

Unlocking Insights for Program Growth and Success





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Lightcast delivers job market analytics that empower employers, workers, and educators to make data-driven decisions. The company's artificial intelligence technology analyzes hundreds of millions of job postings and real-life career transitions to provide insight into labor market patterns. This real-time strategic intelligence offers crucial insights, such as what jobs are most in demand, the specific skills employers need, and the career directions that offer the highest potential for workers. Visit lightcast.io for more information.

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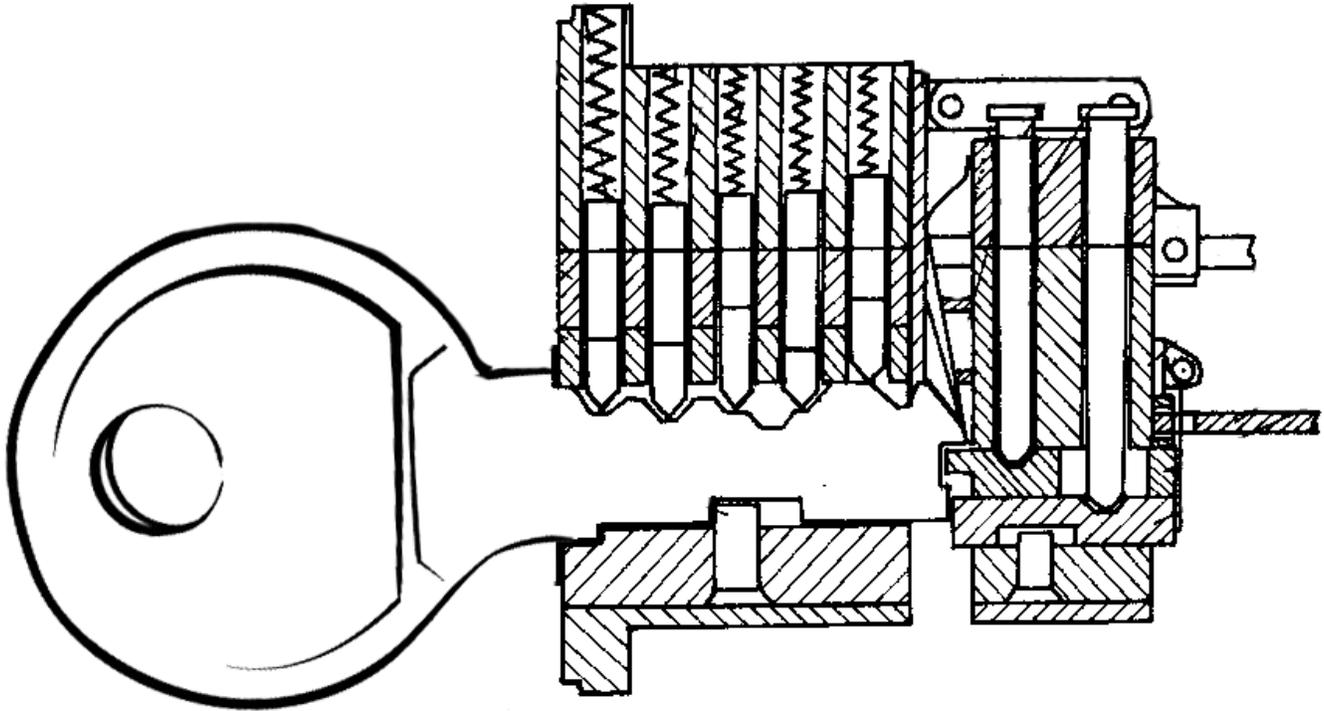
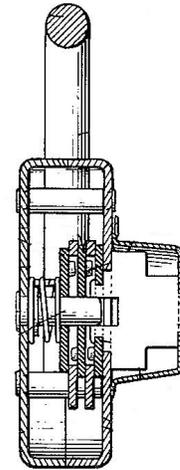
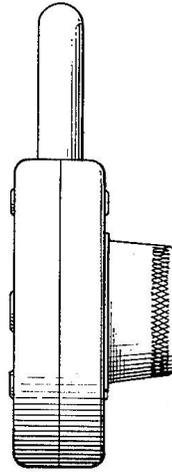
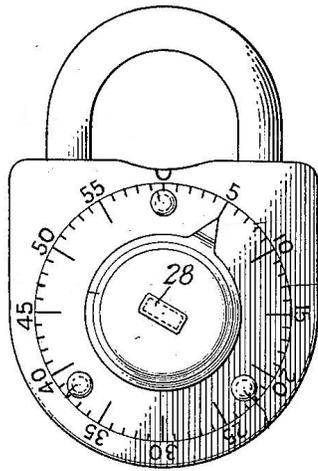


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Introduction

When a college or university launches a successful degree program, it can represent new fields of human knowledge, address emerging social concerns, and propel graduates into fast-developing career fields, all while bringing in new students and tuition revenue. New programs help institutions work toward their mission of being centers of learning while also improving their economic health.

But every new program is an investment, and not every investment pays off. While 30% of new programs succeed by having at least ten conferrals in a year and growing by 50% in size, another 30% stop producing graduates altogether (i.e. have zero conferrals) within five years—and the remaining 40% are caught in between.

Innovation and development have always been vital to the function of every college and university, but after the disruption of the pandemic and a growing shift toward skill-based hiring from employers, higher education

is increasingly under pressure to prove its worth to students.

Facing these challenges, institutions have no choice but to continue investing in new programs, especially because the potential reward is so high. The challenge is to learn from which past programs have paid off and which have not, then use that information to develop future programs with a higher likelihood of producing reliable results and prosperity for schools, students, and communities.

Every new program bets on its own success. The key for higher education is to identify what makes a sound investment—and how you can make it better.

By using labor market data, institutions can design programs relevant to the current employer and market needs, making it more likely programs will appeal to students and ultimately succeed.

After studying patterns regarding which programs succeed and which do not, here are five key takeaways:

1

Both successful and unsuccessful programs are widely distributed across fields of study. Contrary to conventional wisdom, humanities programs in general do *not* fail significantly more than STEM programs, meaning that the door to success is open to everyone.

2

There are similar numbers of growing and failing programs. Around 30% of new programs see significant growth over five years while another 30% fail to continue producing graduates in the same time frame.

3

The rate of successful programs is growing, but some students from those programs are more likely to be underemployed, presenting a growth opportunity for institutions who can better align student interest with success in the job market after graduation.

4

Public four-year institutions are the most likely to have new programs succeed.

