloed than people think."

But college officials insist this is a trend that isn't going away.

Small universities that have created cross-disciplinary programs say they have yet to tap the same grant streams that larger institutions do, but that they hope their efforts will draw the attention of foundations.

"It's a challenging time for universities that do not have large endowments," says Don Capener, dean of the Davis College of Business at Jacksonville, which has in recent years formed cross-disciplinary programs with the schools of computer science, engineering, and health science. "Smaller schools need to find ways to become relevant enough to draw the attention of funders, and intensive programs that deal with large problems in a multifaceted way is one of them."

Unlike large and well-financed institutions, some smaller ones also see interdisciplinary graduate programs as one way to re-energize their campuses and use money more wisely. With many states cutting education support, administrators say it is necessary to work across disciplines.

"The pressure to engage colleagues outside our walls for resources or support is forcing many institutions to collaborate," says Mr. Capener. "They're being told to work together, or else they'll lose funding for pet research projects."

Beyond financial concerns and the demands of employers, academic leaders say that offering relevant programs simply gives many grad students what they want. Many of them enroll in professional school with a passion for taking on multifaceted issues that spill over from one discipline to the next.

"Students come in wanting to solve these big problems," says Vicki Field, director of interdisciplinary initiatives at the University of Minnesota's Graduate School, which has offered such programs for nearly 70 years. "That makes cross-disciplinary programs attractive to them."

A few law schools have created hybrid legal majors to help reverse enrollment declines. Nine years ago, as the recession hit, law-school applications plummeted. Northwestern's law school saw its application rate tumble by about 20 percent. Even as the economy slowly recovered, the effect lingered.

"We needed to advance our standing in the legal world by meeting its demand for T-shaped professionals — people who exhibit a deep grounding in foundational law but also knowledge of another discipline," says Daniel Rodriguez, the dean. "We saw interdisciplinary education as a marketing opportunity."

Administrators began asking law students with STEM backgrounds, primarily engineers and scientists, what kind of grad programs they'd like to see. They said they wanted to work in business and not be practicing lawyers. So the school began sketching out a program to draw in many more students with science backgrounds.

When Mr. Rodriguez and others first offered the master-of-science-in-law program three years ago — hiring faculty members from the law, business, engineering, and journalism schools — Pritzker wasn't exactly exploring new territory. It had featured a combined M.B.A.-and-law-degree program, run jointly with the Kellogg School of Business, for nearly 20 years. The law school has also long maintained cross-disciplinary seminars or incubator programs with the schools of engineering and medicine.

But in the conservative world of legal education, the M.S.L. program made a mark. "Northwestern has been as traditional in its approach to law as most schools," says Mr. Rodriguez, "but we thought it important to include new offerings that responded to the changing nature of practicing law."

The program has brought in 140 students in three years, helping to increase the school's enrollment, which now stands at about 900. So far most of the M.S.L. graduates have landed in jobs in business or science that allow them to apply their specialized training, Mr. Rodriguez says.

"We're hearing a lot of enthusiasm," he says. "If people were disappointed, believe me, we'd hear about it."

Some administrators say they would like to see firmer metrics developed for their mostly new cross-disciplinary programs — perhaps data to precisely measure how much more interdisciplinary graduate students are learning than other degree candidates are, how they fare once they enter the professional world, and whether their problem-solving skills are more or less advanced than those of students from non-hybrid programs.

"We have the desire to get that data," says Scott Lanyon, dean of the Graduate School at Minnesota. "We're not there yet."

Creating multidisciplinary professional programs sometimes exposes institutional baggage. It can set off faculty turf battles and engender skepticism from administrators who say they don't have the money to support hybrid offerings.

Faculty members may be resistant to ideas from outside their discipline, or they may fret about protecting their research findings from scholars in other departments. Deans worry about setting up workable agreements between schools so that programs are adequately funded.

"A lot of schools are having a hard time financially. So if you want to start a law program that helps budding lawyers learn business, someone in the business school will say, 'Hey, that's what we do,' " says Leslie Oster, a clinical associate professor of law at Northwestern who directs the master-of-science-in-law program. "You have to reassure people that you won't be stepping on their toes. In our case, that meant inviting people in the business school to teach in the new program."

But the tensions can last long past the time that hybrid programs are formed.

At Washington State University, the College of Arts and Sciences and the College of Engineering and Architecture have jointly run a successful materials-science-and-engineering Ph.D. program. But even after 15 years, its structure remains a point of friction between the colleges.

They contribute money to pay faculty members and teaching assistants, but the bulk of the program is financed by the university's Graduate School.

"Students count for my performance review, but they don't bring money into my department, which also pays overhead costs on grants," says John McCloy, who directs the program and is an associate professor in the School of Mechanical and Materials Engineering. "There's no way for us to grow the program from the inside."

Such arrangements leave some cross-disciplinary programs vulnerable, he says. "The bottom line is always money, right? If the economic climate is not good, there are discussions about how to keep the money flowing. We don't have a traditional way of doing that. And we're dependent upon three deans getting along."

Discussions between Mr. McCloy and William Andrefsky Jr., dean of the Graduate School, have led to a possible solution: a new research institution that would use grants to support the program. But both men concede that the prospect is years away.

For Mr. Andrefsky, the hybrid program's dilemma raises questions for cross-disciplinary professional programs across the nation. But its success, and that of a similarly structured Ph.D. program in molecular plant science, has inspired Mr. Andrefsky to create new hybrid offerings.

"The real question is, How do we make these programs self-sustaining?" he says. "Funding is always an issue. Plus, the fact is that departments aren't always as invested in cross-disciplinary work as they are their own disciplines."

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