

Development of an IPEDS Academic Programs Dashboard: Leveraging Public Higher Education Data for Strategic Insight

Clair Johnson, PhD
University of Pennsylvania Libraries (formerly)

Background

The Landscape of the Higher Education Library

- Increasing remote learning and evolving role of the academic library
- Emphasis on organizational learning and collective intelligence
- Diversification of librarian expertise
- Democratization of data and open access to scholarship

Emergence of Research Questions

- What academic trends do university libraries need to be prepared to address?
- What skills are students seeking that they may not develop through coursework?
- What kind of support will teaching faculty need in the next five to ten years?

Data & Technology

IPEDS & Power BI

- Integrated Postsecondary Education Data System
 - System of interrelated surveys collected annually by the National Center for Education Statistics
 - All institutions that receive federal aid required to participate
 - Publicly accessible
 - Includes data on enrollment, outcomes, staffing, finances, and libraries
- Microsoft Power BI
 - Low-cost data visualization program
 - Ability to control level of access to reports
 - Ability to “slice and dice” the data

The Dashboards

Emerging Insights

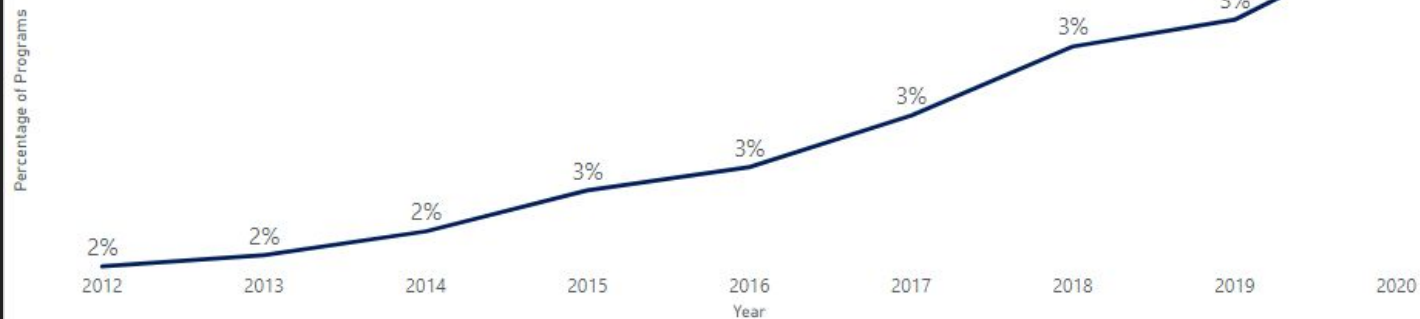
Academic Programs over Time

Year	54.0601 - General Economics	45.0603 - Econometrics	30.7001 - Data Science
2014	335	17	0
2015	334	20	0
2016	334	28	0
2017	328	57	0
2018	320	101	0
2019	310	156	0
2020	302	206	11

Number of Programs



Percentage of Programs



Please select which filters should be applied to the base (denominator) of the percentage calculations. For example, to calculate percentages within the institution(s) selected, choose "Include" for Institution. To calculate across all institutions, choose "Exclude" for Institution.

Institution

- Exclude
 Include

Degree Type

- Exclude
 Include

Distance Ed

- Exclude
 Include

STEM

- Exclude
 Include

Ivy Plus, Institution

All

STEM Programs

- (Blank)
 Y

Distance Ed Programs

- N
 Y

Degree Type

- Bachelor's
 Doctor's - Other
 Doctor's - Professional
 Doctor's - Research
 Master's
 Post Master's Certificate
 Post-Baccalau