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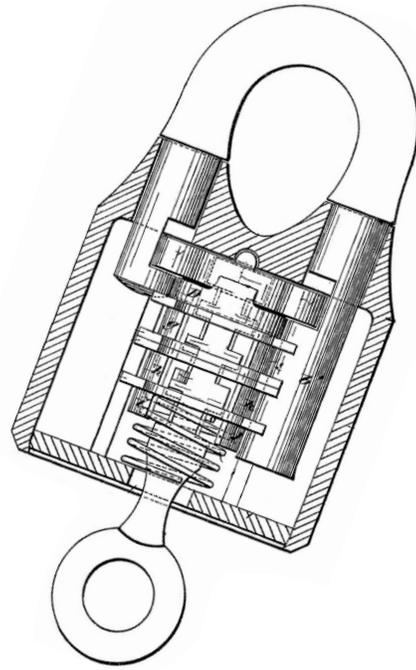
Master's degree programs are more likely to have growth in conferrals than bachelor's or associate's degree programs.

Measuring Success

We first start by looking at which new programs are successful in attracting students and growing over time. We define a program as new if it has zero conferrals in all the years previous to our base year of 2016-2017 and has at least one conferral in 2016-2017. A new program is defined as growing if it meets the following two criteria between 2016-2017 and 2021¹:

1. The program has a minimum of 10 graduates in at least one year.
2. The program has grown the number of graduates by at least 50%.

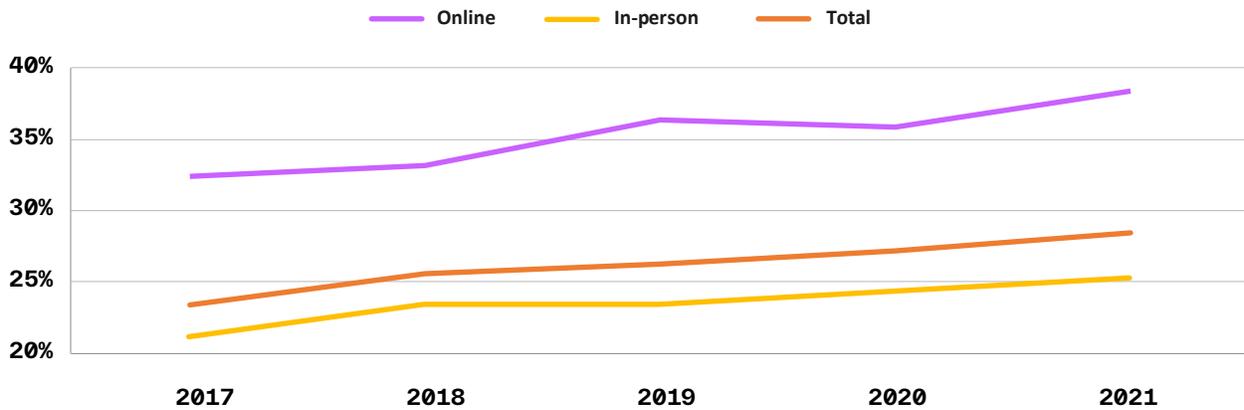
Using that standard, we found that 28.4% of new programs are growing—2,274 out of the 8,007 new programs studied. Comparing online programs to programs on campus, we find 38.4% of online programs are growing, while only 25% of programs in-person are growing.



	New Programs	Growing Programs	Success Rate
Overall	8,007	2,274	28.4%
Offered Online	1,918	736	38.4%
In-person Only	6,089	1,538	25.3%

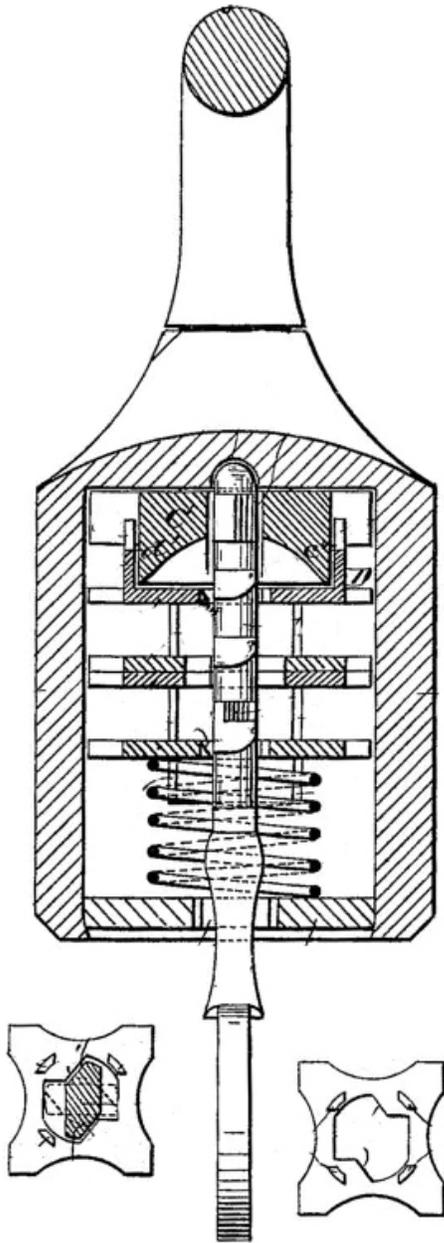
Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).

New Program Success Rate (2017 - 2021)



Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).

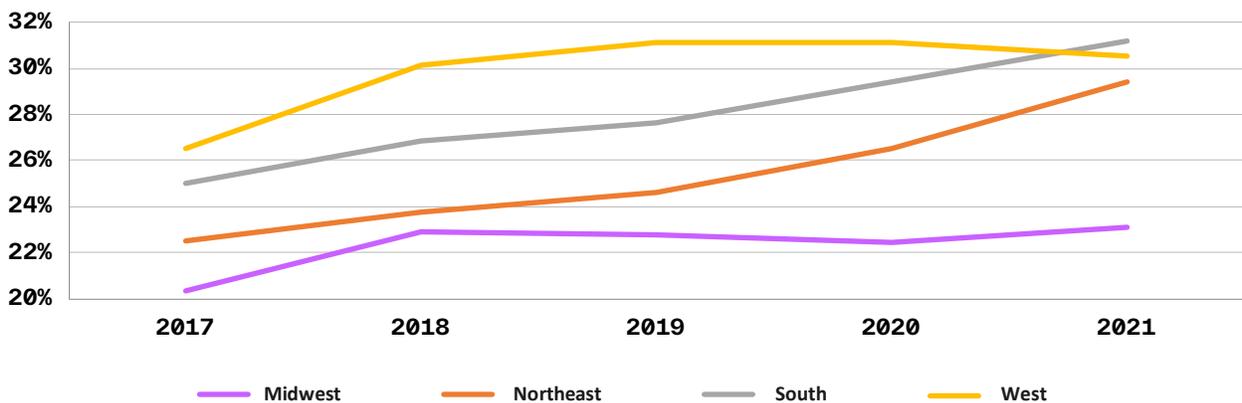
¹ It is important to note that conferrals are just one proxy for understanding program health and that this analysis does not account for the varying programmatic costs of new programs, which can often be highly correlated with program health.



