Bad Bets

The High Cost of Failing Programs in Higher Education

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Introduction

Every new program launched by a college or other institution in higher education is a bet that the idea will resonate with students and grow enrollments—and too many of these bets don't pay off.

Roughly half of the programs that first graduated students in the 2012-13 or 2013-14 academic years reported five or fewer conferrals in 2018, according to an analysis of federal data by Burning Glass Technologies. Some 30% reported no 2018 conferrals at all. In other words, not a single student that year marched in commencement to receive a degree from these new programs.

When you widen the aperture, the picture doesn't improve. A staggering two-thirds of new programs produced 10 or fewer graduates in 2018. That figure roughly holds true across public and private institutions, two-year and four-year, and for undergraduate and graduate programs.[1]

That doesn't mean these programs produced no graduates at all during those five years. Even the 30% of programs that produced no graduates at all in 2018 reported some 48,044 degrees conferred since they were launched. On average, that works out to about 15 conferrals per program, or three per year. Under the broader lens of programs with under 10 conferrals five years after launch, the average increases to about four per year.

Not every program will produce large numbers of graduates, in the same way that not all products succeed in the market and not all movies become summer blockbusters. But the stakes are high for U.S. higher education, which is in an unprecedented financial crisis that was brewing even before COVID-19 struck:

- The nonpartisan Hechinger Report estimates that more than 500 institutions show two or more signs of financial strain. Nearly 30% of all four-year schools brought in less tuition revenue per student in 2017-18 than in 2009-10.[2]
- Undergraduate enrollments have fallen 4% since last year, with freshmen showing a 16.1% drop.[3] This caps a long-term trend of declining enrollment, falling 6% since 2010.[4]
- More than 50 institutions have closed or merged since 2016.[5]

1 Our definition of new programs is based on those that reported no conferrals, or only one conferral, to the federal IPEDS database in the 2012-13 and 2013-14 academic years. For more details, see the Methodology.
2 "Analysis: Hundreds of Colleges and Universities Show Financial Warning Signs," Sarah Butrymowicz and Pete D'Amato, August 4, 2020, https://hechingerreport.org/analysis-hundreds-of-colleges-and-universities-show-financial-warning-signs/.
3 "Fall 2020 Undergraduate Enrollment Down 4% Compared to Same Time Last Year," Todd Sedmak, Oct 15, 2020, https://www.studentclearinghouse.org/blog/fall-2020-undergraduate-enrollment-down-4-compared-to-same-time-last-year/.
4 National Center for Educational Statistics website, https://nces.ed.gov/fastfacts/display.asp?id=98.
5 "A Look at Trends in College Consolidation Since 2016," Education Dive Team, Sept. 17, 2020, https://www.educationdive.com/news/how-many-colleges-and-universities-have-closed-since-2016/539379/.

- Even before the pandemic, more than four in 10 recent college graduates were underemployed, in jobs that don't require a bachelor's degree.[6] Some 11% of the more than $1.5 trillion in student debt is delinquent.[7]

Many colleges and universities are rushing new degree programs into place, hoping to draw in new students and the revenue they bring. But that strategy will only work if those new programs cover their costs, which we estimate can conservatively run to $2 million over four years. A program that grants no conferrals cannot be paying for itself—and in fact may be dragging an institution closer to the brink.

Even a bachelor's program that grants 10 conferrals per year is far from thriving, although it may not be failing outright. A program with enrollment at this level could be covering a good portion of its costs. But unless such a program brings prestige or other intangible benefits, it is far from achieving its financial objectives.

In this environment, higher education has to be innovative. Yet for the same reasons, the margin of error is smaller. Colleges close to the financial edge can afford fewer mistakes. Not only does an unsuccessful program fail to recoup its investment for the institution, but it also represents a lost opportunity. The money spent on one of these programs could have been spent on a program that would produce a return on investment for both students and the institution.

In this paper, we will analyze which programs fail to pay off and suggest strategies for institutions to make better bets on the future.

