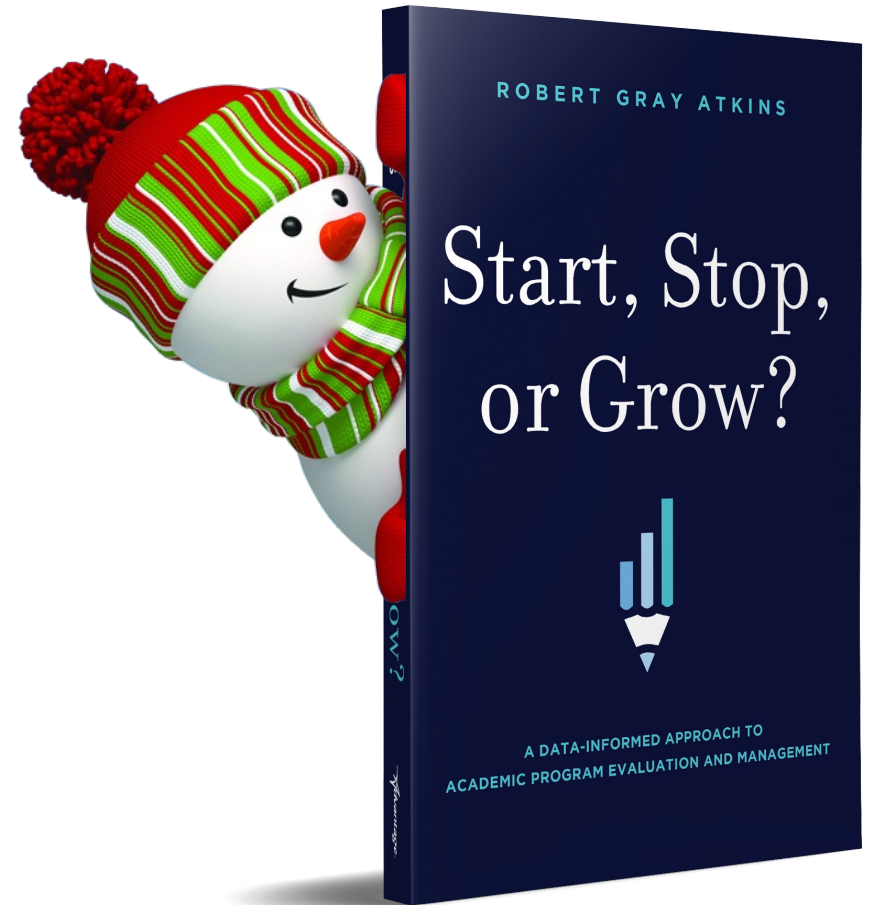


GRAY
ASSOCIATES

Demand for Higher Education Programs

Results through November 2022



Gray has developed a complete Program Evaluation System.



We do a few other things, too.

Pricing: Competitive research, discrete choice surveys, and pricing simulators

Location Analysis: AI models to find the best place to add a campus or market your programs

Financial Planning Models: Simulate events and decisions; provide Pro-forma 10-year financials

Choose a Program

- At the end of the presentation, we'll fire up PES and take requests for programs.
- If you have a program in mind, please let us know in the chat.
- However, we may not be able to get to all the requests in this meeting.
- If we don't get to your program, we will email its scorecard to you this week.

Agenda

Student Demand

- **Leading Indicators: Google and International Search**
- **Current Demand: Enrollment**
- **Historical Trends: Completions**

Employment: Current Indicators

Non-Degree Courses

College Athletics

Program of the Month

Summary

Christmas ghosts of Student Demand

Analyze demand metrics across the student lifecycle.

Completions
Past



Enrollment
Present

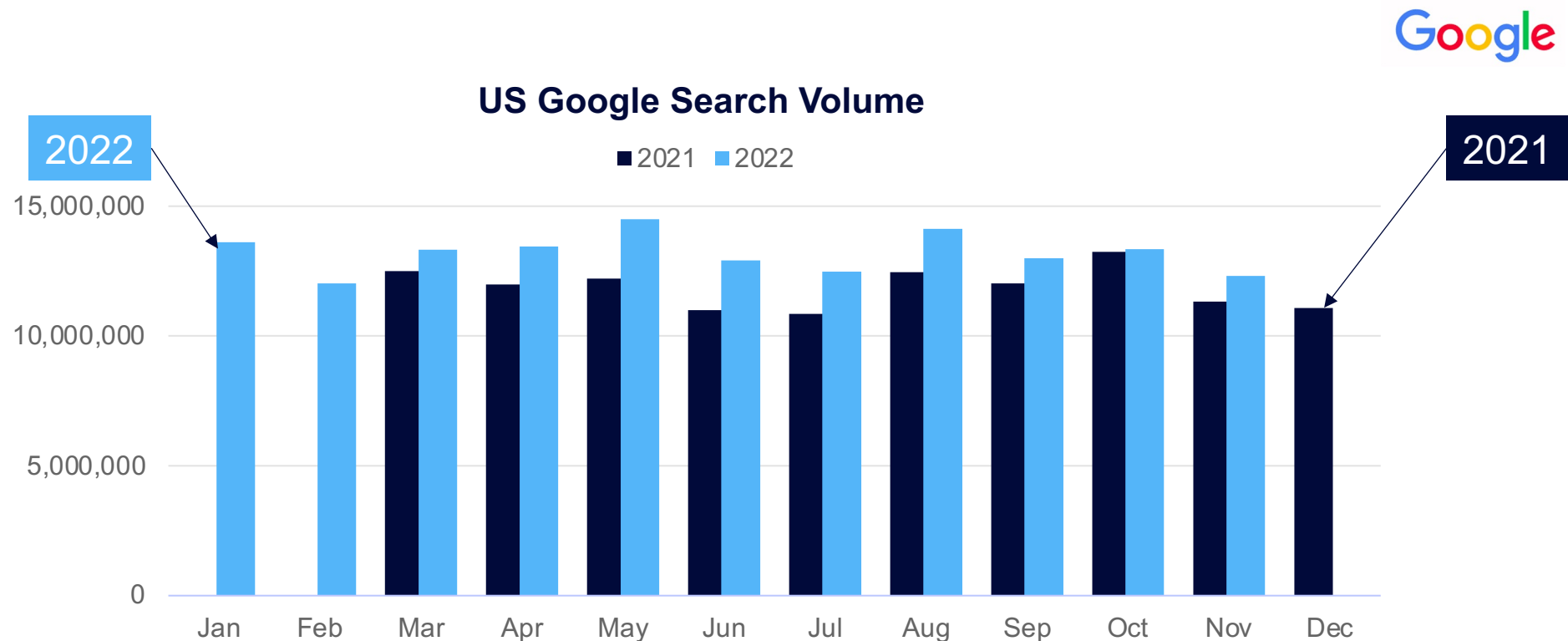


Google Searches
Future



Google Search Trends: Programs

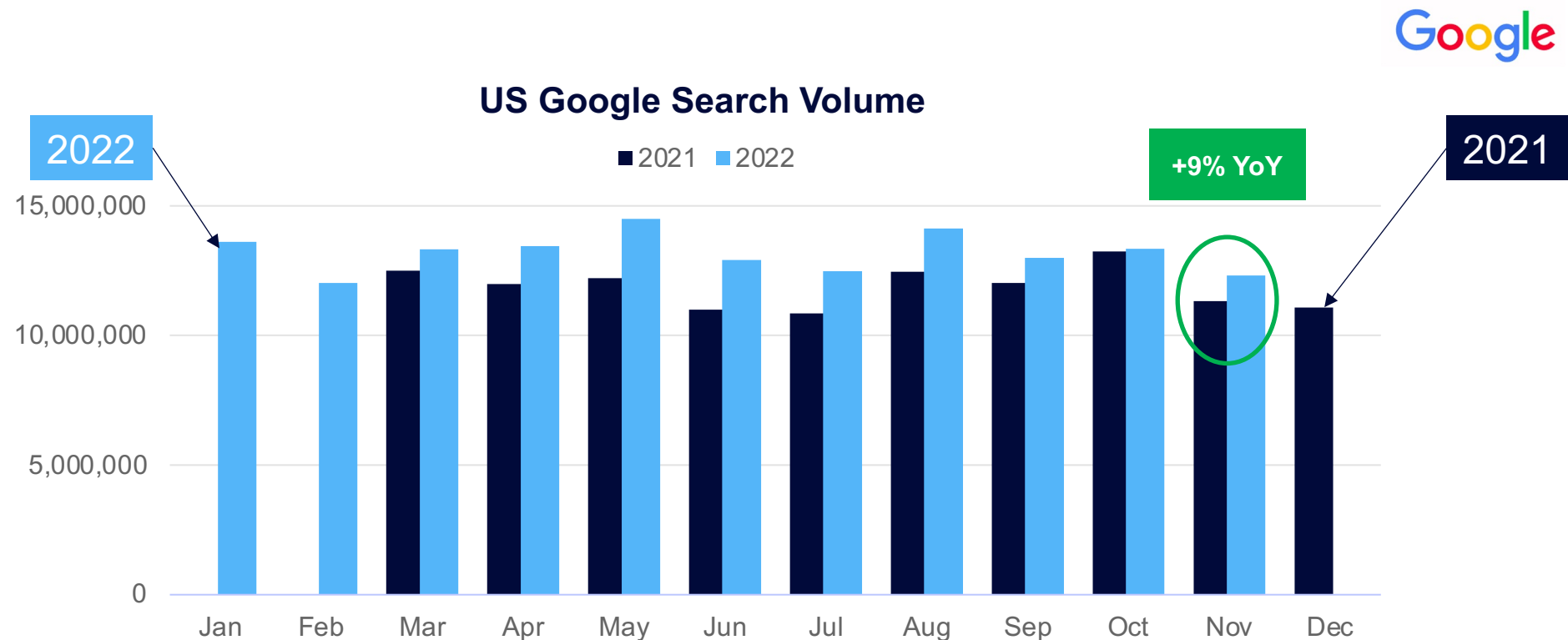
Gray tracks searches for over 900 programs (90% of all US completions).



Source: PES Keyword Search Dashboard

Google Search Trends: Programs

In November, Google searches for academic programs rose 9% year-over-year.



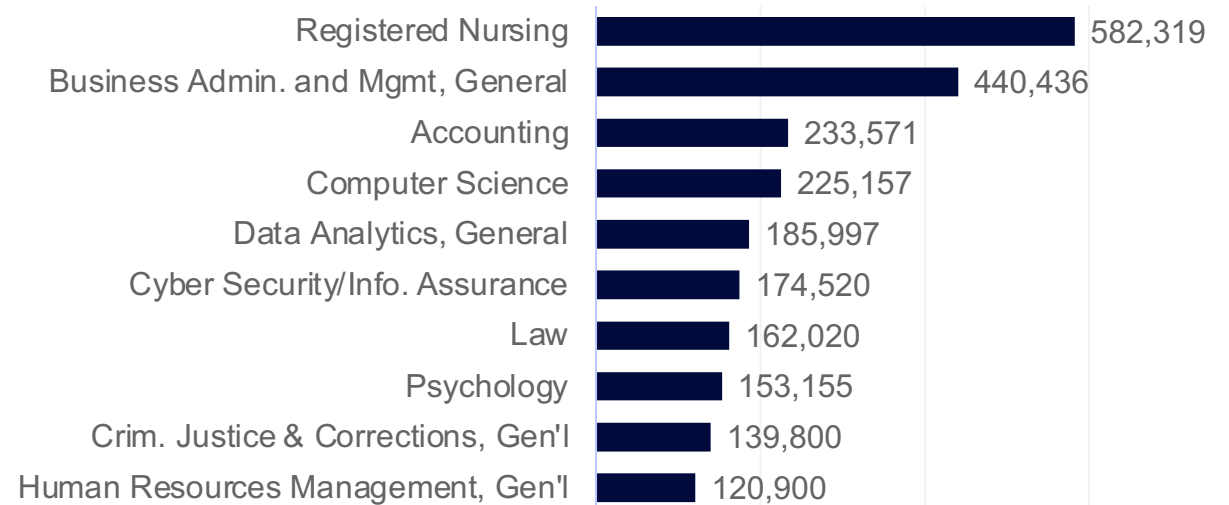
Source: PES Keyword Search Dashboard

Google: US Highest Search Volume, Bachelor's and Above

In November, Registered Nursing had the highest search volume.



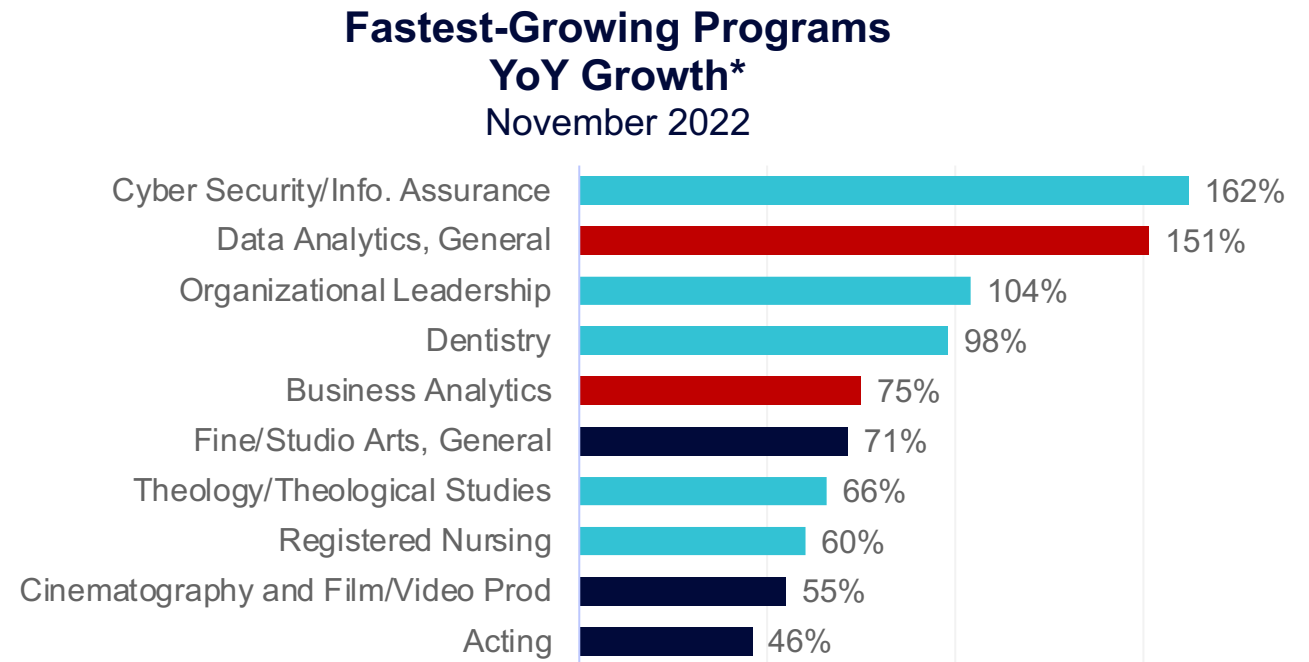
Programs with the Highest Volume of Keyword Searches November 2022



Google search volume for standardized sets of academic keywords for academic programs..
Source: PES Keyword Search Dashboard

Google: US Fastest-Growing Programs

In November, searches for Cyber Security programs increased 162%.