Encouragingly, the rate of success for programs has been rising over time—from 23% in 2017 to 28% in 2021, an increase of 22%. Success for in-person programs has been consistently rising over time, while online programs had a brief drop in growth rate in 2020. The total number of new online-only programs has been declining since 2017, so the decreased success rate in 2020 can't be attributed to a rise in total program numbers. The increase in success in 2021 might correspond to schools' increased capacity to support online programs.

When examined by region, programs in the west and south of the US have the highest rates of success while the south and northeast have had the greatest increase in success rate between 2017 and 2021.

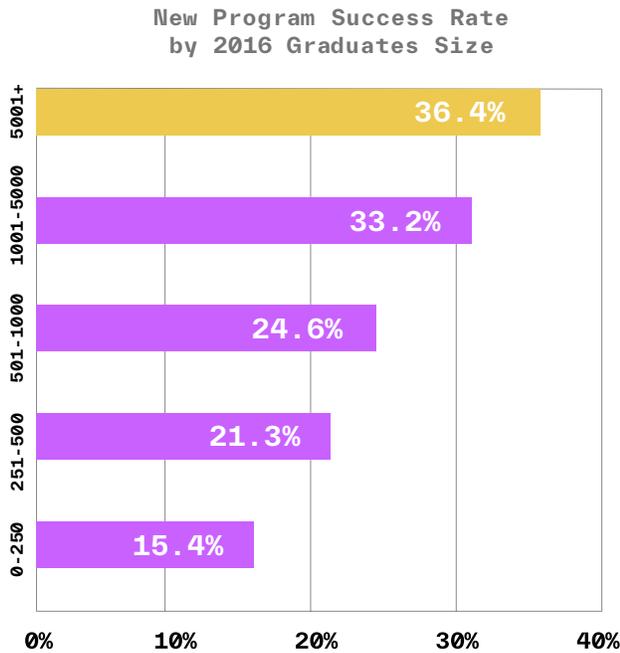
Program Success Rate by Region (2017-2021)



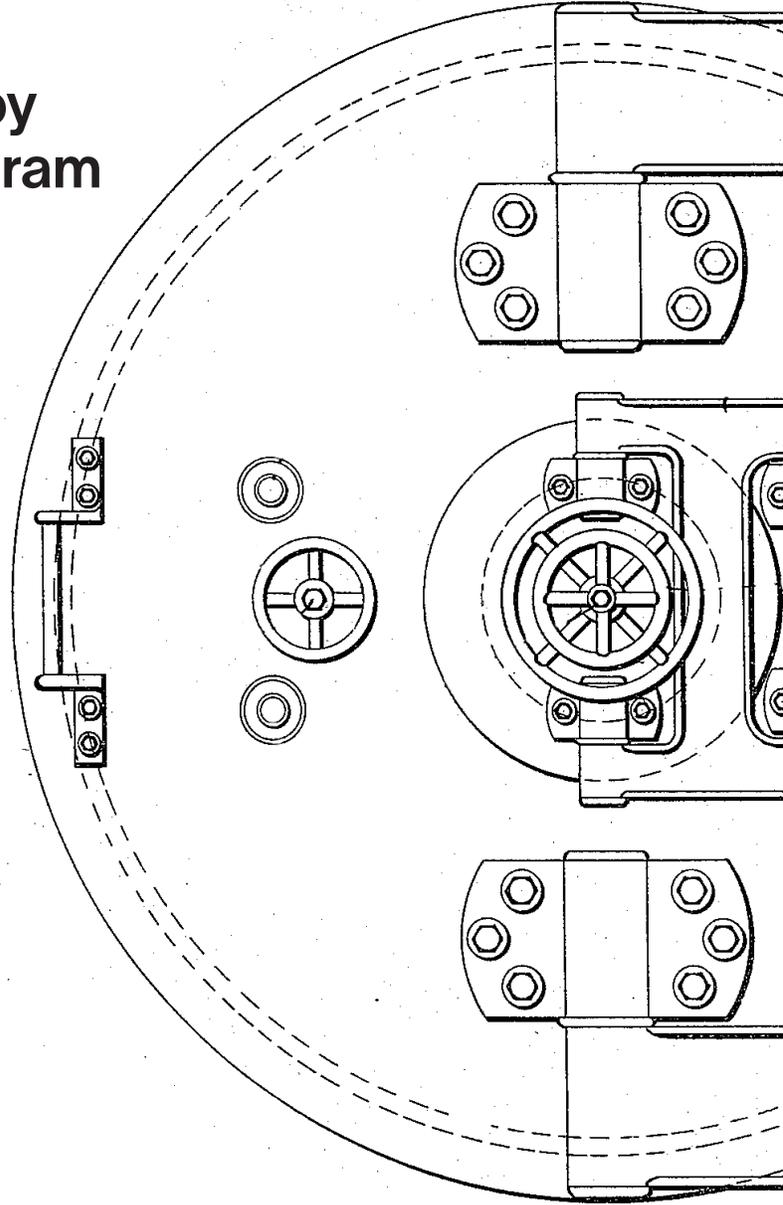
Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).

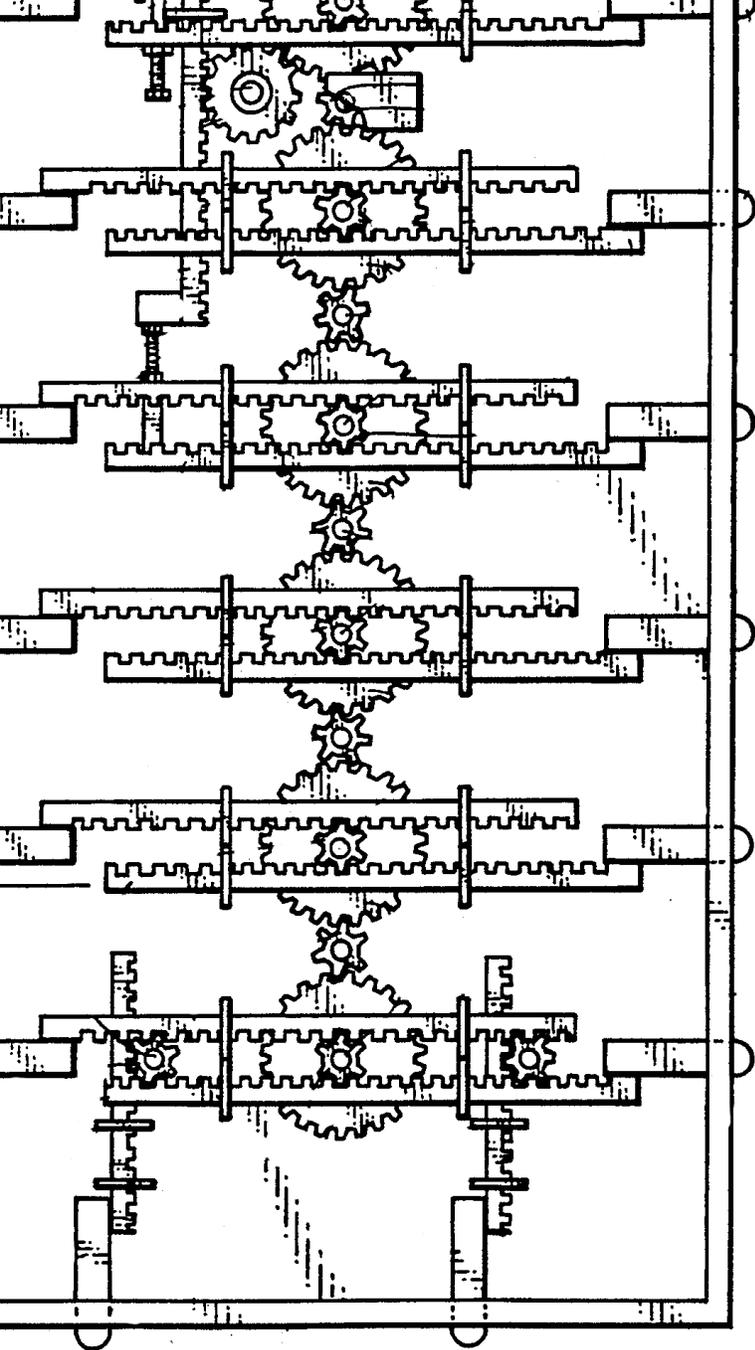
Different Success Rates by School, Degree, and Program