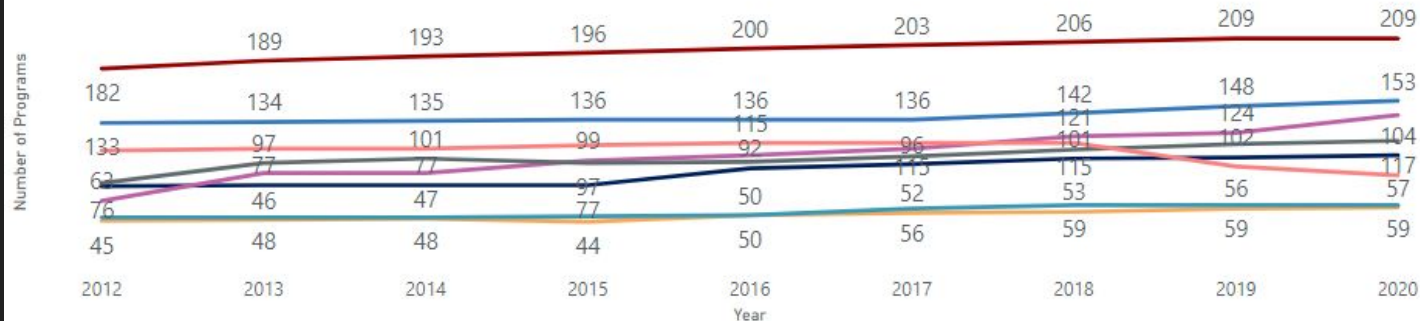
2-Digit CIP, 6-Digit CIP

- '23' - ENGLISH LANGUAGE...
 '24' - LIBERAL ARTS AND S...
 '25' - LIBRARY SCIENCE.
 '26' - BIOLOGICAL AND BI...
 '27' - MATHEMATICS AND ...
 '29' - MILITARY TECHNOL...
 '30' - MULTI/INTERDISCIPL...
 '31' - PARKS, RECREATION, ...
 '38' - PHILOSOPHY AND R...
 '39' - THEOLOGY AND REL...
 '40' - PHYSICAL SCIENCES.
 '41' - SCIENCE TECHNOLO...
 '42' - PSYCHOLOGY.
 '43' - HOMELAND SEURI...

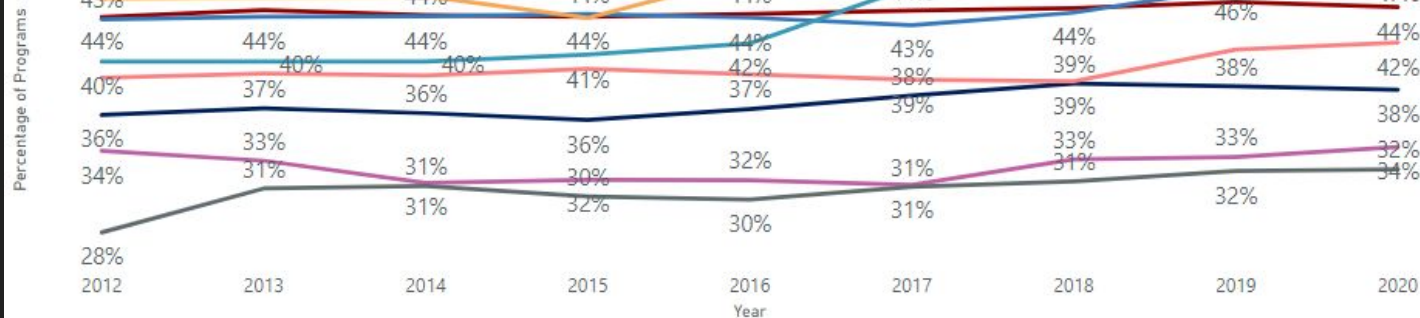
Clear all filters

Number of Programs

Institution(s) ● Brown University ● Columbia Universi... ● Cornell University ● Dartmouth Coll... ● Harvard University ● Princeton Uni... ● University of ... ● Yale University



Percentage of Programs



Please select which filters should be applied to the base (denominator) of the percentage calculations. For example, to calculate percentages within the institution(s) selected, choose "Include" for Institution. To calculate across all institutions, choose "Exclude" for Institution.