Big Data

Arts

Other

*Minimum 10,000 searches 2021

Google: Cost-per-Click

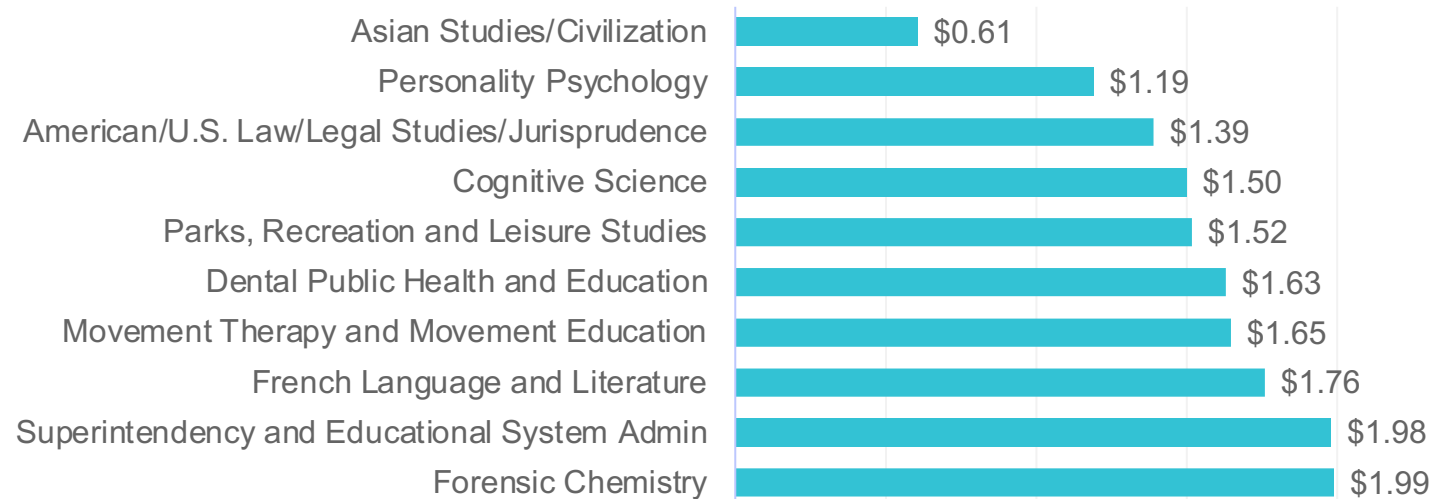
In November, Accounting and Finance had the most expensive Google cost-per-click.



Google: Cost-per-Click

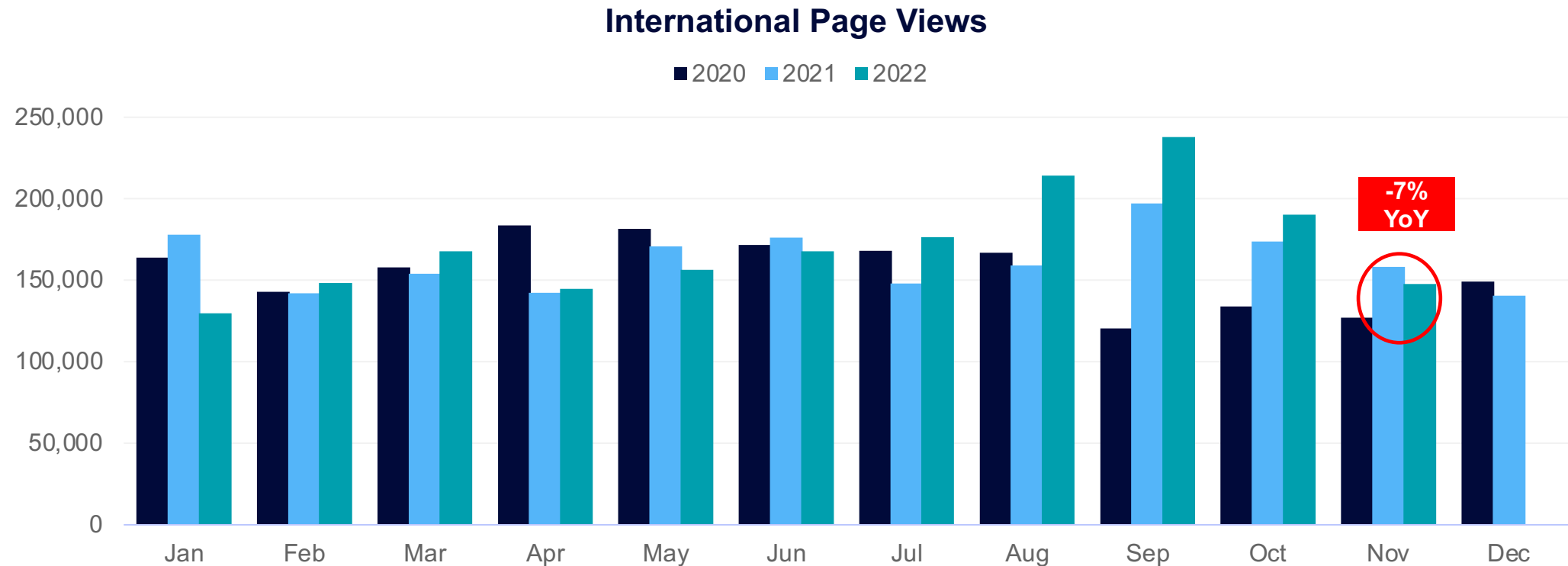
Asian Studies had the least expensive Google cost-per-click.

Lowest Marketing Costs
November 2022



International Student Demand

In November, international student interest in US programs decreased 7% year-over-year.

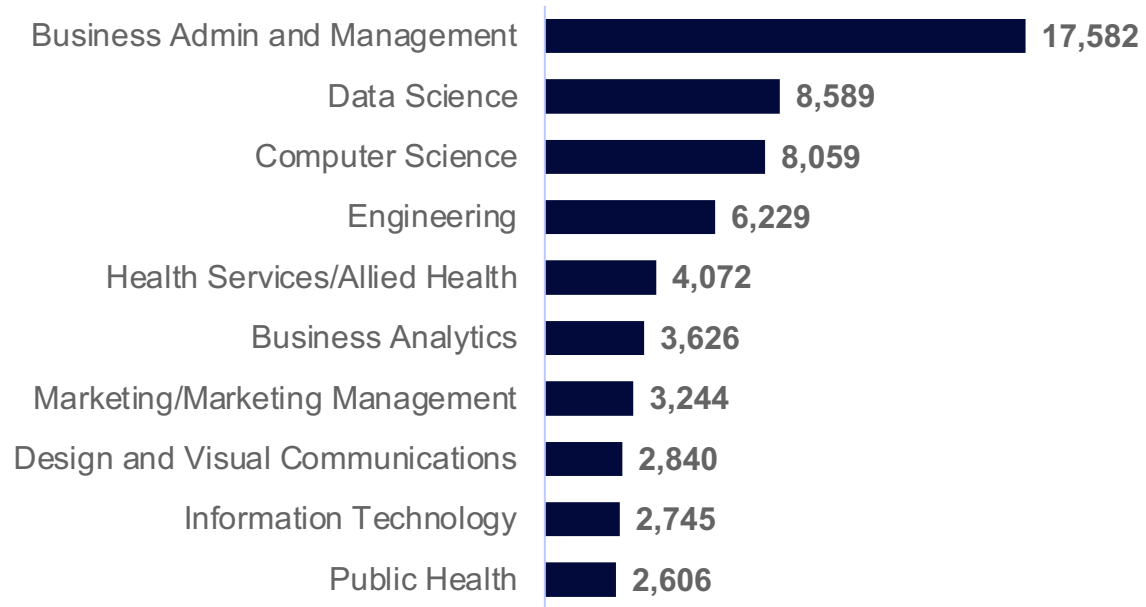


Source: PES International Student Demand Dashboard

International Student Demand

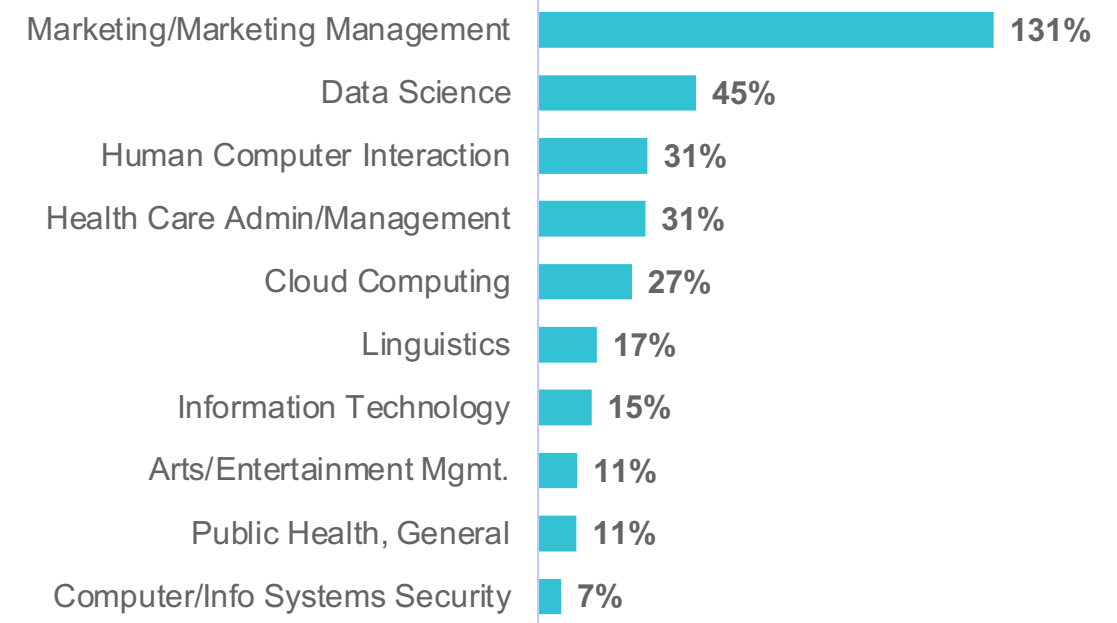
In November, the most-viewed programs were Business and Data Science.

Top 10 Programs
International Page Views



Marketing grew the fastest year-over-year.

Fastest-Growing Programs
International Page Views



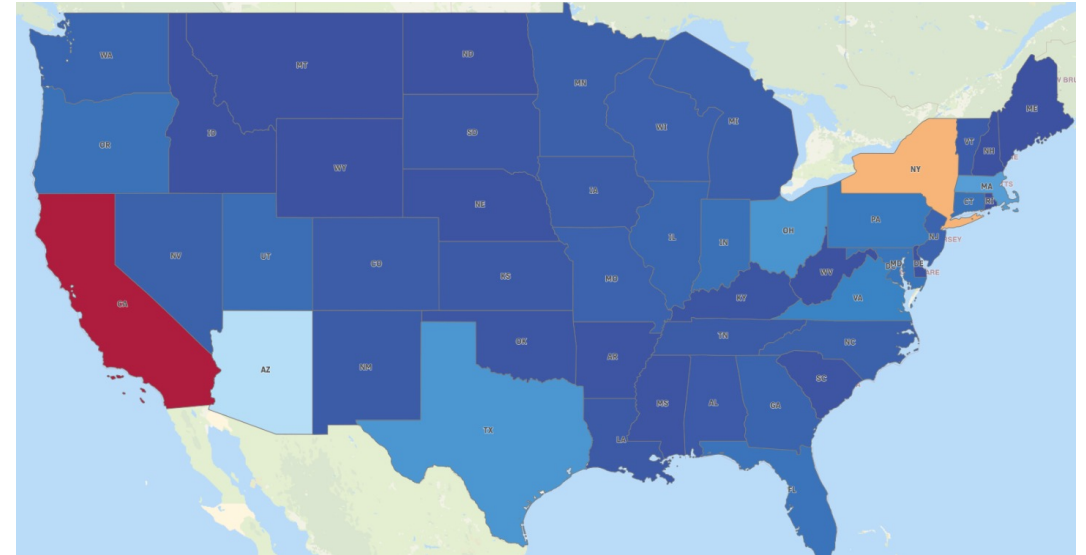
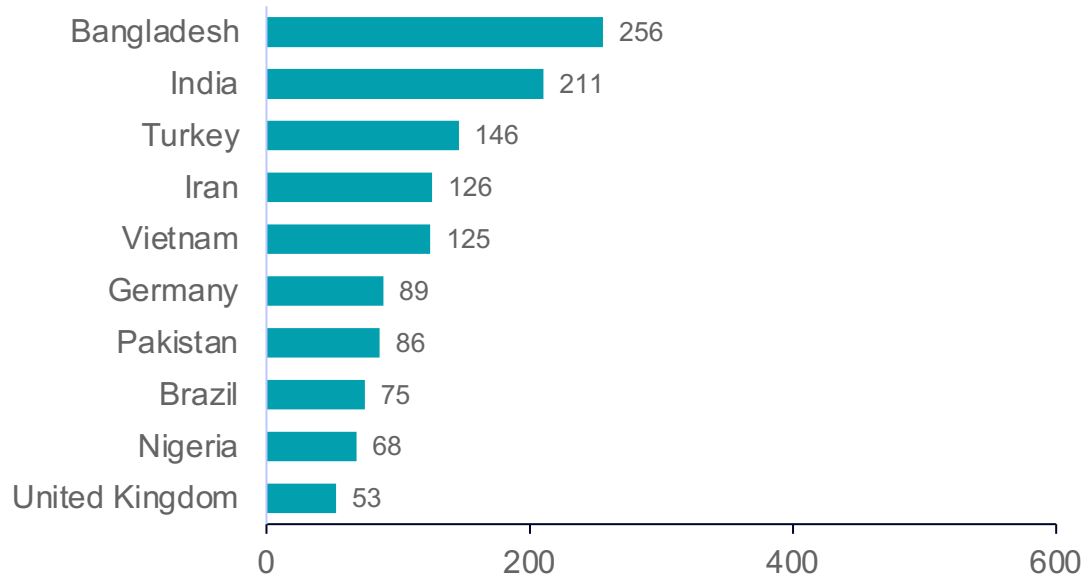


International Page Views: Linguistics (sixth fastest-growing)

Bangladesh led in page views.