Overall, four-year public schools are most likely to see programs grow, and their success rates have increased about 32% since 2017 (moving from 28% to 37%). On average, new four-year not-for-profit private school programs are 13 percentage points less likely to grow than similar public school programs.



Larger schools are more likely to have new programs grow, echoing the pattern of public four-year schools also seeing the highest growth rates. This is likely because those schools have greater resources or because their student populations are larger, or some combination of the two.





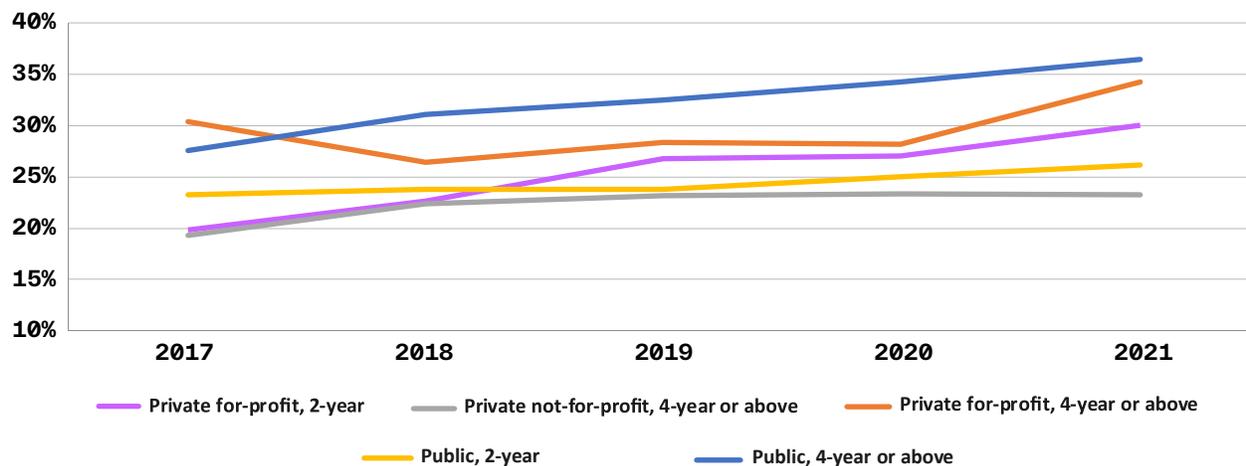
This discrepancy in size emphasizes the importance of making sound investments for smaller institutions. Working with a smaller margin means you can't afford to take risks in the same way larger schools can, and creating any new program should be based on the best data possible.

Looking at success rates by degree level, master's degree programs are more likely to grow than associate's or bachelor's degree programs.

	New Programs	Growing Programs	Success Rate
Associate's degree	2,194	557	25.4%
Bachelor's degree	3,200	933	29.2%
Master's degree	2,068	712	34.4%

Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).

New Program Success Rate by Type of Institution (2017-2021)



Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).

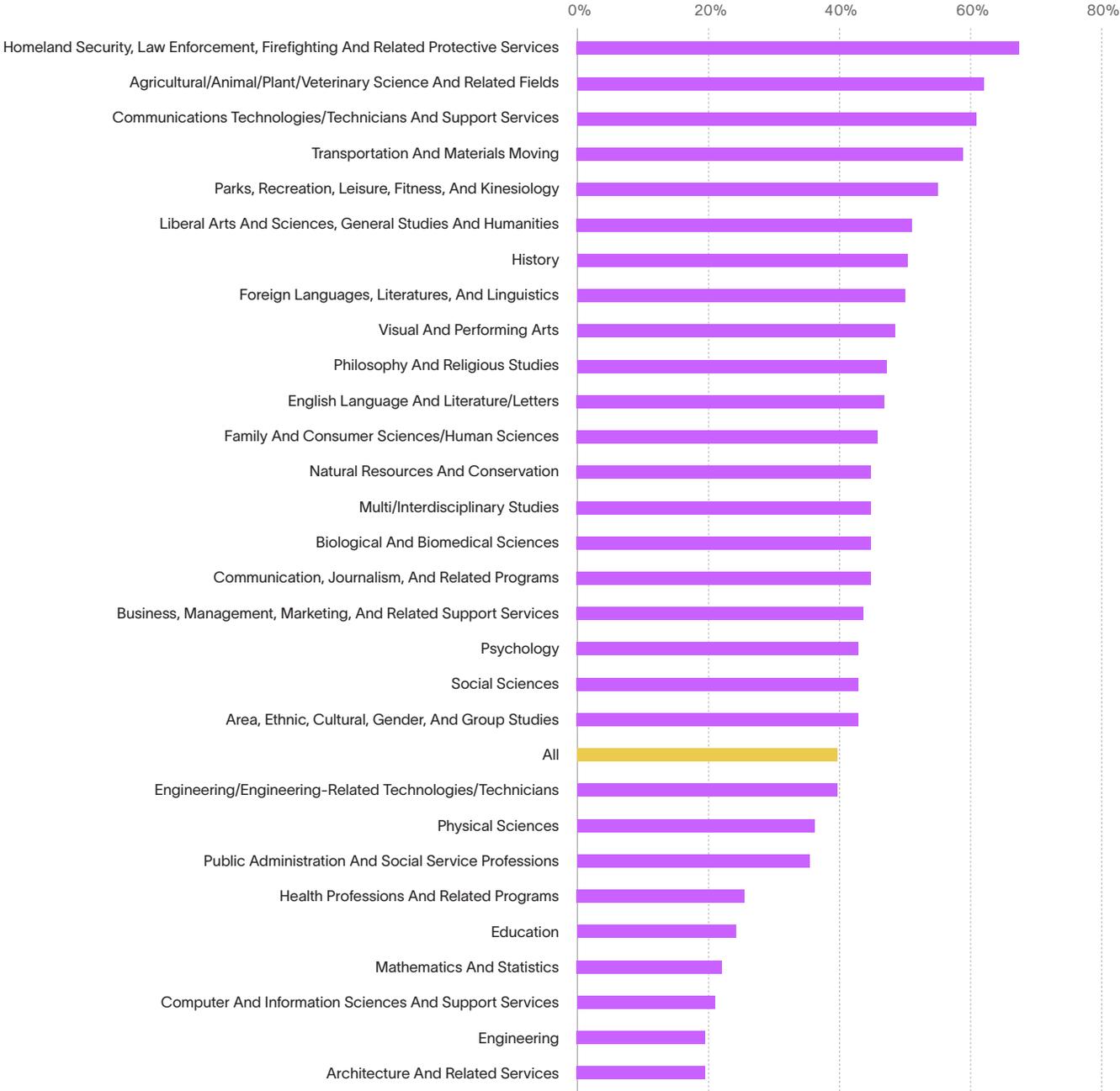
Comparing degree fields by their rate of growth, we see the top performers are relatively diverse.

