

Understanding Enrollment Trends by Major

The Future of Arts & Sciences Part I



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Academic Affairs Forum

Managing your audio



Use Telephone

If you select the “use telephone” option, please dial in with the phone number and access code provided.

The screenshot shows a window titled "Audio" with a minus sign icon in the top-left corner. Inside, the "Audio Mode:" label is followed by two radio button options: "Use Telephone" (which is selected, indicated by a green dot) and "Use Mic & Speakers". Below these options, the text "Dial: +1 800 555 1212" and "Access Code: 141-607-114 (and [additional numbers](#) ..)" is displayed. At the bottom, a green message states "You are connected to audio". A red diagonal line is drawn across the left side of the window.

Use Microphone and Speakers

If you select the “mic & speakers” option, please be sure that your speakers/headphones are connected.

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Managing your screen



Questions:

To ask the presenter a question, please type into the question panel and press send.

Questions Panel

File View Help

Audio

Audio Mode: ☒ Use Telephone ☐ Use Mic & Speakers

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Audio PIN: 70
If you're already on the call, press #70# now.
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1 A Framework for the Future of Arts & Sciences

2 The Future of Arts & Sciences

3 Launching Financially Sustainable Academic Programs

4 Introducing EAB's Academic Program Innovation Resources

The Need for a Disciplinary Perspective

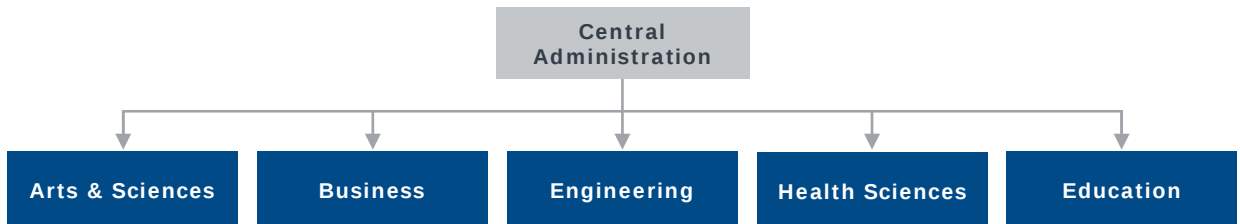
Academic Leaders Live in Different Disciplinary Worlds

“

“The university is a miscellany of schools and departments held together by a central heating system.”

Robert Maynard Hutchins
Former President of University of Chicago

”



Common Disciplinary Differences



- Enrollment
- Demographics
- Career Outcomes



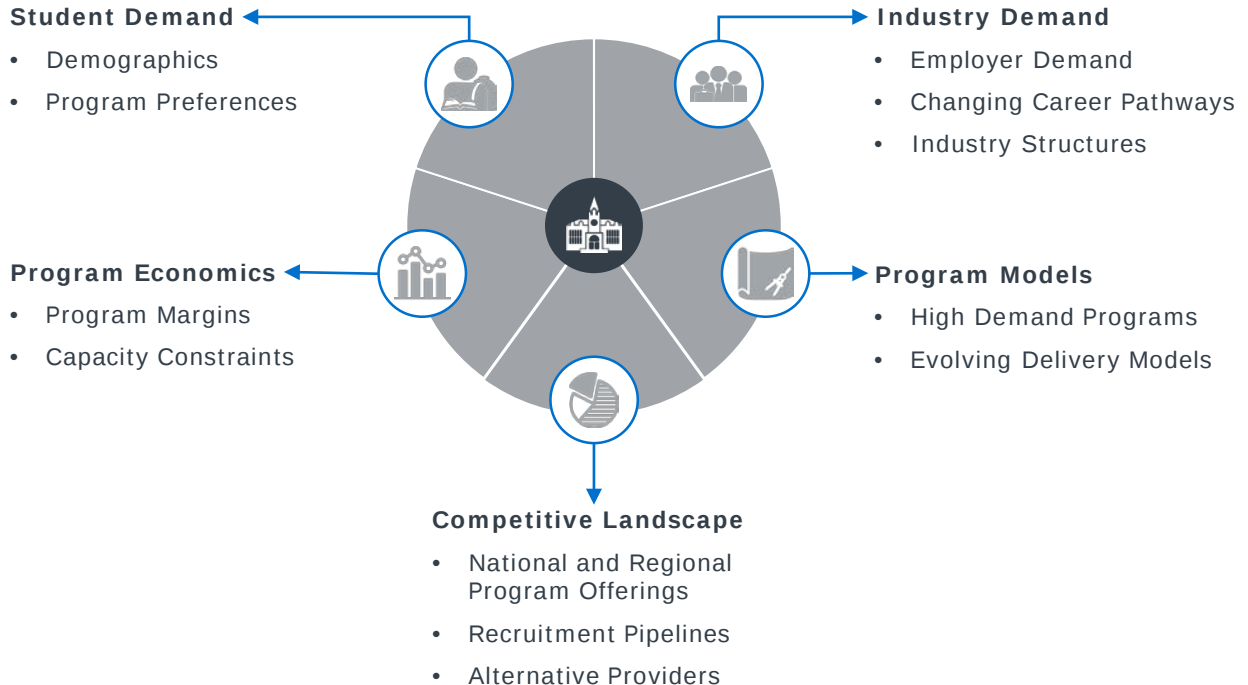
- Instructional Costs
- Class Sizes
- Growth Opportunities