California was the most popular destination for this program.

International Page Views by Originating Country
Linguistics, November 2022



Agenda

Student Demand

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- **Historical Trends: Completions**

Employment: Current Indicators

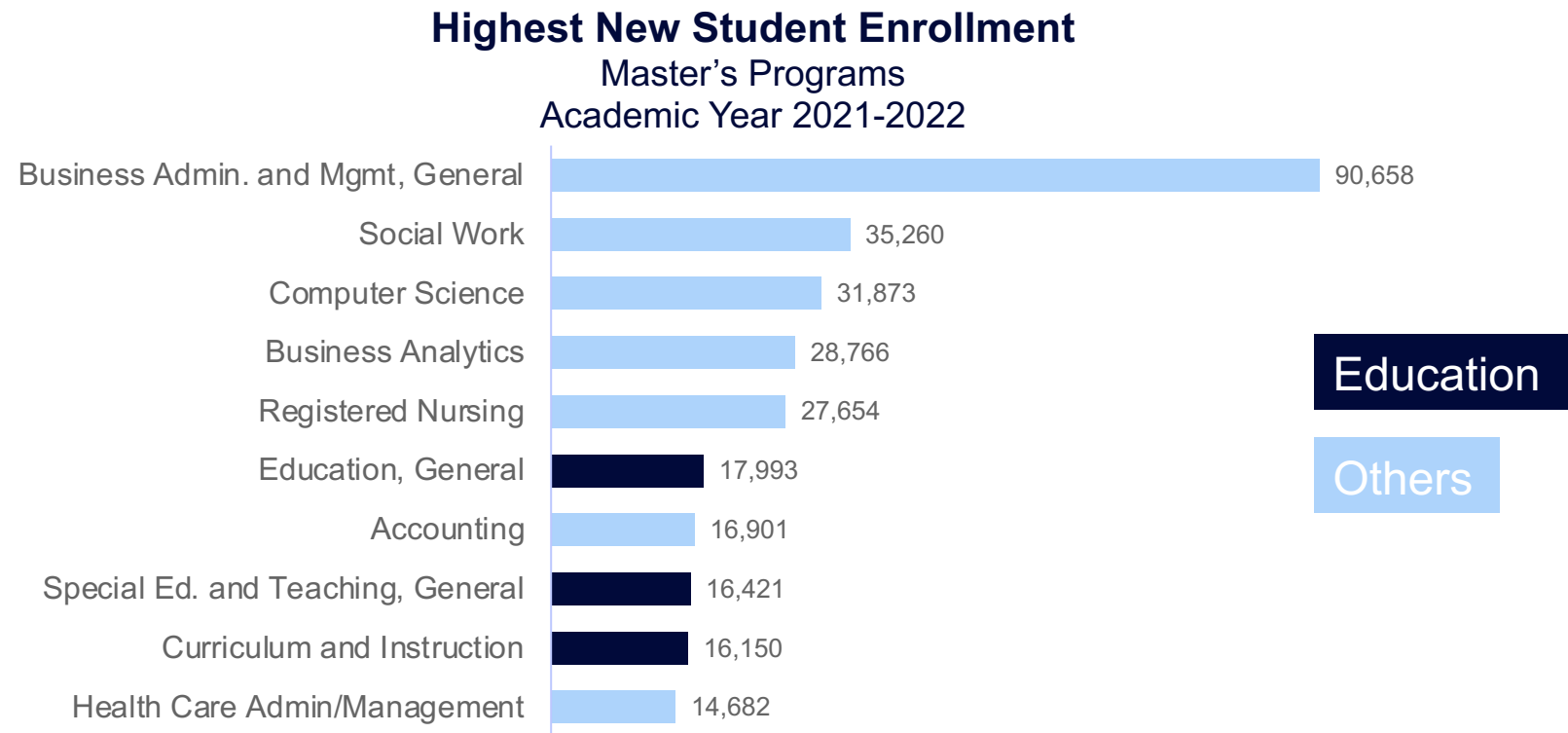
Non-Degree Courses

College Athletics

Program of the Month

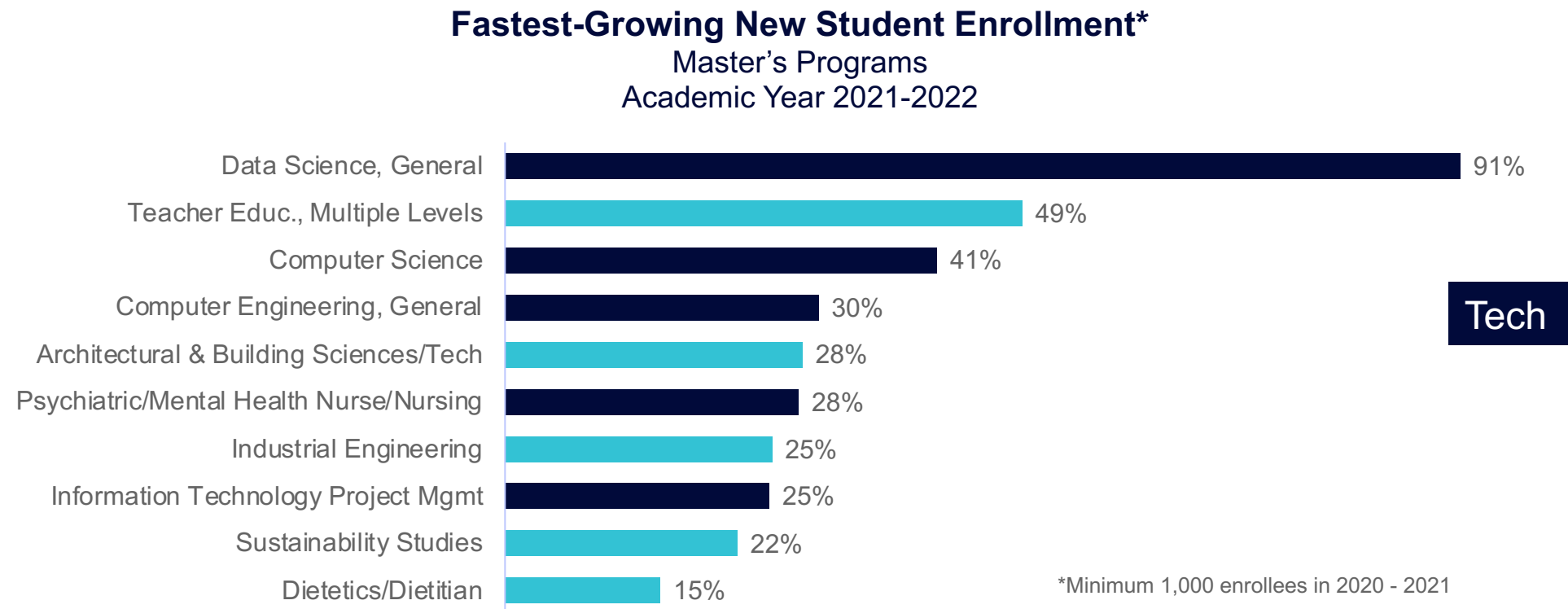
Summary

In academic year 2021-2022, Business had the highest new student enrollment of all master's programs.

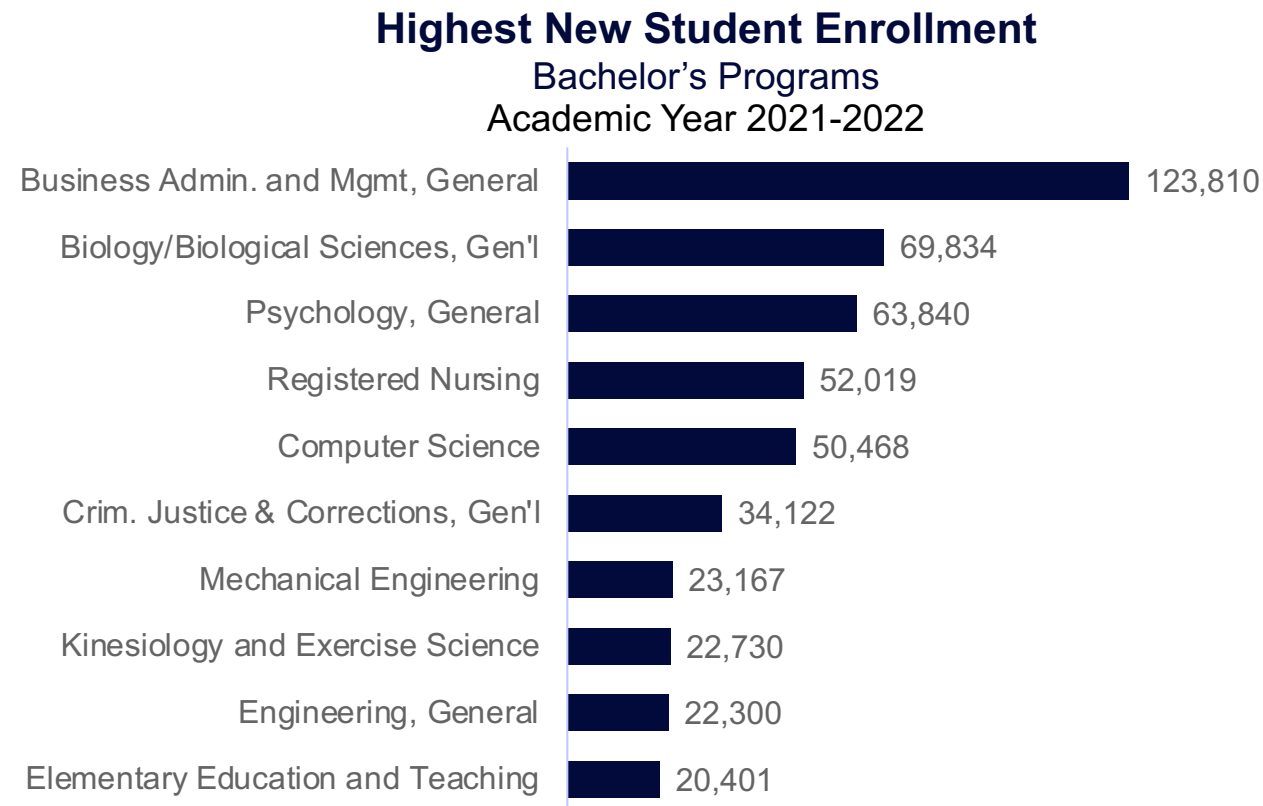


Source: PES Program Enrollment Dashboard

Data Science new student enrollment grew 91% year-over-year.

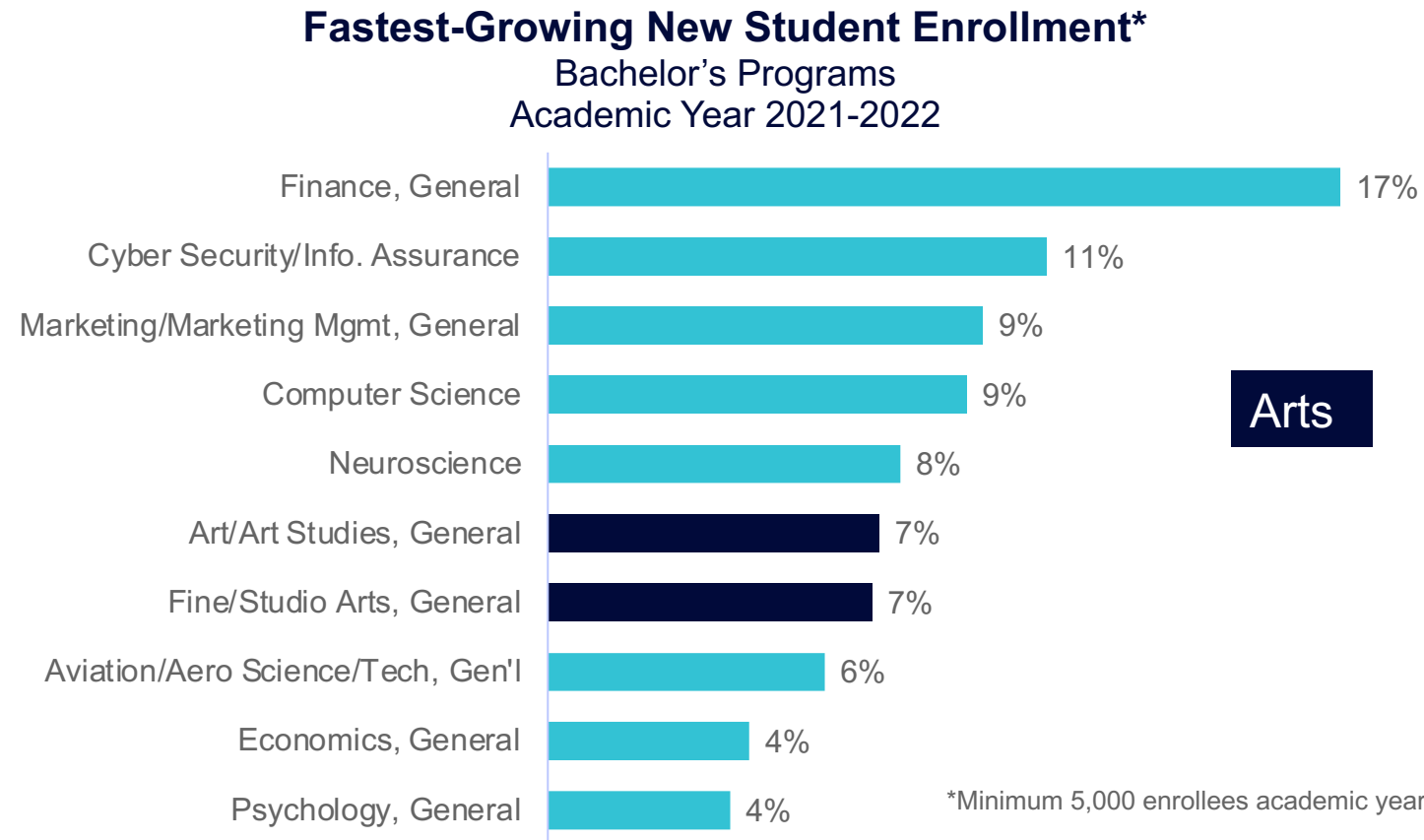


In academic year 2021 - 2022, Business had the highest new student enrollment.