6 "Underemployment: Research on the Long-Term Impact on Careers," Burning Glass Technologies, https://www.burning-glass.com/research-project/underemployment/.
7 "Quarterly Report on Household Debt," August 2019, Federal Reserve Bank of New York, https://www.newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/hhdc_2019q2.pdf.

2.

Bigger Institutions Do Better

All told, 10,536 programs graduated their first cohorts in 2013-14, according to the federal IPEDS database. Some 3,194, or 30%, of these reported no conferrals in 2018.

Table 1: New Program Conferrals

	New Programs Launched in 2013 & 2014 (10,536 total)	Failure Rate
Total Programs with 0 Conferrals	3,194	30%
Total Programs with fewer than 5 Conferrals	5,177	49%
Total Programs with fewer than 10 Conferrals	6,596	63%

Programs that included online or distance learning elements were slightly less likely to fail than in-person ones. Overall, one-quarter of the new programs were offered online or by distance learning, and 26% reported no conferrals. By contrast, 32% of in-person programs had no conferrals. Since this data is drawn from pre-COVID-19 pandemic experience, there is no way of knowing how the shift to online instruction this year has affected program success.

Overall, bigger institutions seemed to make better bets. Whether this is because they have a more sophisticated review process, are superior strategists, or are simply more cautious is impossible to say. And at very small schools, 10 or fewer conferrals may be an acceptable result.

Table 2: New Programs by Size of Institution

Institution by Annual Conferrals	New Programs	Programs with No 2018 Conferrals	Failure Rate	Programs with Fewer than 10 Conferrals	Failure Rate
0-250	1,457	632	43%	1,227	84%
251-500	1,552	565	36%	1,148	74%
501-1000	2,071	641	31%	1,441	70%
1001-5000	3,615	897	25%	2,011	56%
5001+	1,841	459	25%	769	42%

There is also a significant difference between public and private institutions, as well as nonprofit versus for-profit. Four out of 10 new programs at for-profit institutions reported no conferrals in 2018—in theory the sector of higher education that should be the most likely to expect a strict return on investment for their operations.

By contrast, the lowest failure rate is at public four-year colleges and universities, where the average failure rate is up to 18 points lower than for their private four-year counterparts, both for-profit and nonprofit. Still, a lower failure rate is not the same as success: Half of new programs at four-year public colleges produced fewer than 10 conferrals in 2018. One-quarter produced no conferrals at all.

Table 3: New Programs by Type of Institution

Institution Type	0 Conferrals	<5 Conferrals	<10 Conferrals
Private for-profit, 2-year	43%	54%	66%
Private for-profit, 4-year or above	42%	55%	66%
Private not-for-profit, 2-year	33%	67%	71%
Private not-for-profit, 4-year or above	34%	55%	67%
Public, 2-year	28%	53%	70%
Public, 4-year or above	24%	37%	51%
Overall	**30%**	**49%**	**63%**

The nation's community colleges are significantly less likely to have new programs that report no 2018 conferrals (28%) than their for-profit (43%) and nonprofit (33%) two-year competitors. But this advantage evaporates at higher conferral levels. Public two-year colleges are just as likely to have programs that report fewer than 10 conferrals as private nonprofit universities and somewhat more likely than private for-profits (70% public vs. 66% for-profit).In addition, new associate's degree programs are more likely to report no conferrals than other degrees. Community colleges are usually viewed as closer to their communities and local employers, so would logically be expected to launch programs with strong local interest. Yet their failure rate is overall higher than that of four-year programs.[8]

8 Some 22% of new doctoral programs produced no conferrals in 2018. However, we excluded doctoral programs from our overall analysis. Ph.D programs are usually small by design, in contrast to medical and law schools, which are major enterprises.