- Research Productivity
- External Funding
- Accreditation

Proposing a Basic Disciplinary Framework

What Factors Shape Academic Unit Performance?



The 800 Pound Gorilla

The College of Arts & Sciences

How Arts & Sciences is Different from Other Schools

Largest Unit On-Campus



Arts & Sciences units account for more than 50% of students and faculty at most universities

Not Employer Driven



Arts & Sciences tend to have a very loose connection to employer demand

Contains Many Sub-Disciplines



Arts & Sciences is made up of a wide variety of disciplines and sub-disciplines

Teaches to All Students



40-60% of credits taught by Arts & Sciences are taught to students from other units

Varying Organizational Models



There are many ways to split up Arts & Sciences disciplines

Recognizing Multiple Models

Many Ways To Group Disciplines

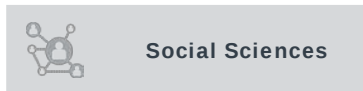
Arts & Sciences



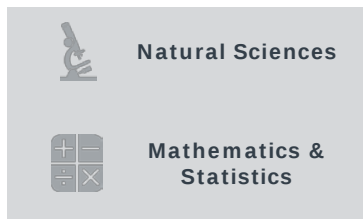
Arts & Humanities



Social Sciences



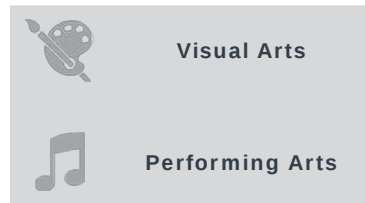
Sciences



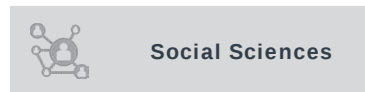
Humanities



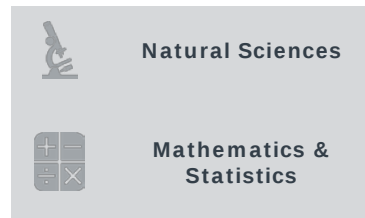
Music & Arts



Social Sciences



Sciences



1

A Framework for the Future of Arts & Sciences

2

The Future of Arts & Sciences

3