Source: PES Program Enrollment Dashboard

Among bachelor's programs, Finance grew the fastest.



Source: PES Program Enrollment Dashboard

Agenda

Student Demand

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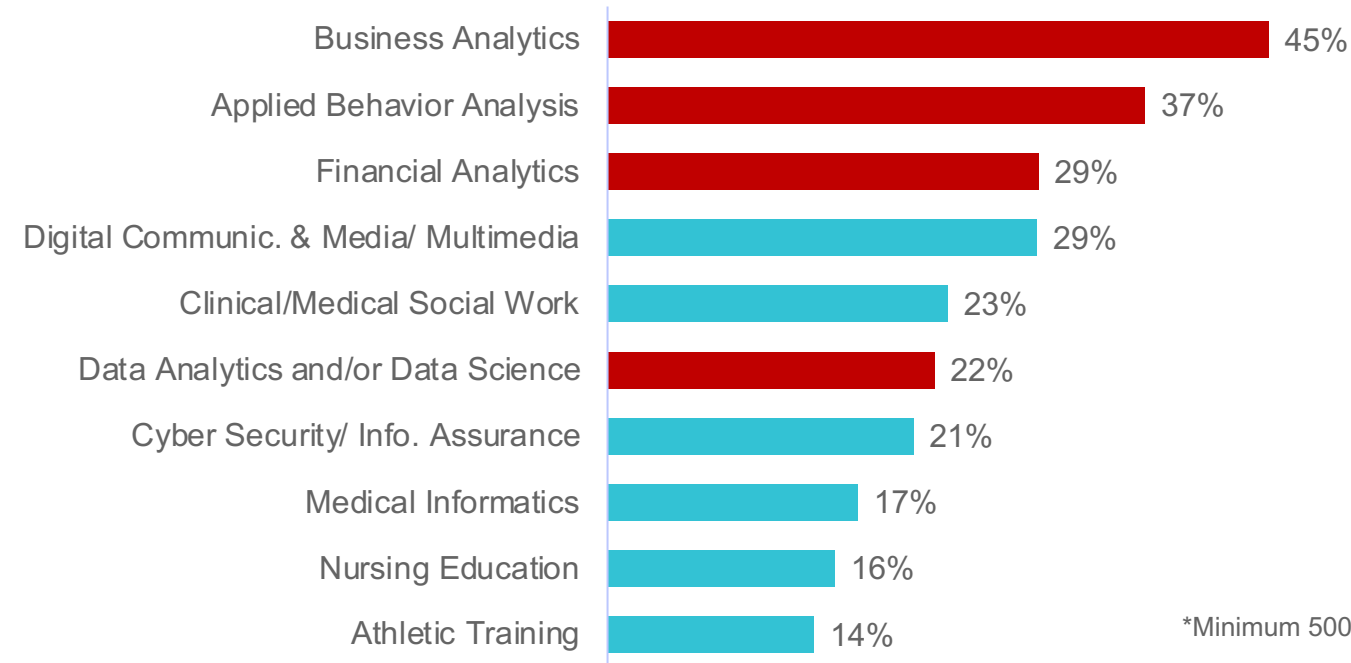
Summary

Master's: in 2021, Business had the highest completion volume.



Master's: From 2016 – 2021, Business Analytics grew 45% annually.

Fastest-Growing Program Completions Master's Programs

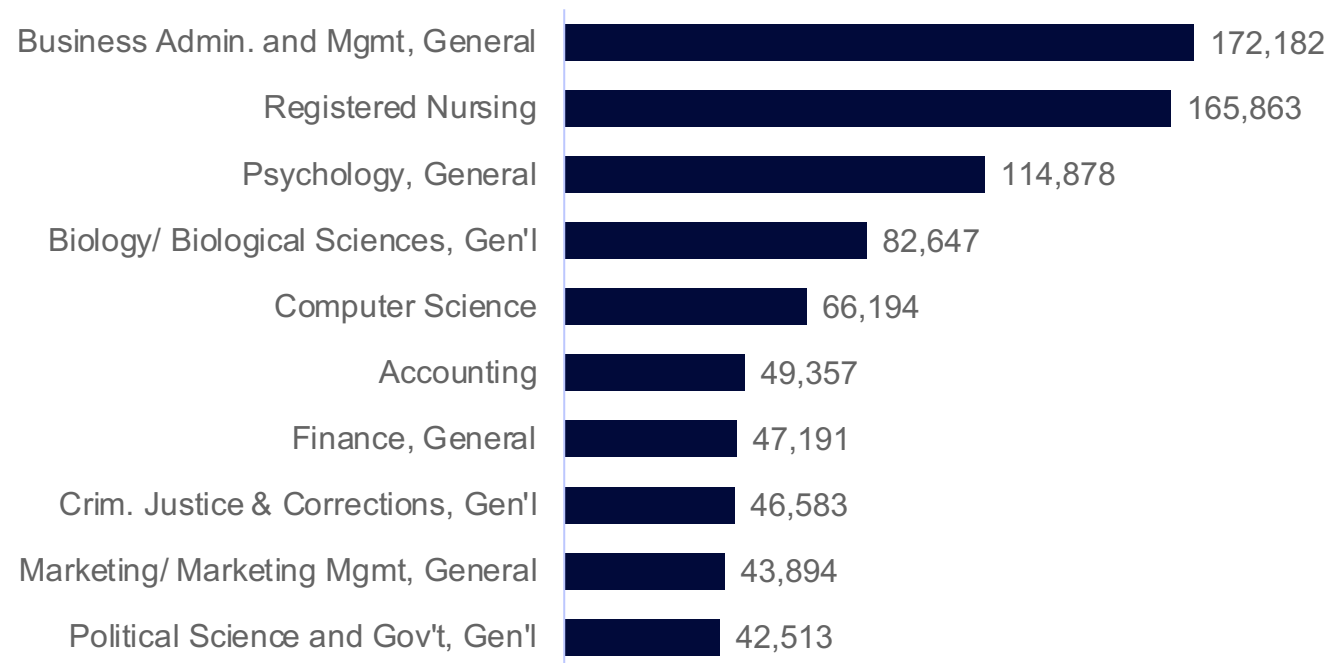


Data/Analysis

*Minimum 500 completions 2016

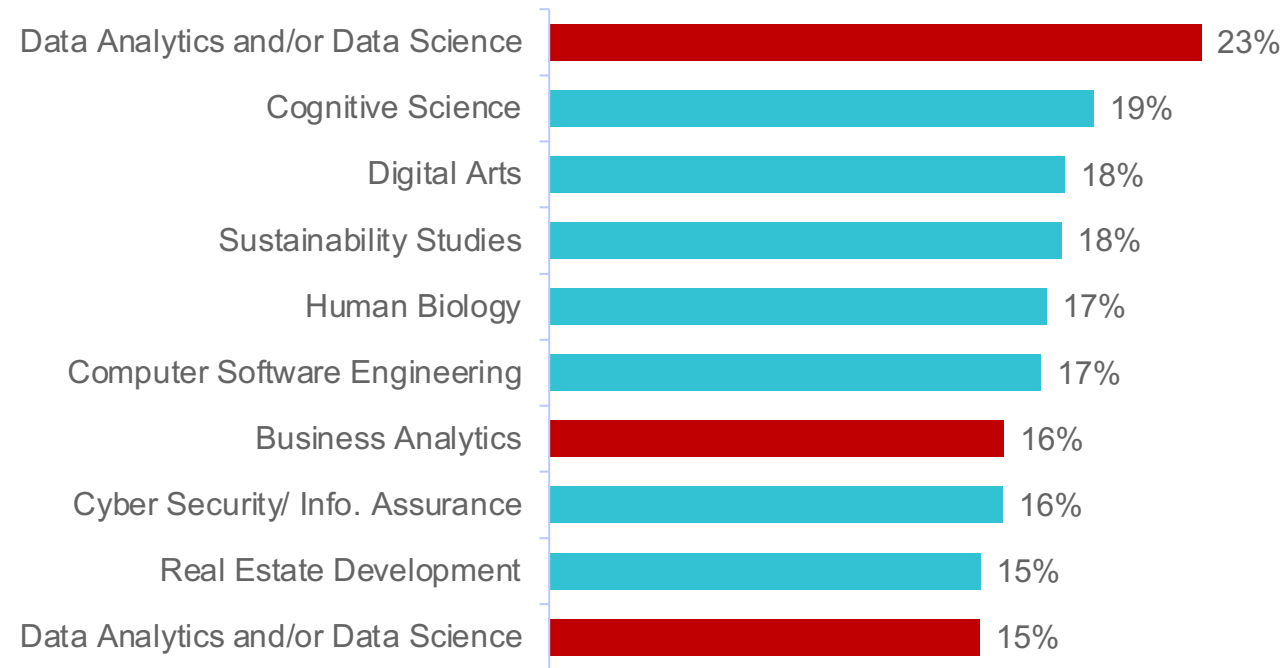
Bachelor's: in 2021, Business had the highest completion volume.

Highest 2021 Completions Bachelor's Programs



Bachelor's: From 2016 – 2021, Data Science/Analytics grew an average of 23% annually.

Fastest-Growing Program Completions
Bachelor's Programs



Data/Analysis

*Minimum 500 completions 2016

Agenda

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Employment: Current Indicators

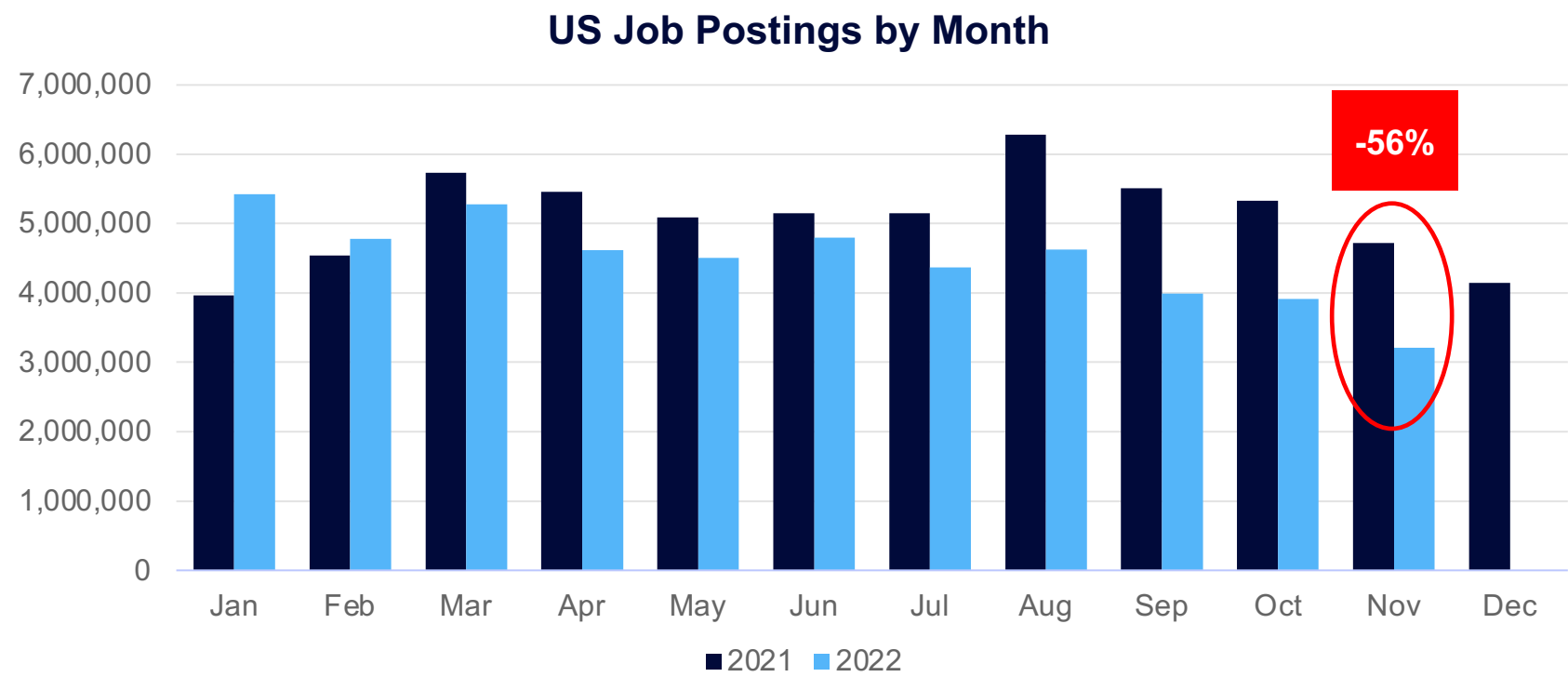
Non-Degree Courses

College Athletics

Program of the Month

Summary

In November 2022, job postings volume dropped 56% year-over-year.