Table 4: New Programs by Degree Type

Award Type	0 Conferrals	<5 Conferrals	<10 Conferrals
Associate's degree	32%	55%	70%
Bachelor's degree	30%	53%	67%
Master's degree	30%	48%	62%
Doctoral degree	22%		
Overall	**30%**	**49%**	**63%**

Viewed by major, the new programs with no 2018 conferrals include popular programs like Education, Engineering Technologies, and Agriculture.

Table 5: New Programs: Conferrals by Major

Major	New Programs	No Conferrals	Failure Rate	Fewer than 10 Conferrals	Failure Rate
Construction Trades	70	31	44%	50	71%
Theology and Religious Vocations	129	53	41%	97	75%
Education	1179	481	41%	838	71%
Foreign Languages, Literatures & Linguistics	167	65	39%	138	87%
Philosophy & Religious Studies	79	30	38%	65	82%
Engineering Technologies/ Technicians	320	119	37%	243	76%
Science Technologies/Technicians	19	7	37%	19	100%
Transportation & Materials Moving	31	11	35%	24	77%
Area, Ethnic, Cultural & Gender Studies	146	51	35%	120	82%
Agriculture, Agriculture Operations & Related Sciences	128	44	34%	88	69%

Here again, public colleges and universities have better results with new programs than private, nonprofit, four-year institutions—sometimes by double-digit margins. It is true that the two sectors focus on different areas. For example, there were only four new construction trades programs launched at private nonprofits during this period, and no theology programs at all were launched at public colleges. Yet even in areas where the two types of institutions go head-to-head such as in liberal arts, physical sciences, or computer science, public institutions report fewer programs with no conferrals.

Table 6: Success of New Programs, Public vs. Private Four-Year Institutions

Program	Private 4-year, No Conferrals	Public 4-year, No Conferrals	Private, Fewer than 10 Conferrals	Public, Fewer than 10 Conferrals
Agriculture, Agriculture Operations & Related Sciences	58%	26%	79%	53%
Area, Ethnic, Cultural & Gender Studies	50%	19%	85%	79%
Business, Management, Marketing & Related Support Services	30%	22%	61%	45%
Communication, Journalism & Related Programs	37%	19%	72%	38%
Computer & Information Science & Support Services	42%	20%	72%	43%
Education	43%	36%	75%	65%
Foreign Languages, Literatures & Linguistics	48%	36%	89%	75%
Multi/Interdisciplinary Studies	27%	17%	66%	44%
Natural Resources & Conservation	36%	17%	88%	32%
Physical Sciences	42%	22%	86%	49%
Social Sciences	32%	23%	72%	53%
Visual & Performing Arts	34%	21%	82%	61%

There is some overlap between four-year and two-year schools, but community colleges focused more new programs on health and business majors.

Table 7: Top New Programs in Community Colleges

Program	New Programs	No Conferrals	Fewer than 10 Conferrals
Health Professions & Related Clinical Services	295	27%	64%
Business, Management, Marketing & Related Support Services	207	32%	77%
Engineering Technologies/Technicians	161	37%	85%
Computer & Information Science & Support Services	133	28%	69%
Visual & Performing Arts	129	78%	91%
Security & Protective Services	95	31%	78%
Parks, Recreation, Leisure & Fitness Studies	76	22%	54%
Social Sciences	75	16%	52%
Mechanic & Repair Technologies/Technicians	71	32%	80%
Education	63	40%	79%
Liberal Arts & Sciences, General Studies & Humanities	59	20%	40%
Agriculture, Agriculture Operations & Related Sciences	52	35%	83%

3.

The Cost of Failure

A minority of majors produce the majority of graduates. Research by the rpk Group, an education consulting firm, found that on average two-thirds of an institution's undergraduates major in no more than 12 programs.[9] Examined from another angle, Gray Associates reported that 48% of academic programs produce 10 or fewer graduates per year, accounting for 7% of all degrees.[10]

Expanding the market for higher education is likely the key to survival for many institutions. Yet there seems to be no consensus on how much it costs to start up a new program, what the return on investment is expected to be, or the number of enrollees and conferrals required to be a success.