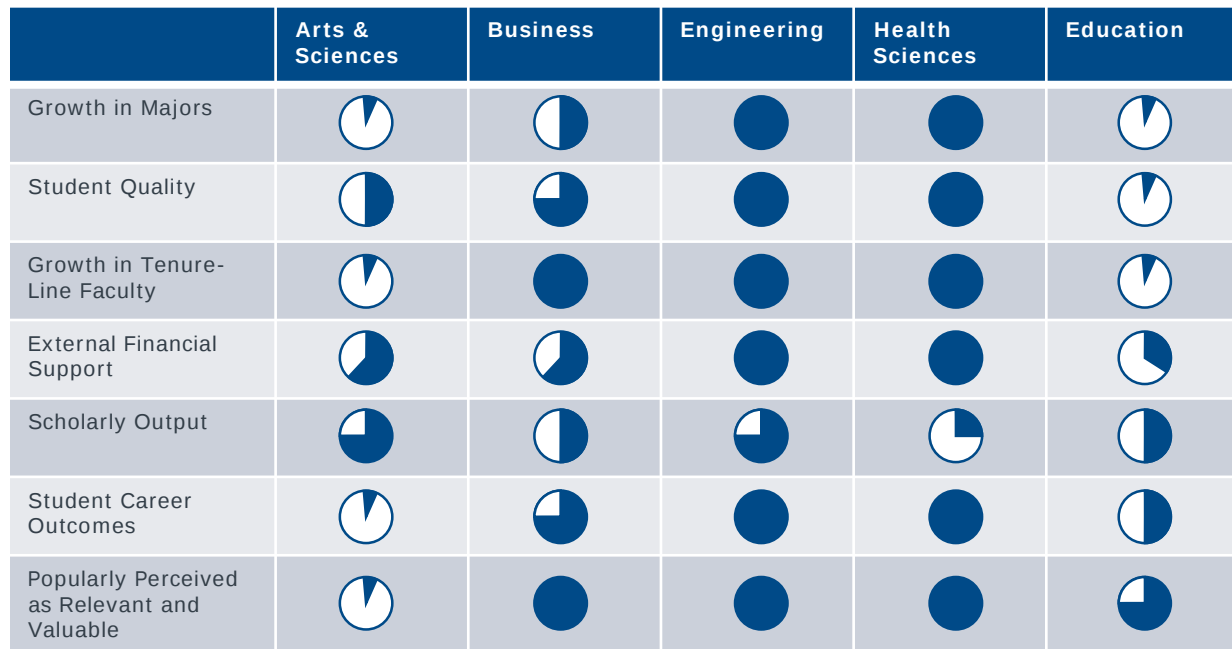
Launching Financially Sustainable Academic Programs

4

Introducing EAB's Academic Program Innovation Resources

Beyond Academic Vital Signs

How Do You Measure the Health of an Entire College?



Focusing on the “Liberal” in Liberal Arts

A New Low in the Public Perception of the Value of Liberal Arts

58% Of Republicans believe higher education is having a negative impact on the U.S.

“

The Political Challenge

“Find entire parts of your campus ... that don't need to be there... [that are] not helping to produce that 21st-century educated work force... If you're studying interpretive dance, God bless you, but there's not a lot of jobs right now in America looking for people with that as a skill set.”

Kentucky Governor Matt Bevin

BA East Asian Studies, Washington and Lee University

”

“

The Branding Challenge

The term "liberal arts" no longer works as an effective means of communicating one of higher education's most precious assets... Putting the words liberal and arts together is a branding disaster, and the most effective way to save or defend the liberal arts may be to change what we call them.

Brandon Busteed

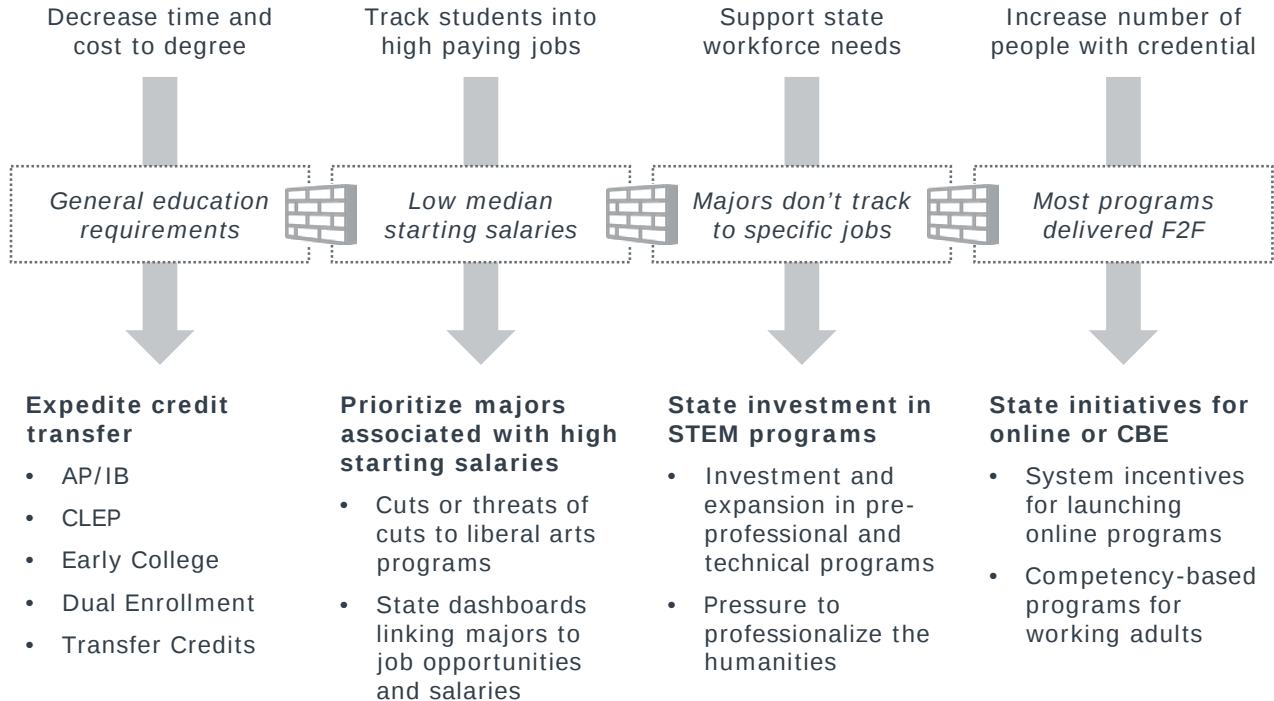
Executive Director of Education and Workforce Development, Gallup