Institution

- Exclude
 Include

Degree Type

- Exclude
 Include

Distance Ed

- Exclude
 Include

STEM

- Exclude
 Include

Ivy Plus, Institution

Multiple selector

STEM Programs

- (Blank)
 Y

Distance Ed Programs

- N
 Y

Degree Type

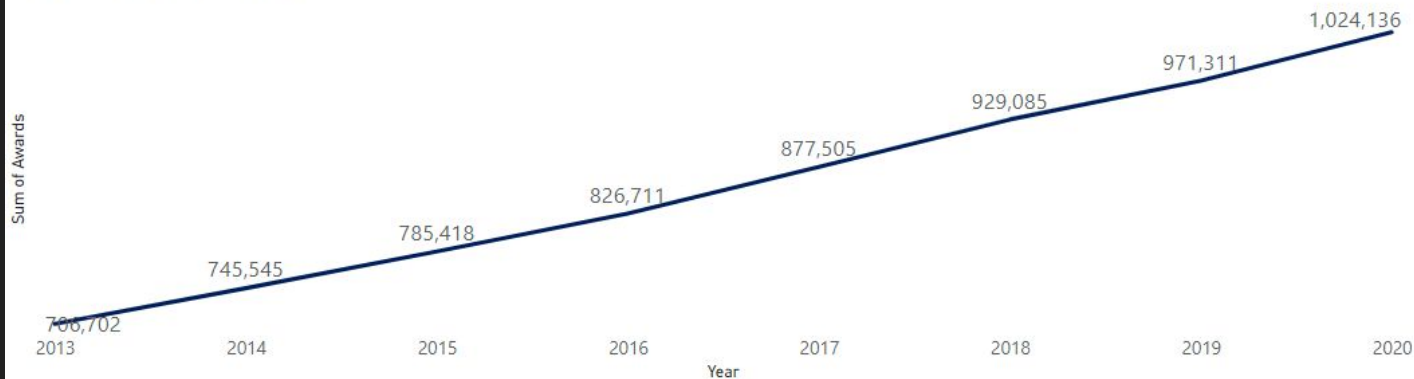
- Bachelor's
 Doctor's - Other
 Doctor's - Professional
 Doctor's - Research
 Master's
 Post Master's Certificate
 Post-Baccalaureate Certificate

2-Digit CIP, 6-Digit CIP

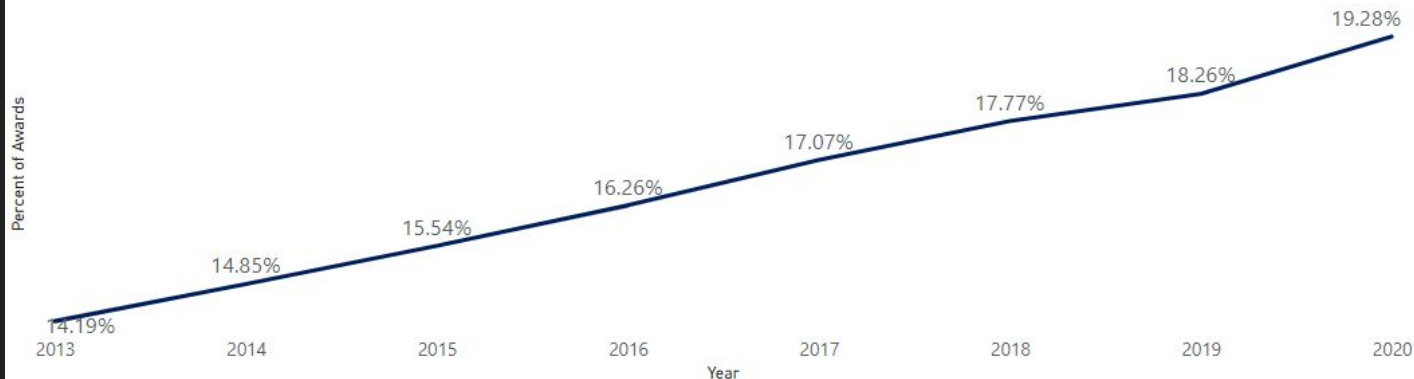
- '01' - AGRICULTURAL/ANI...
- '03' - NATURAL RESOURCE...
- '04' - ARCHITECTURE AND...
- '09' - COMMUNICATION, J...
- '11' - COMPUTER AND INF...
- '13' - EDUCATION.
- '14' - ENGINEERING.
- '15' - ENGINEERING/ENGI...
- '26' - BIOLOGICAL AND BI...
- '27' - MATHEMATICS AND ...
- '29' - MILITARY TECHNOL...
- '30' - MULTI/INTERDISCIPL...
- '40' - PHYSICAL SCIENCES.

Clear all filters

Number of Completions



Percentage of Completions



Please select which filters should be applied to the base (denominator) of the percentage calculations. For example, to calculate percentages within the institution(s) selected, choose "Include" for Institution. To calculate across all institutions, choose "Exclude" for Institution.