At many institutions, new programs are driven by the faculty, so may "cannibalize" existing programs, or as one researcher put it, "just spreading a thin broth thinner."[11] Institutions may set metrics for success, such as numbers of students enrolled or degrees conferred, but there is little evidence of a rigorous return-on-investment standard.

In interviews conducted by Burning Glass with administrators and consultants, we found widely ranging estimates, depending on the type of program. Some administrators admitted they didn't know for sure while others had widely differing estimates.

At a minimum, a new program requires:

- The cost of two or three faculty members with salary and benefits;
- Classroom or laboratory space;
- Curriculum design; and
- Marketing so that students know the program exists.

Based on our research and these factors, we would estimate an average might be between $350,000 to $500,000 per year. Faculty salaries are the largest part of the cost. As an example, EAB recently cited $2.2 million over six years, although many of those we interviewed considered this estimate conservative.[12] Depending on the type of program, much more could be involved. A nursing or health sciences program, for example, has high startup costs because it requires more elaborate training spaces with equipment and partnerships with local health care providers.

9 "The Bailout Is Just the Start: Why Higher Ed Needs to Build a Sustainable Model," Richard Staisloff, The Chronicle of Higher Education, March 31, 2020, http://rpkgroup.com/wp-content/uploads/2020/06/The-Bailout-Is-Just-the-Start_-Why-Higher-Ed-Needs-to-Build-a-Sustainable-Model-The-Chronicle-of-Higher-Education.pdf.
10 "Largest Academic Programs Generate Nearly Half of Completions, Gray Associates Analysis Shows," Ellis Simon, March 2, 2018, Gray Associates, https://www.grayassociates.com/blog/largest-academic-programs-generate-nearly-half-of-completions.
11 "Panicked universities in search of students are adding thousands of new majors," Jon Marcus, August 9, 2018, Hechinger Report, https://hechingerreport.org/panicked-universities-in-search-of-students-are-adding-thousands-of-new-majors/.
12 "To grow academic programs profitably, ask these questions first," May 8, 2018, EAB, https://eab.com/insights/blogs/operations/to-grow-academic-programs-profitably-ask-these-questions-first/.

More importantly, many institutions do not take into account indirect costs: maintenance, utilities, administration, and so on. In other words, institutions rarely calculate a new program's costs in terms of overhead, or "keeping the lights on." The more these are factored in, the higher the estimated cost.

Nor is there an accepted standard for how many conferrals a new program should create to be viable. Minimum standards in our research ranged from five to 25 per year. As noted above, half of the programs we examined do not even meet this modest standard. All told, 140,125 students graduated from the more than 6,500 new programs that awarded fewer than 10 conferrals in the five years we examined. That averages to about four conferrals a year.

Of course, it is important to note that, for many programs, the number of conferrals produced may not be the primary goal. Courses are offered because they serve other parts of the institutional mission. Engineering schools like MIT offer literature programs not because they expect to turn out a lot of graduates in those fields but because they want to produce well-rounded scientists and engineers. Religiously affiliated colleges will offer philosophy and theology as part of their founding mission, even if few graduates join the clergy. Area and gender studies programs provide diverse perspectives and speak to broader concerns in society. In these situations, the fact that many students pass through these programs as part of their general education requirement is justification enough.

In today's fiscal climate, however, the greatest cost is in lost opportunities. The college could have spent the same amount of money on a different program that might have brought in paying students. This is the cost higher education rarely reflects upon: The price of what might have been.

4. Launching Programs with Purpose

Higher education, on the whole, doesn't view itself as a business concerned with making a profit. Institutions rightly view other missions—such as turning out well-rounded, thoughtful citizens or driving cutting-edge research—as of primary importance. And these objectives are increasingly critical to student success well beyond the university.[13]

But while a college may not be a business, it still has a business model: a strategy for how to generate revenue to sustain its impact. Too many institutions still grow in a haphazard manner, rather than a coordinated strategy. The current fiscal crisis will force a reevaluation for many institutions. A fiscal crisis can only be resolved two ways: by making cuts or expanding revenue. And very few ever argue that making cuts is the preferred option.