”

The Liberal Arts Obstacle

A Luxury Many Seem to Think We Can Longer Afford

Public Policy Goals:

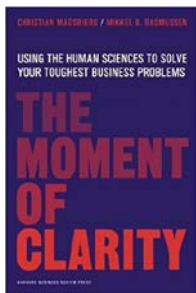


A Faustian Bargain?

Rebranding the Liberal Arts as the Key to Entrepreneurial Success

The Moment of Clarity (2014)

Using the Human Sciences to Solve Your Toughest Business Problems



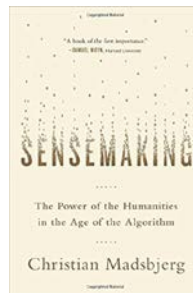
The Fuzzy and the Techie (2016)

Why the Liberal Arts Will Rule the Digital World



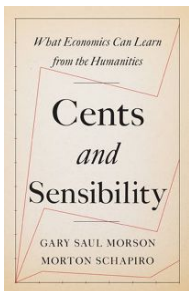
Sensemaking (2017)

The Power of the Humanities in the Age of the Algorithm



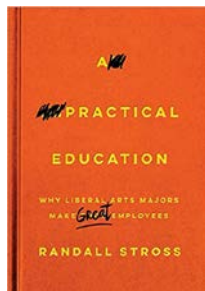
Cents and Sensibility (2017)

What Economics Can Learn from the Humanities



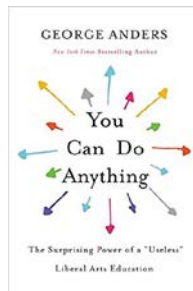
A Practical Education (2017)

Why Liberal Arts Majors Make Great Employees



You Can Do Anything (2017)

The Surprising Power of a "Useless" Liberal Arts Education



From Socrates to F.W. Taylor

Shifting from Politico-Philosophical Questions to Practical and Economic Ones

The Typical Conversation



Clarifying and Communicating the Value of the Liberal Arts

- How do the liberal arts contribute to leading a good life and building a just society?
- How can we help students and parents understand the value of a liberal education?
- How do we convince employers of the practicality of a liberal arts education?
- How do we defend investments in learning and scholarship “for its own sake”?