Institution

Exclude

Include

STEM

Exclude

Include

Award Level

Exclude

Include

Carnegie Class

Exclude

Include

Ivy Plus, Institution

All

STEM Awards

(Blank)

Y

Award Level

All

2018 Carnegie Classification

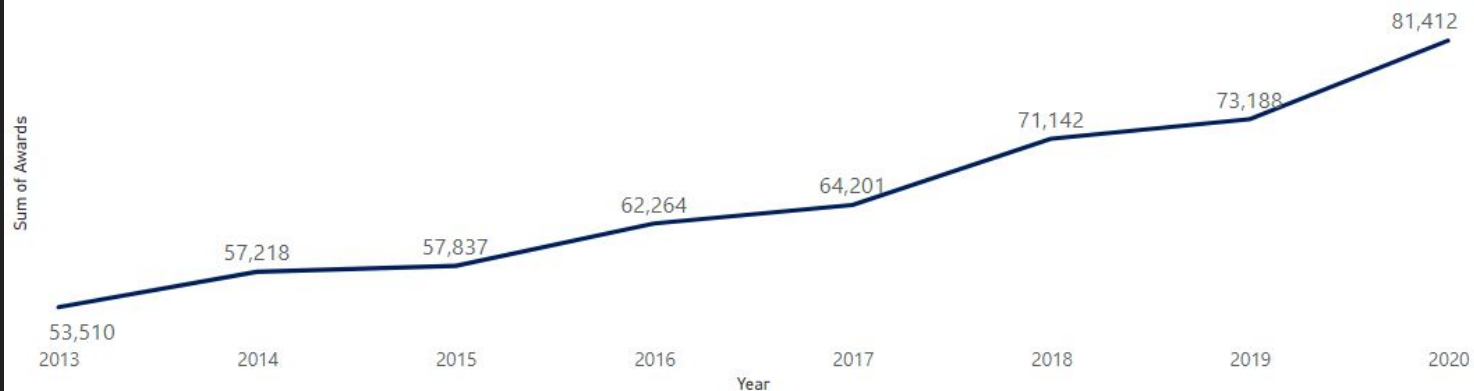
All

6-Digit CIP Code Title

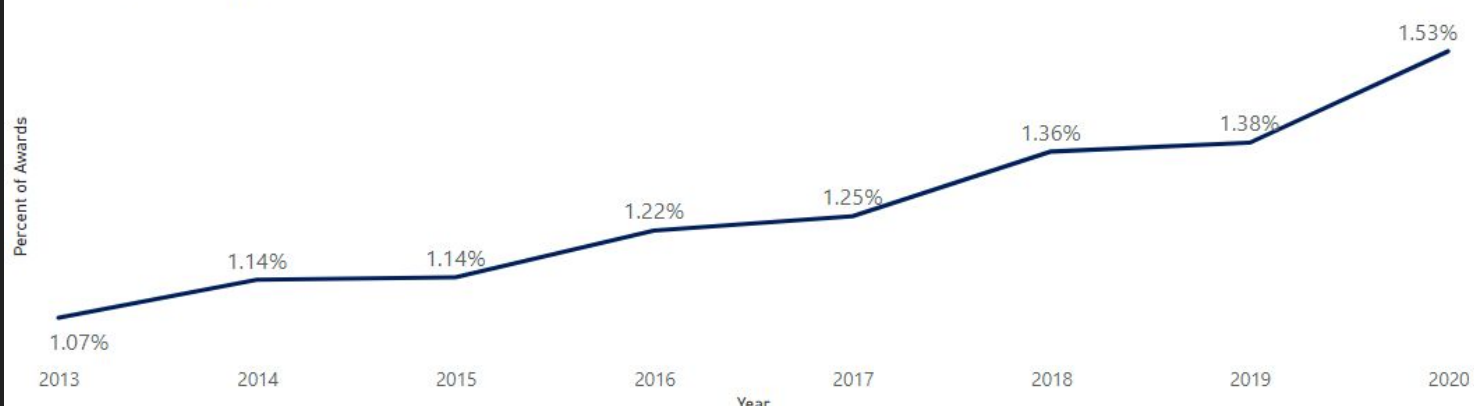
All

Clear all filters

Number of Completions



Percentage of Completions



Please select which filters should be applied to the base (denominator) of the percentage calculations. For example, to calculate percentages within the institution(s) selected, choose "Include" for Institution. To calculate across all institutions, choose "Exclude" for Institution.

Institution

- Exclude
 Include

STEM

- Exclude
 Include

Award Level

- Exclude
 Include

Carnegie Class

- Exclude
 Include

Ivy Plus, Institution

All

STEM Awards

- (Blank)
 Y

Award Level

Multiple selections

- Certificates of less than 12...
 Doctor's degree - other
 Doctor's degree - profess...
 Doctor's degree - researc...
 Master's degree
 Postbaccalaureate certific...
 Post-Master's certificate

Clear all filters

Strategic Significance

Strategic Significance

- **Resource conservation:** Taking advantage of publicly accessible data resources
- **Collective intelligence:** Leveraging crowdsourced insights in the era of big data
- **Global perspective:** Implementing an external lens in library assessment