Degree Field	New Programs	Growing Programs	% Growing
Public Administration And Social Service Professions	116	54	46.6%
Parks, Recreation, Leisure, Fitness, And Kinesiology	191	77	40.3%
Computer And Information Sciences And Support Services	417	153	36.7%
Business, Management, Marketing, And Related Support Services	875	313	35.8%
Health Professions And Related Programs	1156	393	34.0%
Social Sciences	347	117	33.7%
Architecture And Related Services	48	16	33.3%
Family And Consumer Sciences/Human Sciences	80	26	32.5%
Psychology	225	73	32.4%
Mathematics And Statistics	116	35	30.2%

Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).

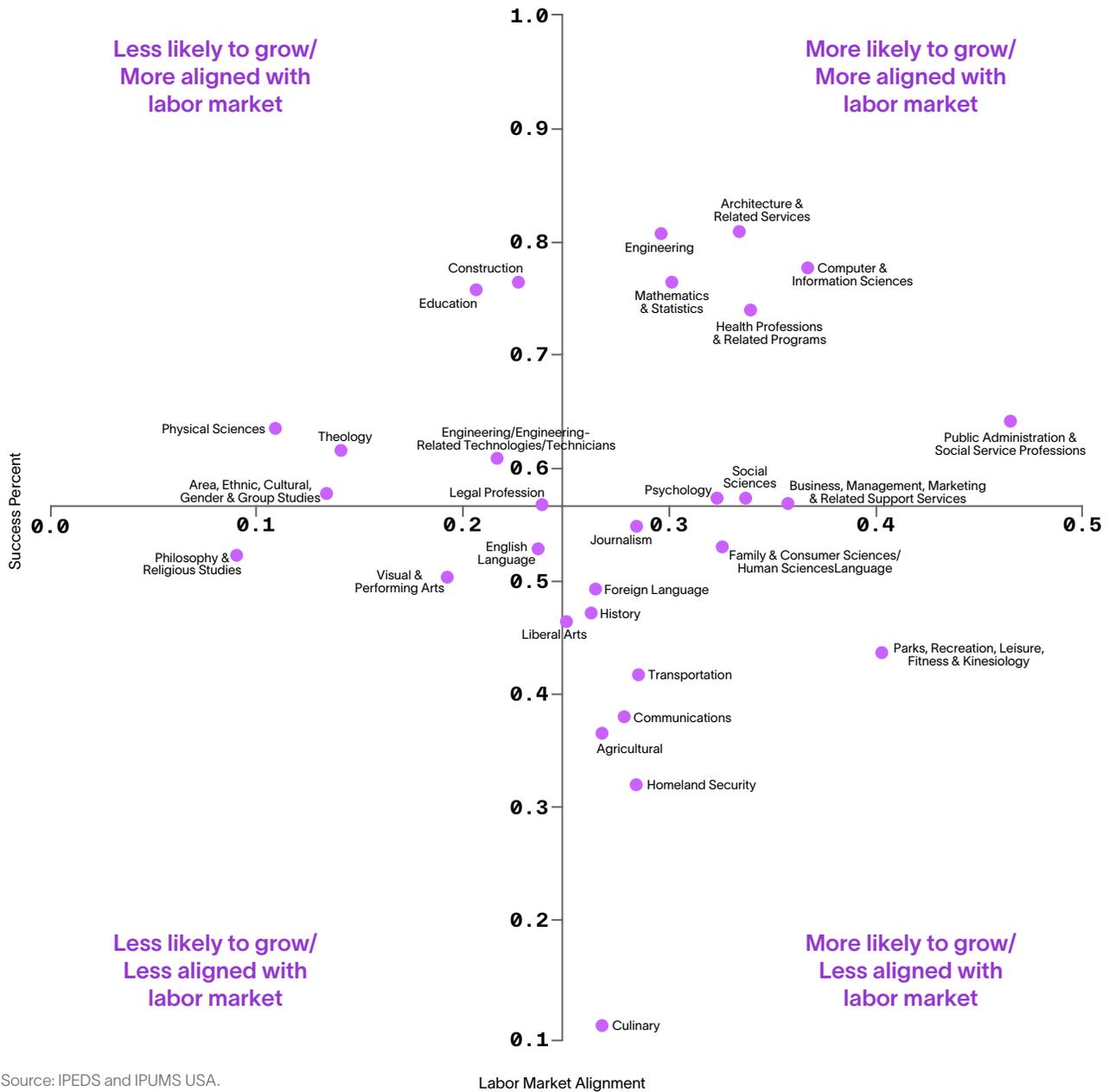
However, census data show that graduates from some of these fast-growing programs may be among the most likely to be underemployed. An individual is considered underemployed when they have a bachelor's degree but are working in an occupation that frequently does not require that degree. Graduates in Parks, Recreation, Leisure, Fitness and Kinesiology, which had a 40% success rate for new programs, are underemployed 56% of the time. And graduates from Social Sciences and Family and Consumer/Human Sciences, which have around a 33% success rate each, are underemployed 42% and 46% of the time, respectively.

Percentage underemployed by major



Source: IPEDS and IPUMS USA.

The challenge for higher education institutions—particularly in these growing degree fields—is to develop programs that attract student interest but also prepare them well for the labor market.