If institutions want to launch new programs to gain more tuition-paying students, then it is essential to have a rigorous process to ensure new programs actually accomplish that. For example, Richard Staisloff, a financial consultant to higher education, has suggested new programs should be evaluated in terms of the institution's mission, market, and margin.[14]

Some elements of that process that institutions may want to consider include:

1. Understanding what employers need

Surveys show that getting a good job is the primary reason students give for going to college.[15] For the nontraditional students who make up a greater proportion of enrollees in most new programs, the connection to work is even stronger. Not all courses need to be vocational, but career-oriented courses must hit the mark in terms of providing valuable, up-to-date job skills.

2. Understanding the students—and parents—you want to attract

What are their expectations? What does success mean to them? Are you offering them a good return on their tuition? This is particularly critical given that there are dramatic differences in underemployment—the percentage of students who land in a job that doesn't require their degree—for different majors, ranging from 29% in engineering to 80% in personal and culinary services. A new program that attracts students but doesn't connect them with viable careers won't be sustainable for long.

13 "The New Foundational Skills of the Digital Economy," Burning Glass Technologies, March 2019, https://www.burning-glass.com/research-project/new-foundational-skills/
14 "Want to Change the Academic Lineup? First Analyze Offerings as a Whole," Scott Carlson, Oct. 15, 2019, The Chronicle of Higher Education, https://www.chronicle.com/article/want-to-change-the-academic-lineup-first-analyze-offerings-as-a-whole/.
15 "Why Higher Ed? Strada and Gallup Examine Consumers' Top Motives for Choosing Their Educational Pathways," Gallup, https://news.gallup.com/reports/226457/why-higher-ed.aspx.

3. Setting specific metrics to show return on investment

Institutions need to enter into new programs with precise, measurable goals for revenue and conferrals. Will a new program actually expand an institution's base of potential students? Or just move existing students from one program to another?

4. Know when to quit and when to stand pat

Colleges should have a specific time frame for a program to prove its value. A program doesn't become successful overnight—but the institution also shouldn't wait too long before making course corrections.

Higher education can and should launch new programs and tap new markets. Experimentation should be encouraged. But those experiments, like any others conducted on campus, should be undertaken based on a high standard of prior evidence, rigorously conducted, and held to well-defined metrics of success.

5. Methodology

To calculate how well new postsecondary programs perform in the marketplace, Burning Glass drew from information in the Integrated Postsecondary Education Data System (IPEDS), collected by the National Center for Education Statistics. IPEDS is a survey of postsecondary institutions collecting data on enrollment, conferrals, finances, and other measures.

For this analysis, we looked at IPEDS conferrals data by institution, award level, and CIP code for 2010-2018. IPEDS also includes a flag to indicate if the program was offered via distance learning.

To identify programs that were new in either 2013 or 2014, we focused on programs that reported N/A or blank conferrals in 2010, 2011, and 2012, as well as at least one conferral in 2013 or 2014. The presumption is that a new program would not create conferrals for its first few years. We set aside institutions with fewer than 10 conferrals total in 2018 to exclude institutions that were being merged with others, closing, or where data was being collected differently. We also removed institutions where more than 50% of the programs were new, to control for new institutions and those that only began reporting to IPEDS during 2013 and 2014.

We then analyzed how many conferrals these programs had in 2018, after they had been in existence for at least four years. Given the self-reported nature of IPEDS survey data, respondents may have reported programs that had no conferrals as 0, N/A, or left the field blank. All of these were counted as reporting no 2018 conferrals in our analysis.

By the same token, many of these programs have made conferrals in the intervening years, but probably not enough to make the program viable.

Finally, we excluded doctoral programs because of the wide differences in both program size and goals. Ph.D programs are often deliberately kept small. Medical, law, dental, and veterinary schools are much larger and have specific vocational goals.

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