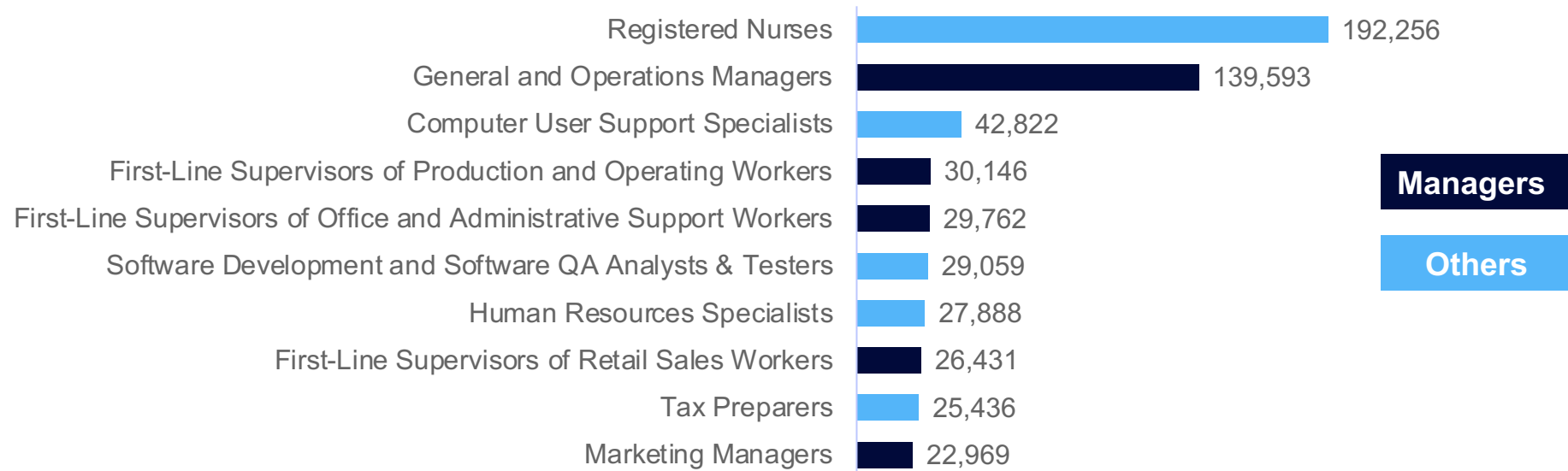


Source: PES Job Postings Dashboard

In November, Registered Nurses had the highest volume of job postings for bachelor's and above degree-holders.

Half of the occupations with the highest job postings were in management.

November 2022 Highest Job Postings
By Standard Occupational Code



In November, job postings for Tax Examiners increased 189% year-over-year.

**November Job Postings Year-over-Year Growth
Bachelor's Degree and Above
By Standard Occupational Code**



Agenda

Student Demand

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Employment: Current Indicators

Non-Degree Courses

College Athletics

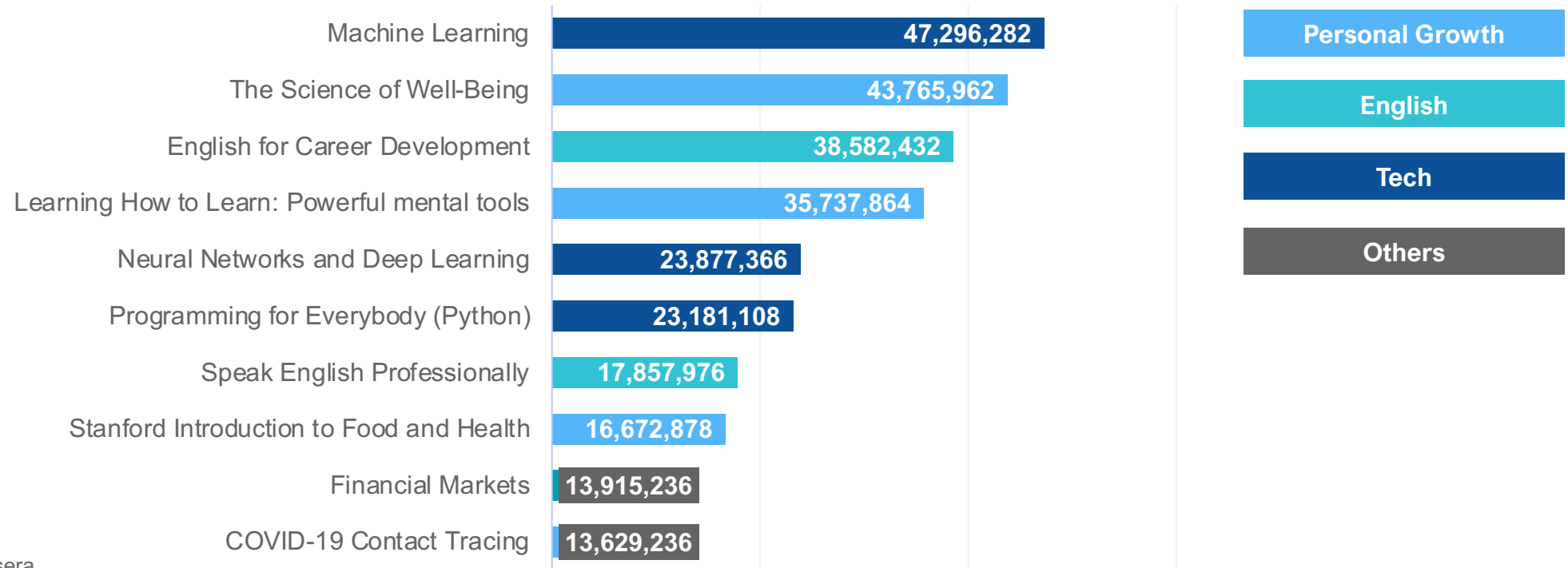
Program of the Month

Summary

Coursera: Highest Cumulative Course Enrollment

In November, Stanford Intro to Food and Health appeared for the first time in the top 10.

Highest Course Enrollment Volume
November 2022

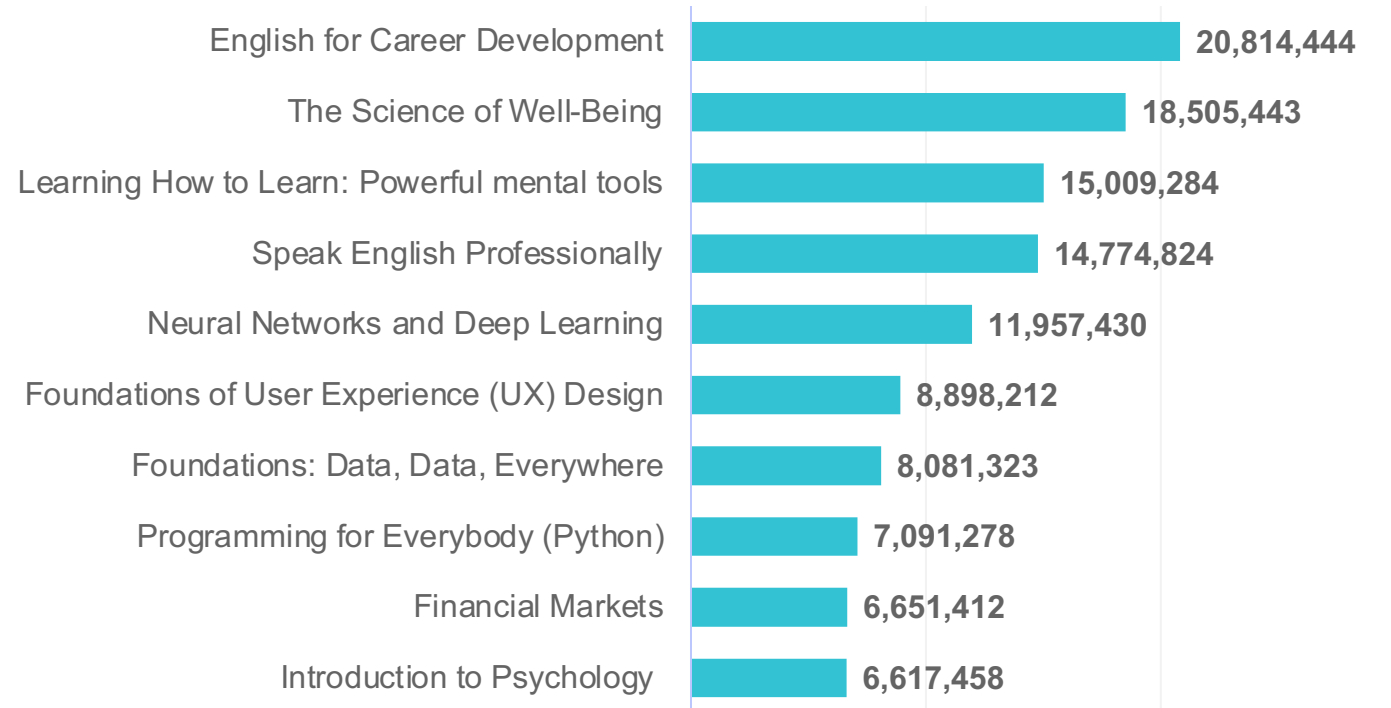


Source: PES Non-Degree Demand: Coursera

Coursera: Fastest-Growing Courses

In November, English for Career Development added the most students year-over-year.

Highest Year-Over-Year Unit Change in Enrollment November 2022



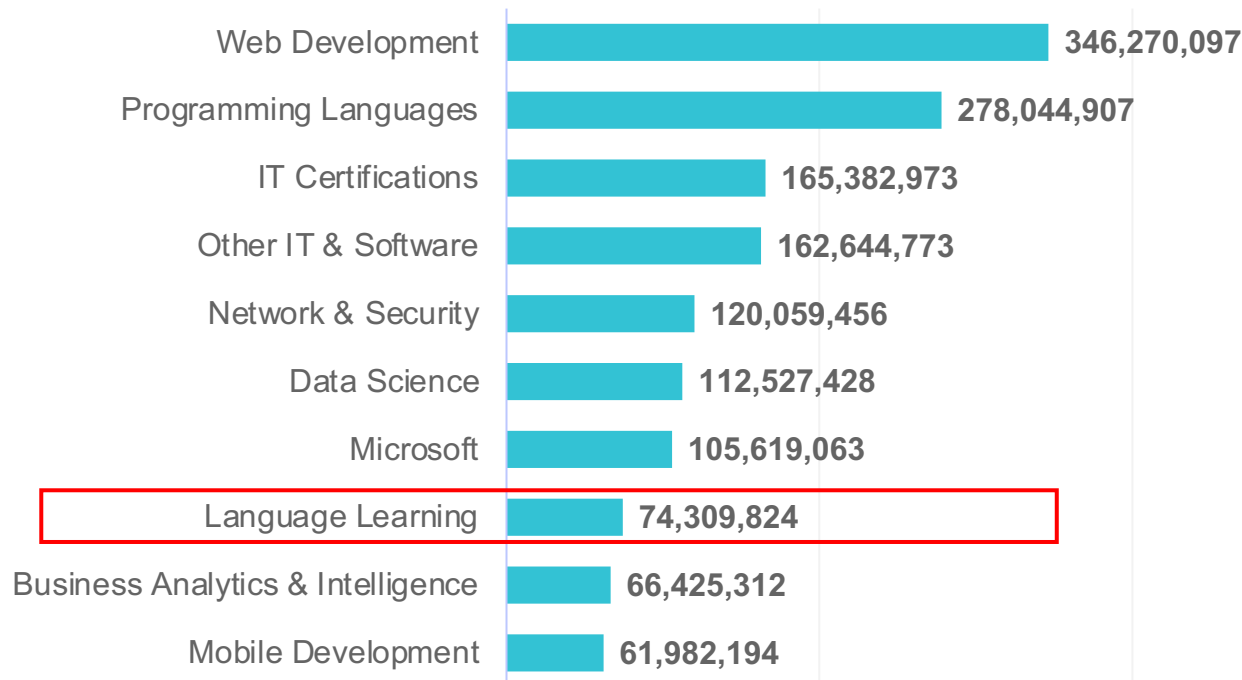
Source: PES Non-Degree Demand: Coursera

Udemy: Language Learning is one of the most popular categories.

Is there an untapped opportunity in higher education?

Highest Year-Over-Year Unit Change in Enrollment

November 2022



Source: PES Non-Degree Demand: Udemy

Teaching & Academics > Language Learning > Business English

Business English Course for ESL Students

Learn essential Business English vocabulary for presentations, meetings, negotiations, phone calls, e-mails, and more!

Bestseller 4.5 ★★★★★ (8,117 ratings) 41,719 students

Created by [Shayna Oliveira](#)

41,719 enrolled students

Teaching & Academics > Language Learning > English Language

Building Your English Brain

Learn to start thinking in English so that you can stop translating in your head and become fluent in English faster.