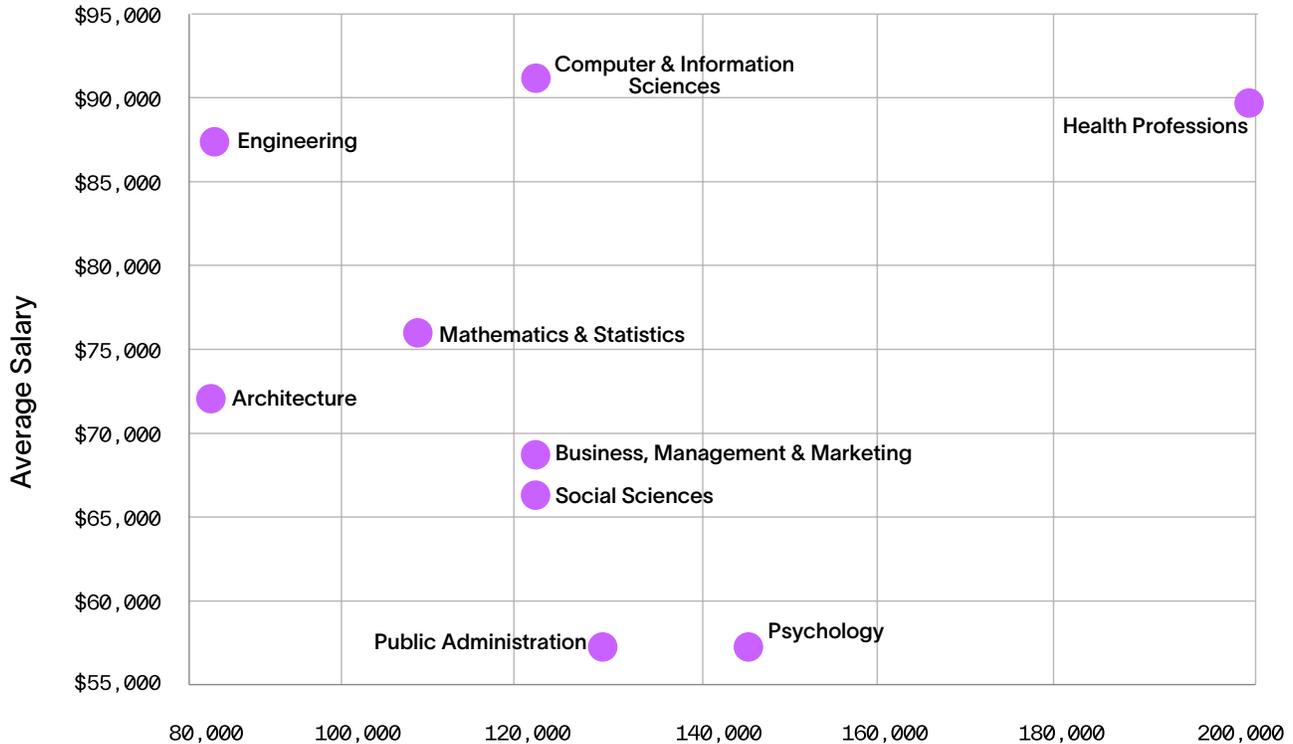


Source: IPEDS and IPUMS USA.

In the graph above, we can see in the lower left quadrant that Philosophy and Religious Studies and Visual and Performing Arts programs are both less likely to grow and less aligned with the labor market,² while in the top right, Architecture and Related Services and Computer and Information Sciences have both higher growth rates and labor market alignment.

² Labor market alignment is defined as 1- underemployment rate. For example, since Psychology has a 42% underemployment rate, or 42% of graduates work in an occupation that does not require their degree, we would say that Psychology has a labor market alignment of 58%. This is because 58% of graduates work in an occupation that does require their degree.

Demand v. Salaries



Source: Lightcast and IPUMS USA

Total number of postings in 2022*

* Data available at the time of analysis spans January to mid-November 2022.

But underemployment is only one measure of student success. If we look more closely at the actual market demand and salaries for these majors, we see that Health Professions are the most in-demand among high-earning jobs, while demand for Architecture is significantly lower than other programs that scored similarly in terms of growth rate and underemployment.

Labor market data can provide a clear solution to this problem by identifying the skills that

are being required by employers, enabling educators to ensure those skills are taught in courses and programs.

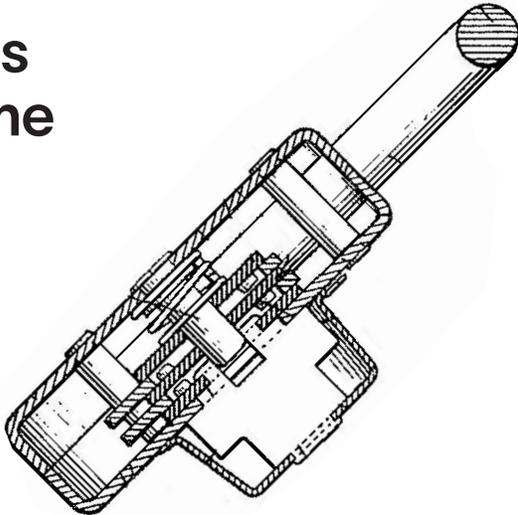
By equipping students with a strong base of relevant skills, schools can provide a reliable pathway to good jobs in the local economy, and by enabling and promoting alumni success, institutions also put themselves in position to market that success and improve enrollment, investment, and growth moving forward.

Understanding What Works Both On Campus and Online

To properly understand the overall impact of new programs on higher education, we need to look not only at successful programs, but also at those that are struggling.

Since just as many new programs fail as succeed, aiming to decrease failure goes hand-in-hand with aiming to increase success. The overall failure rate of new businesses in the US is roughly 20%, according to federal statistics—even reducing the failure rate of new degree programs to that benchmark (from 30% to 20%) would be a huge step forward for higher education, both by improving schools’ financial health and improving outcomes for students.

Over the five years included in our analysis, the 2,373 programs that folded produced 33,688 graduates before reaching zero conferrals (averaging around three degrees per program



per year). After the significant financial investment of acquiring a degree, those graduates may now face an uphill battle looking for a job armed with a degree representing a program that no longer exists—or one that employers may not be familiar with.