4.6 ★★★★★ (13,804 ratings) 50,157 students

Created by [Luke Priddy](#)

50,157 enrolled students

Agenda

Student Demand

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Employment: Current Indicators

Non-Degree Courses

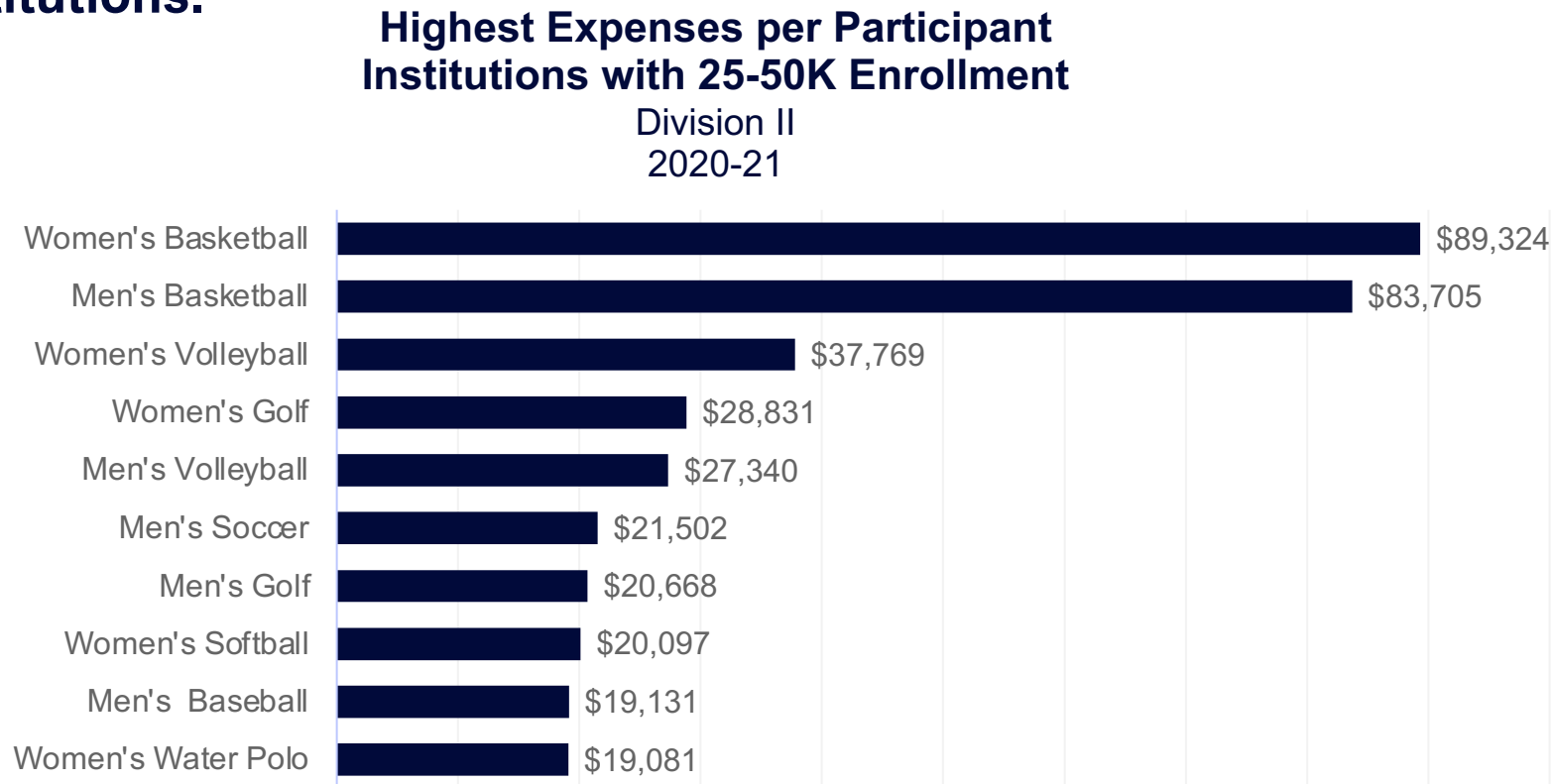
College Athletics

Program of the Month

Summary

Athletics Benchmarking: Expenses, Large Division II Schools

In 2021-2022, women's basketball had the highest expenses per athlete in large Division II institutions.



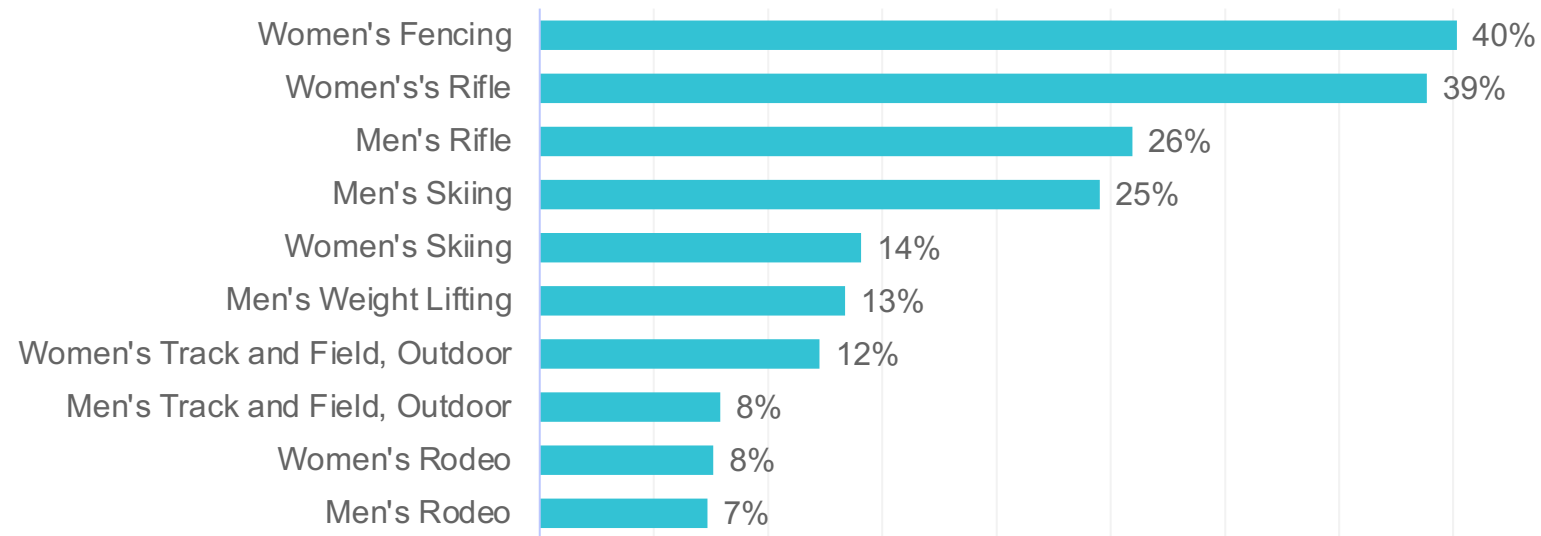
Source: Athletics Benchmarking Dashboard

Athletics Benchmarking: Growth in Expenses

Women's fencing expenses grew the most.

Highest Growth in Expenses per Participant Institutions with 25-50K Enrollment

Division II
2020-21



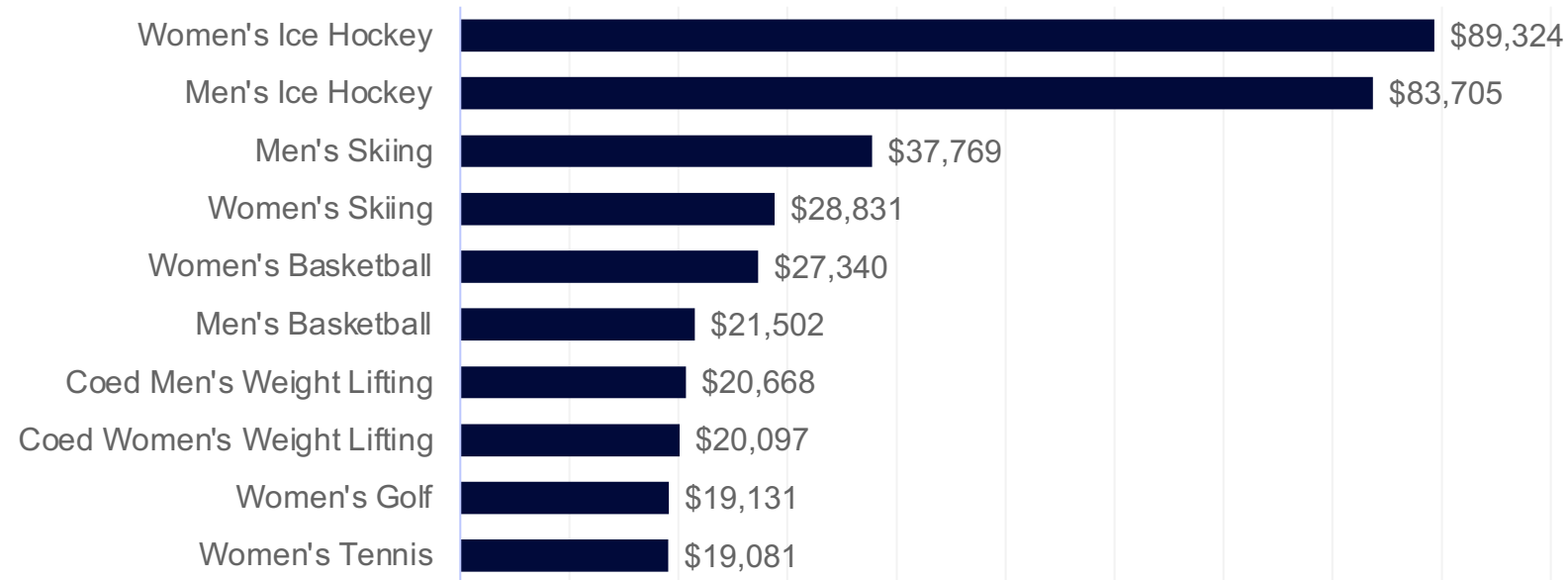
Source: Athletics Benchmarking Dashboard

Athletics Benchmarking: Expenses, Small Division II Institutions

Women's ice hockey had the highest expenses at Division II small institutions.

Highest Expenses per Participant Institutions with 1-5K Enrollment

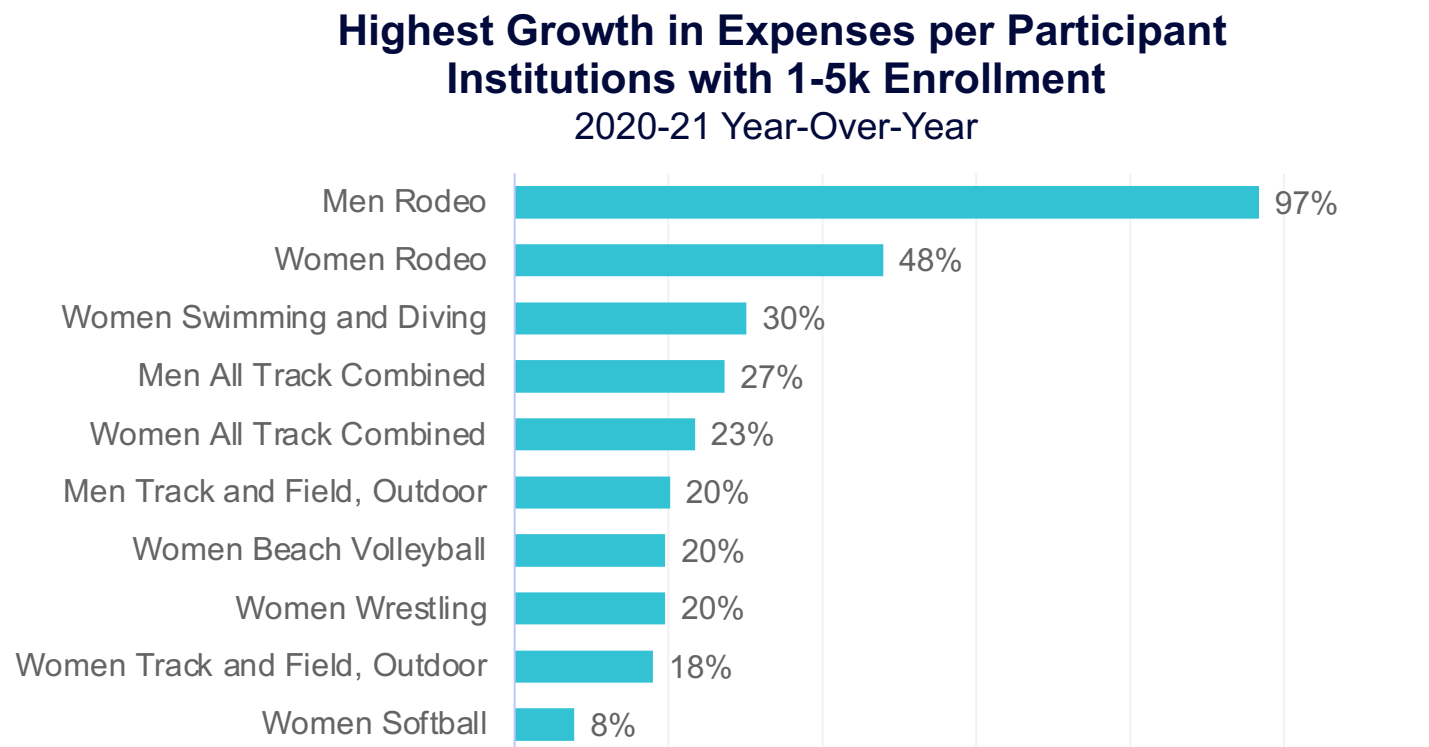
Division II
2020-21



Source: Athletics Benchmarking Dashboard

Athletics Benchmarking

Men's rodeo had the highest growth in expenses.



Source: Athletics Benchmarking Dashboard

Agenda

Student Demand

- **Leading Indicators: Google and International Search**
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Employment: Current Indicators

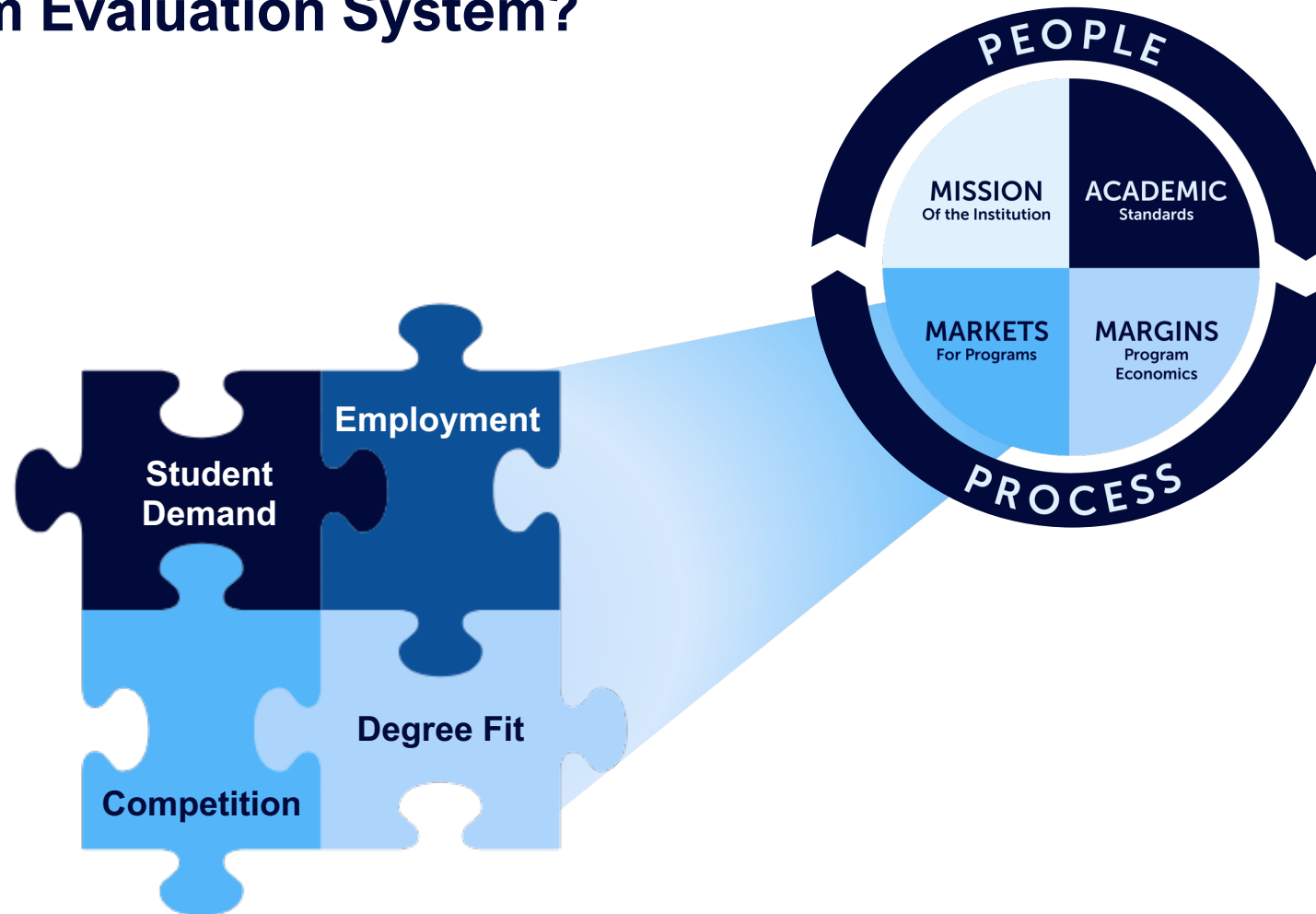
Non-Degree Courses

College Athletics

Program of the Month

Summary

What is a Program Evaluation System?



Program Markets: Program Rank

We score on Student Demand, Employment, Competitive Intensity, and Degree Fit.

- Let's focus on the national market for a Master's in Education.

US Program Ranking Master's Programs

Percentiles by CIP

(Double-click Field headers to change sorting.)

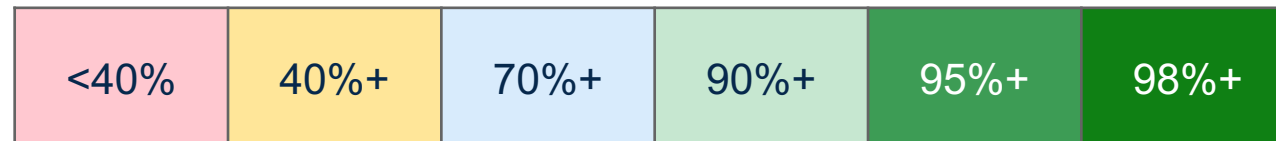
CIP	Total Percentile	Student Demand Percentile	Competitive Intensity Percentile	Employment Percentile	Degree Fit Percentile
11.0701 Computer Science	100	100	31	99	50
52.0201 Business Admin. and Mgmt, General	100	99	89	100	50
44.0701 Social Work	99	99	89	98	50
52.0301 Accounting	99	99	50	99	50
14.1001 Electrical/Electronics Engin'g	99	99	39	98	50
13.0101 Education, General	99	99	31	99	50
11.0103 Information Technology	99	99	19	98	50
51.3801 Registered Nursing	99	99	7	99	50
52.1401 Marketing/Marketing Mgmt, General	99	99	7	99	50
52.1001 Human Resources Management, Gen'l	99	99	1	97	50
11.1003 Cyber Security/Info. Assurance	99	99	0	98	50
11.0401 Information Science/Studies	99	98	89	92	50
51.3805 Family Practice Nurse/Nursing	99	98	31	96	50
44.0401 Public Administration	99	98	7	99	50
04.0902 Architectural & Building Sciences/Tech	99	97	97	90	50
52.0801 Finance, General	99	97	4	100	50
51.0912 Physician Assistant	99	96	96	96	50
30.7102 Business Analytics	98	99	39	81	50
13.0401 Educational Leadership/Admin, Gen'l	98	99	7	95	50
43.0100 Crim. Justice & Corrections, Gen'l	98	99	0	95	50
Total Percentile	020+40+70+90+95+98+100				
Total Score	-33-18-4313202960				

Source: Gray's PES Markets

Program Scorecard: Percentiles

All data are color-coded by their percentile rank in the local market compared to over 1,400 IPEDS programs (CIP codes).

Percentile Color-Code:



Program Scorecard: Student Demand

Education scores in the 99th percentile for Student Demand.

- New student enrollment is strong and grew 8% year-over-year.
- Online completions are in the 99th percentile.
 - Overall completions fell 6% year-over-year.
- International demand for a Master's in Education is in the 99th percentile.
- Google search volume is strong and growing.
 - It grew 12% year-over-year.

Student Demand Score: 32 Percentile: 99				
Catego...	Pctl	Criterion	Value	Score
Size	98	Google Search Volume (3 Months)*	581,892	8
	99	International Page Views (12 Months)	15,382	NS
	98	New Student Enrollment Volume (12 Mo.)	539	8
	99	On-ground Completions at In-Market Institutions	12,429	4
	99	Online Completions by In-Market Students	7,521	4
	99	Sum of On-ground and Online Completions	19,950	4
Growth	96	Google Search YoY Change (Units)*	63,738	3
	93	New Student Enrollment Vol. YoY Change (Units)	39	2
	0	Completion Volume YoY Change (Units)	-1,205	-1
	62	Google Search YoY Change (%)*	12%	0
	40	New Student Enrollment Vol. YoY Change (%)	8%	0
	38	Completion Volume YoY Change (%)	-6%	0

Program Scorecard: Employment

Education ranks in the 99th percentile for Employment.

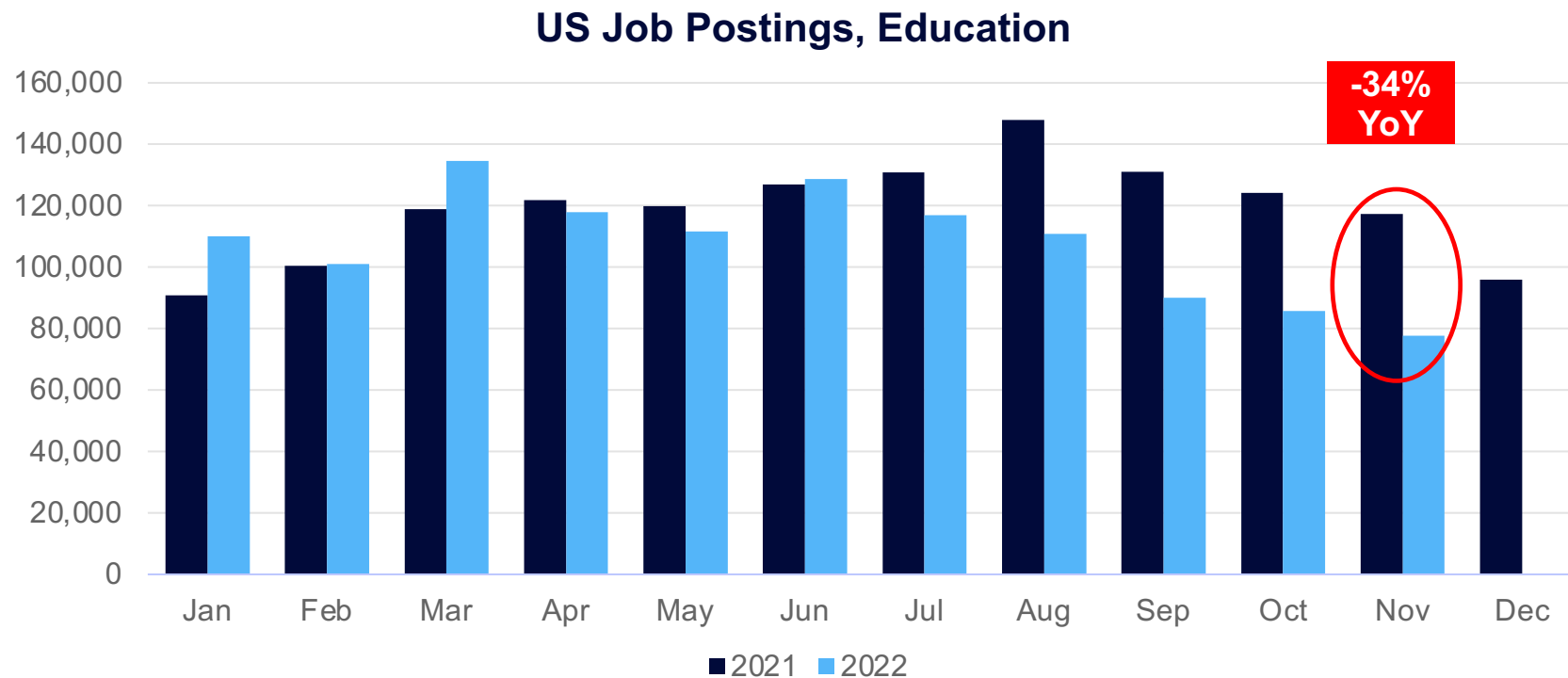
- Job volume is very high for this program.
 - However, it fell 4% year-over-year.
- Job postings per graduate are moderate.
- BLS mean wages are in the 27th percentile and lower for other wage metrics.

Employment*

Score: 22 Percentile: 99

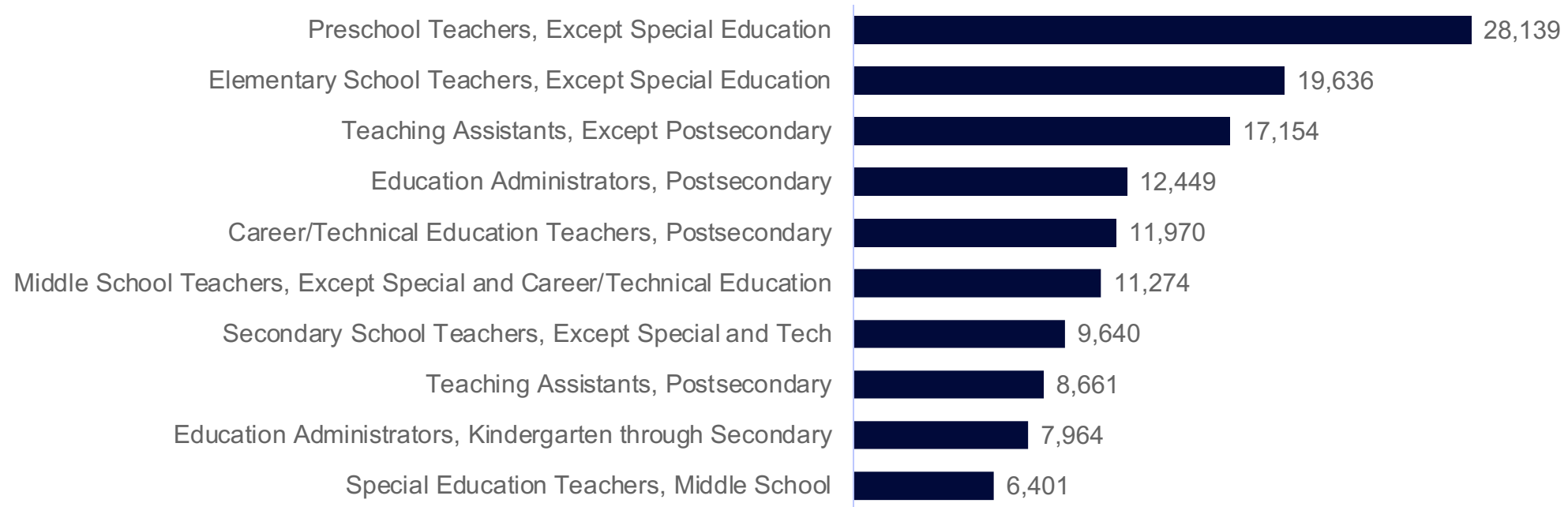
Category	Pctl	Criterion	Value	Score
Size: Direct Prep	95	Job Postings Total (12 Months)*	102,743	6
	98	BLS Current Employment*	1,639,426	8
	98	BLS Annual Job Openings*	144,268	5
Size: ACS Bach. Outcomes	95	Job Postings Total (12 Months)*	28,014	NS
	97	BLS Current Employment*	244,002	NS
Growth (Direct Prep)	47	BLS 1-Year Historical Growth*	-3.8%	0
	51	BLS 3-Year Historic Growth (CAGR)*	0.7%	1
	45	BLS 10-Year Future Growth (CAGR)*	0.5%	0
Saturation (Direct Prep)	68	Job Postings per Graduate*	3.4	0
	88	BLS Job Openings per Graduate*	4.8	2
Wages (Direct Prep)	31	BLS 10th-Percentile Wages*	\$33,861	NS
	27	BLS Mean Wages*	\$51,866	0
National American Community Survey Bachelor's Degree Outcomes	22	Wages (Age < 30)	\$38,767	NS
	9	Wages (Age 30-60)	\$63,546	NS
	76	% with Any Graduate Degree	50%	NS
	95	% with Masters	44%	NS
	28	% with Doct/Prof Degree	5%	NS
	19	% Unemp. (Age <30)**	2%	NS
	19	% Unemp. (Age 30-60)**	1%	NS
	99	% in Direct Prep Jobs	67%	NS

In November 2022, Education job postings dropped 34% year-over-year.