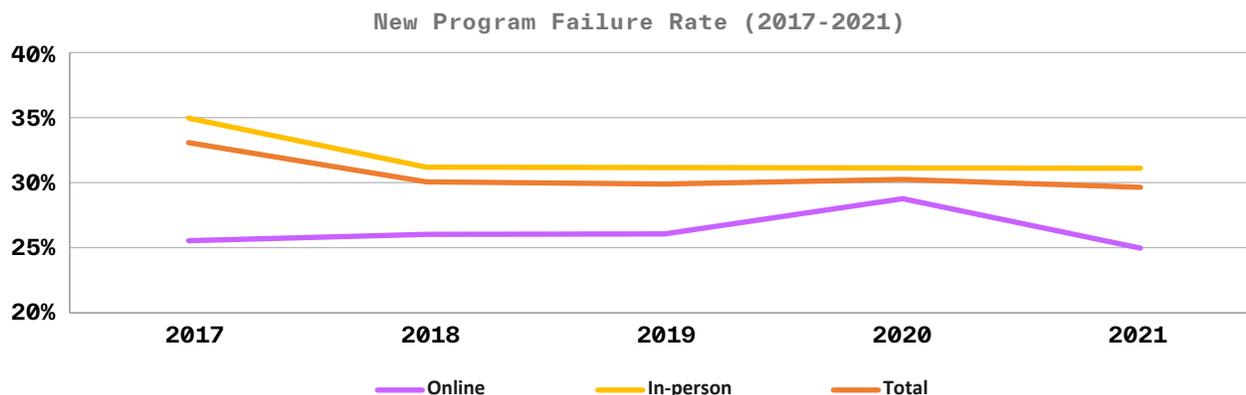
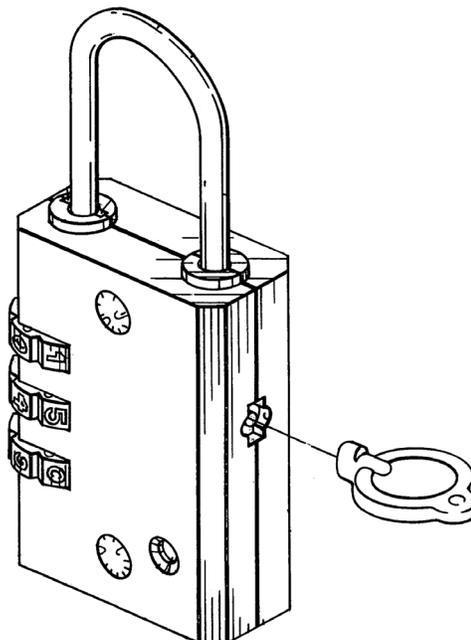
This emphasizes the importance of making sure new programs align with both students’ needs and those of the broader labor market.

	New Programs	Failed Programs	Failure Rate
Overall	8,007	2,373	29.6%
Offered Online	1,918	479	25.0%
In-person only	6,089	1,894	31.1%

Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).

We consider a new program to have failed if it stopped producing graduates (i.e. reached zero conferrals and remained at zero conferrals) within five years of its creation³. While nearly 30% of new programs had no graduates, many more are producing relatively small returns. Two-thirds (66%) of new programs produced 10 or fewer graduates in 2021.

Over time, failure rates for in-person programs have fallen slightly while online programs have stayed constant at a lower rate.



Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).

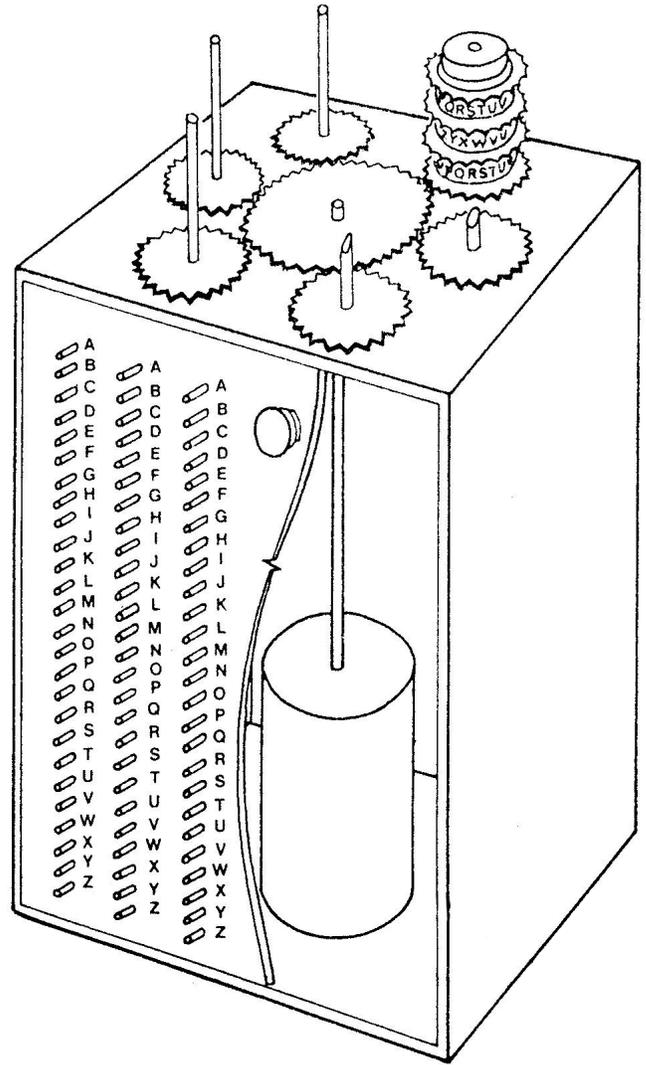
Different Failure Rates by School, Degree, and Program

Overall, four-year public schools are least likely to see programs reach zero conferrals, and their failure rates have fallen about 24% from 2017 (moving from 26.7% to 20.4%). On average, new private school programs are 10 percentage points more likely to fail than public school programs.

	New Programs	Failed Programs	Failure Rate
Associate's degree	2,194	695	31.7%
Bachelor's degree	3,200	1,006	31.4%
Master's degree	2,068	538	26.0%
Doctoral degree	545	134	24.6%

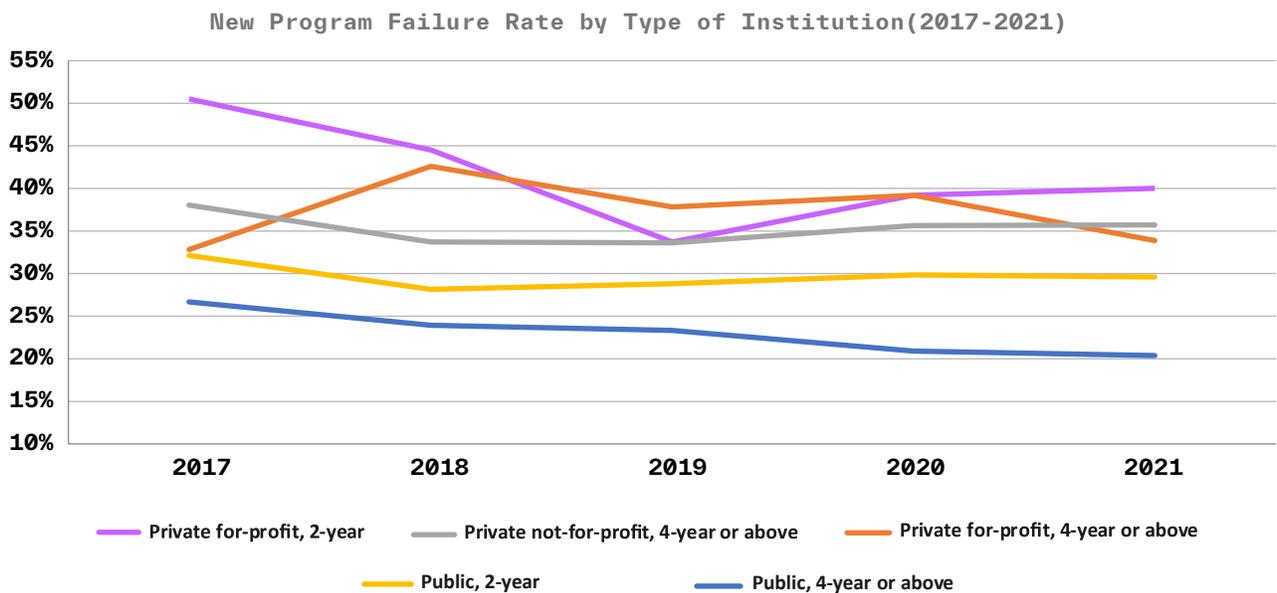
³ As a robustness check, we also ran our analysis using a seven year window for both our success and failure rates and found that the failure rate increased from 30% to 36% while the success rate decreased from 28% to 27%.

Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).



Looking at failure rates by degree level, associate's degree and bachelor's degree programs fail at about the same rate and more than post-graduate programs.

Comparing failure rates by field of study suggests that unsuccessful programs are evenly and widely distributed—meaning that programs in the humanities programs in general do not fail significantly more than more scientific fields. The total number of new programs in a degree field does not appear to correlate with their rate of failure, either.



Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).

Degree Field	New Programs	Failed Programs	Failure Rate
Philosophy And Religious Studies	66	31	46.9%
Library Science	5	2	40.0%
Engineering/Engineering-Related Technologies/Technicians	236	93	39.4%
Liberal Arts And Sciences, General Studies And Humanities	156	61	39.1%
Education	855	333	38.9%
Visual And Performing Arts	535	206	38.5%
Construction Trades	53	20	37.7%
Foreign Languages, Literatures, And Linguistics	133	50	37.6%
Area, Ethnic, Cultural, Gender, And Group Studies	112	42	37.5%
Science Technologies/Technicians	20	7	35.0%

Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).

Applying the Lessons Learned

Decisions about launching a new program are made based on a complex set of factors, and the exact calculations will be different depending on the institution and department.

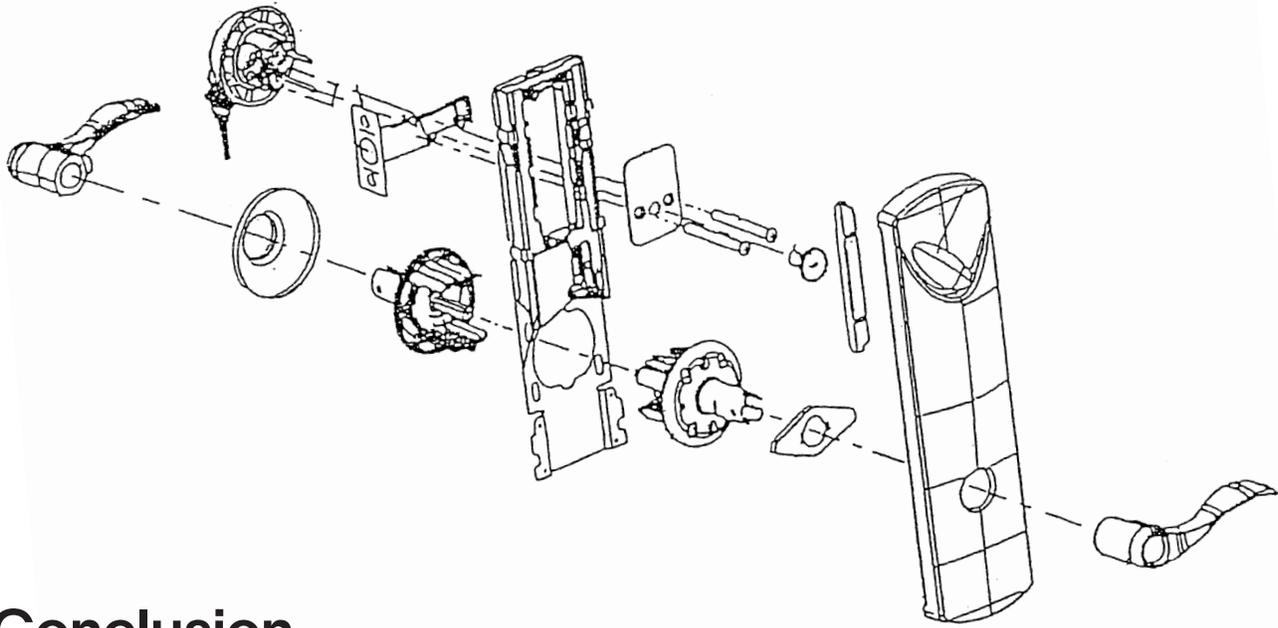
The data and analysis in this report is not presented to override any of those other decision-making factors. Instead, these findings can be puzzle pieces that, when combined, create the most comprehensive look possible at the landscape for new programs—an additional tool for administrators and educators. Here are four takeaways from the data.

1 Institutions should consider establishing new postgraduate degree programs first, because they succeed at a higher rate than those for associate's and bachelor's degrees.

2 Public four-year universities are seeing the highest rates of success for new programs, and private for-profit schools have seen the largest increase in their rate of success over the past five years, suggesting those types of institutions can afford to be more ambitious in launching new programs.

3 By contrast, smaller institutions generally have a lower success rate for new programs than big ones. And precisely because they have fewer resources, smaller institutions have to be even more rigorous in examining new program ideas. In other words, they have less margin for error because they have less capacity to absorb the costs of a program that closes down.

4 Because unsuccessful programs are distributed widely across fields of study, no particular field should be disqualified from considering a new program—humanities programs can be just as confident in a new offering as STEM or business programs.



Conclusion

In an already challenging and disruptive landscape for both higher education and the labor market, it's vital for educators and administrators to understand exactly what their students need—both in school and after graduation—as well as how their programs and course offerings serve those needs.

When programs fail to attract students and bring in revenue, that investment comes out as a loss. But they don't all fail; many successful programs are launched every year. These provide schools with consistent streams of enrollment while providing students with valuable skills and a foundation for economic success after graduation.

Decisions about launching new programs should not be taken lightly. The stakes are

simply too high for everyone investing their time and money into the program, students and schools alike. Labor market data, and skills data in particular, are vital tools to help higher education institutions create programs that provide reliable value for their alumni and communities.

Knowledge of which kinds of programs have succeeded and failed over the past few years can serve as valuable landmarks to guide new paths forward. To launch successful new programs, educators need to make use of every tool available to them, and that includes learning from the past to prepare for the future—unlocking insights and success for everyone.



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