In November 2022, preschool teachers had the highest volume of job postings for Education graduates.

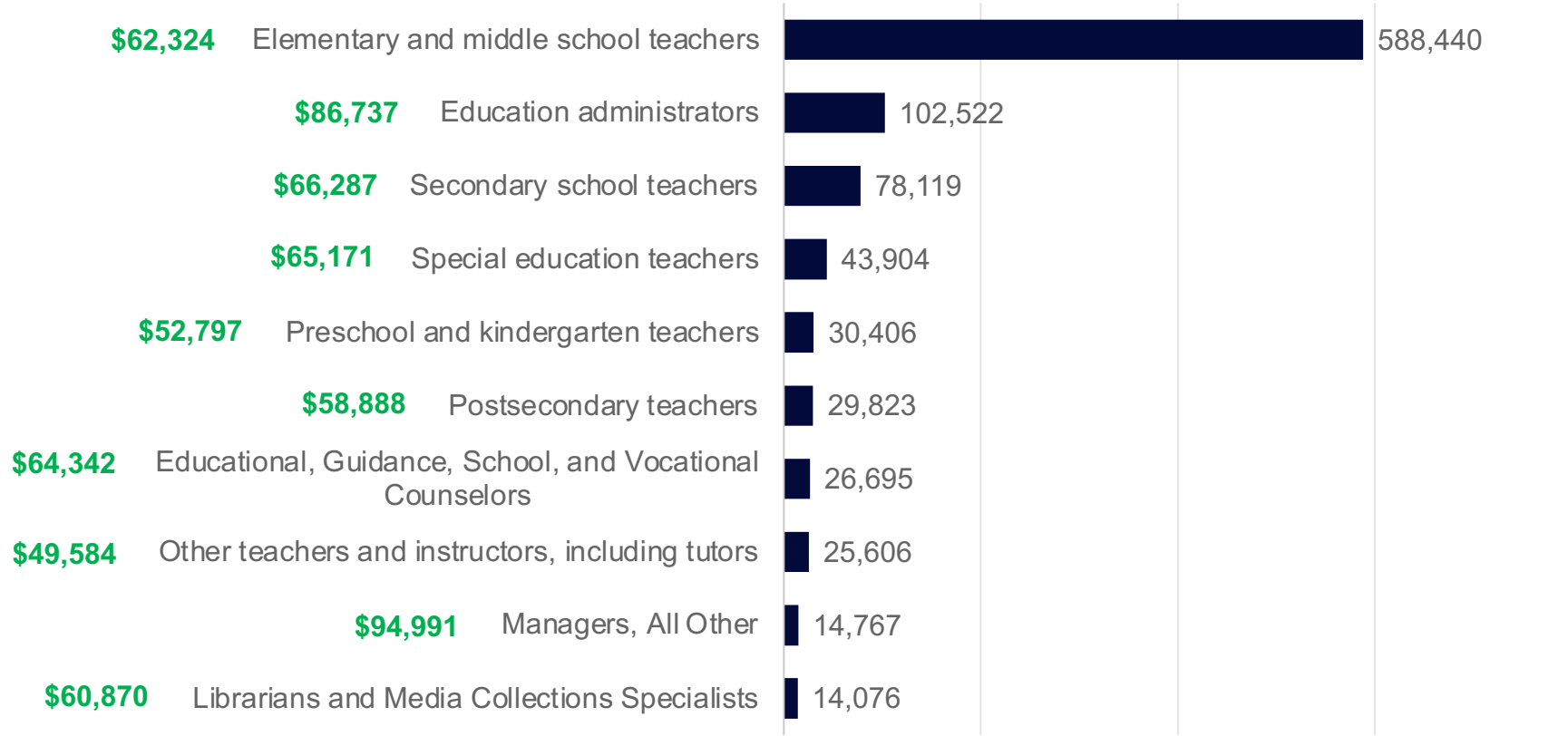
November Highest Job Postings By Standard Occupational Code



American Community Survey: Master's in Education occupations with average mid-life income

Top Occupations by Population

Average Income
Ages 30-60



Source: US Census, American Community Survey

Program Scorecard: Competitive Intensity

Education is a competitive program.

- 358 institutions have Master's in Education graduates
 - 38% of completions are online.
- Average and median program sizes are healthy
- Median size grew by 2% year-over-year.
- Marketing costs are very high for this program
 - 94th percentile for a Google click
 - 66th percentile competition index
- It is a popular online program: 38% of completions are online.

Competitive Intensity

Score: -4 Percentile: 31

Category	Pctl	Criterion	Value	Score
Volume of In-Market Competition	99	Campuses with Graduates**	358	-8
	94	Campuses with Grads YoY Change (Units)**	4	-2
	99	Institutions with Online In-Market Students**	138	NS
In-Market Program Sizes	97	Average Program Completions	35	4
	95	Median Program Completions	14	4
	90	YoY Median Prog. Compl. Change (Units)	1	1
	79	YoY Median Prog. Compl. Change (%)	8%	0
In-Market Saturation	94	Google Search * Cost per Click**	\$21	-3
	66	Google Competition Index**	0.46	0
National Online Competition	99	National Online Institutions (Units)**	145	NS
	78	Nat'l Online % of Institutions	30%	NS
	76	Nat'l Online % of Completions	38%	NS

Program Scorecard: Degree Fit

While 62% students are undergraduates, 63% of completers have a master's degree.

- 63% of completions are at the master's level.
 - Only 7% of enrollment is at the master's level.
- Only 6% of the national workforce have a master's degree.

Degree Fit:
Score: 0 Percentile: 50

National Completions by Level
Score: 0

Award Level	Completions (National)	Completions (Market)	Enrollment (Market)
Certificate	2%	2%	0%
Associates	7%	7%	30%
Bachelors	16%	16%	62%
Postbaccalaureate Certificate	1%	1%	0%
Masters	63%	63%	7%
Post-masters Certificate	3%	3%	0%
Doctoral	8%	8%	1%
Unknown	0%	0%	0%

National Workforce Ed. Attainment
Score: 0

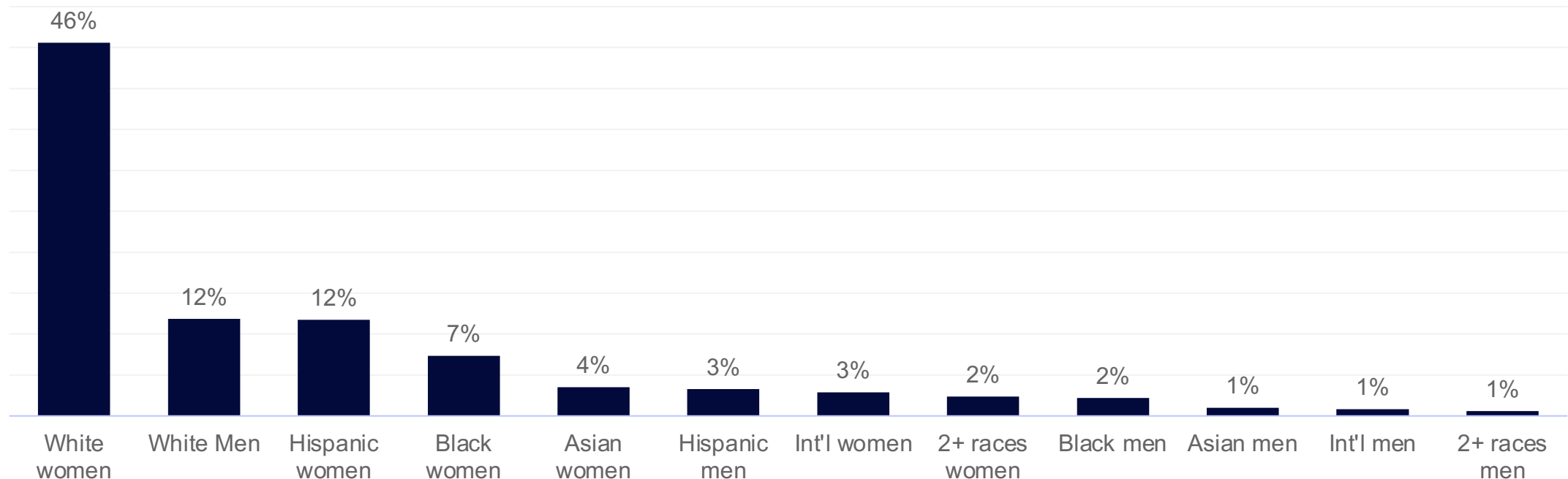
Award Level	BLS Educational Attainment
No College	33%
Some College	18%
Associates	18%
Bachelors	21%
Masters	6%
Doctoral	5%

Demographics

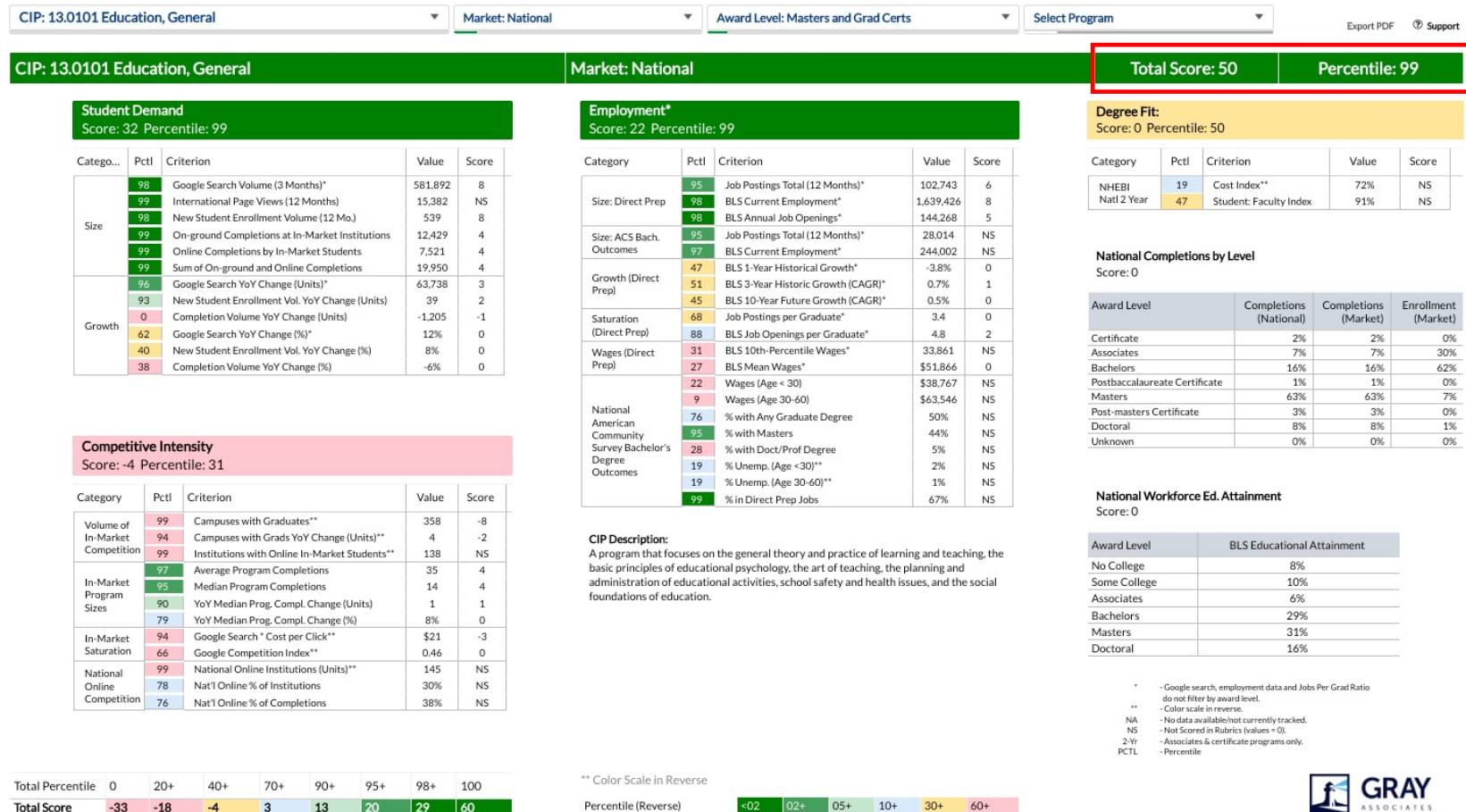
In 2020, white women made up 46% percent of completions for a Master's in Education.

- After white women, white men and Hispanic women had the highest percentage of completions.

2020 Completions by Demographic Group



Program Scorecard: A Master's in Education ranks in the 99th percentile.


National Workforce Ed. Attainment
Score: 0

* - Google search, employment data and Jobs Per Grad Ratio do not filter by award level.

** - Color scale in reverse.

NA - No data available/not currently tracked.

NS - Not Scored in Rubrics (values = 0).

2-Yr - Associates & certificate programs only.

PCTL - Percentile

Total Percentile
0
20+
40+
70+
90+
95+
98+
100

Total Score
-33
-18
-4
3
13
20
29
60

** Color Scale in Reverse

Percentile (Reverse)
<02
02+
05+
10+
30+
60+

Agenda

Google Search

International Student Demand

Enrollment

Employment Trends

Non-Degree Courses

College Athletics

Program of the Month

Summary

Summary

- In November, US Google searches for academic programs increased 9% year-over-year.
 - Three of the 10 fastest-growing programs were in the arts.
- In academic year 2021-2022, the fastest-growing master's degree enrollment was in Data Science.
 - At the bachelor's level, Finance grew the fastest.
- In November, there was a strong employer demand for managers.
- Tax is a rapidly growing job market
- Demand for a Master's in Education is very high.
 - Student demand is very high.
 - Employer demand is very high.
 - However, mean wages are in the 27th percentile.
 - This program is very competitive.

Upcoming Webinars

Topic	Date
Demand Trends Webcast: Community Colleges	<i>Wednesday</i> January 25 th at 2 pm ET
Demand Trends Webcast: Bachelor's and Above	<i>Thursday</i> January 26 th at 2 pm ET

Contact:
Robert Atkins
RobertGrayAtkins.com