Today's Conversation

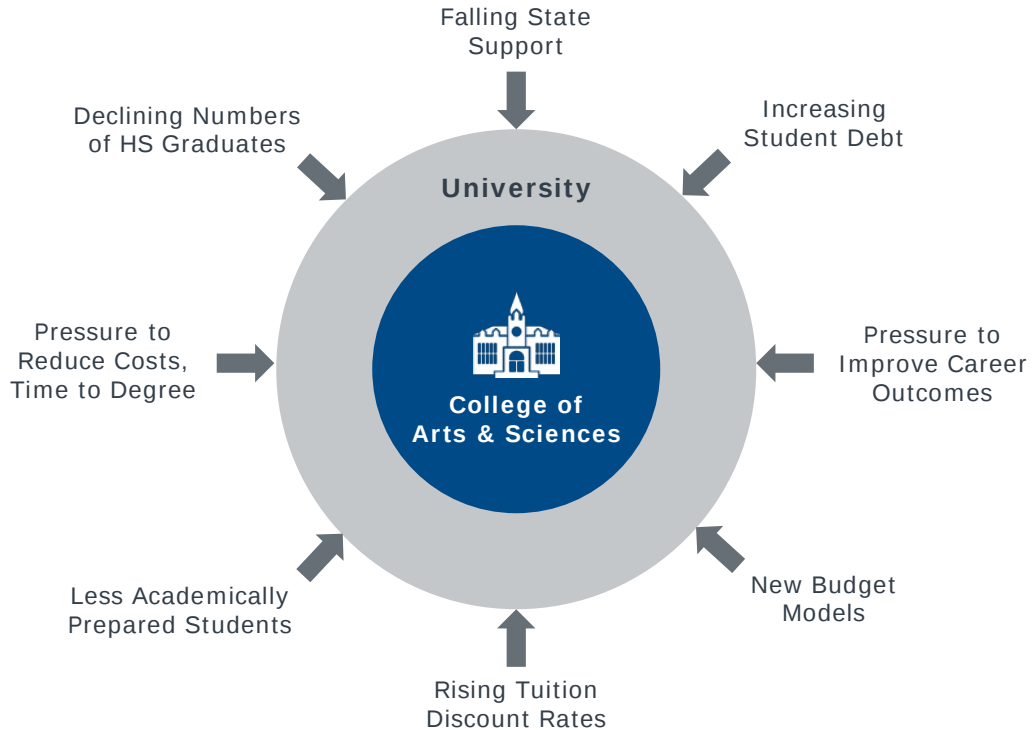


Enhancing the Economic and Institutional Viability of the Liberal Arts

- What factors are driving enrollment changes in liberal arts departments?
- How are enrollment changes impacting college and university finances?
- How can we improve the career outcomes of Arts & Sciences graduates?
- How can we improve the financial sustainability of the liberal arts in order to preserve them?

The Big Picture

Challenges for Arts & Sciences Happening in a Broader Context of Change



A Sense of Urgency

Budget Challenges Chip Away at the Liberal Arts



Reorganizing to Prepare for Performance-Based Funding

- College of Arts & Sciences split into two colleges to prepare for PBF metrics
- French, theatre, theatre teaching, comparative humanities eliminated as part of budget cuts



Layoffs Lead to Program Elimination

- \$3M budget shortfall led 18 faculty and staff, two contract employees to be laid off
- After the two faculty members who taught political science were laid off, the major was eliminated



Seeking Alternative Revenue Sources

- \$10M deficit in College of Arts & Sciences partly driven by declining enrollments/SCH
- Budget cuts, expanding online and STEM-focused offerings in Arts & Sciences



Unintended Consequences of Gen Ed Overhaul

- More flexible gen ed program rolled out leading to less exposure to liberal arts
- English department sees 40% decline in majors in a little over three years



Philosophy on the Chopping Block

- State budget cuts lead to cost cutting
- Philosophy, religious studies, women's studies, African-American studies majors cut due to low- or declining enrollments



The Struggle of Modern Languages

- Declining enrollment led to impending deficit
- Cut several low-enrollment majors and 5% workforce, expanding pre-professional offerings

Source: Seltzer R, "The Philosophy of What Makes a University," IHE, 2016; Flaherty C, "Where have all the English Majors gone?" IHE, 2015; Wilson R, "What Happens When Entire Departments Get the Ax," The Chronicle, 2009; Olson G, "Why Universities Reorganize," The Chronicle, 2010; Barker R, "Eku cuts French, theatre programs," Richmond Register, 2016; Day Z, "Eku restructures with budget cuts," Eastern Progress, 2016; Perez E, "Wisconsin Lutheran College plans layoffs," Journal Sentinel, 2009.

The Key Drivers of Arts & Sciences Performance



Trends by Major



Disciplinary Trends
Institutional Variation
Demographic Preferences



Career Outcomes



Placement and Salary
Occupational Distribution
In-Demand Skills



Course Enrollments



Majors vs. Non-Majors
General Education
Transfer Credits



The Economics of Arts & Sciences

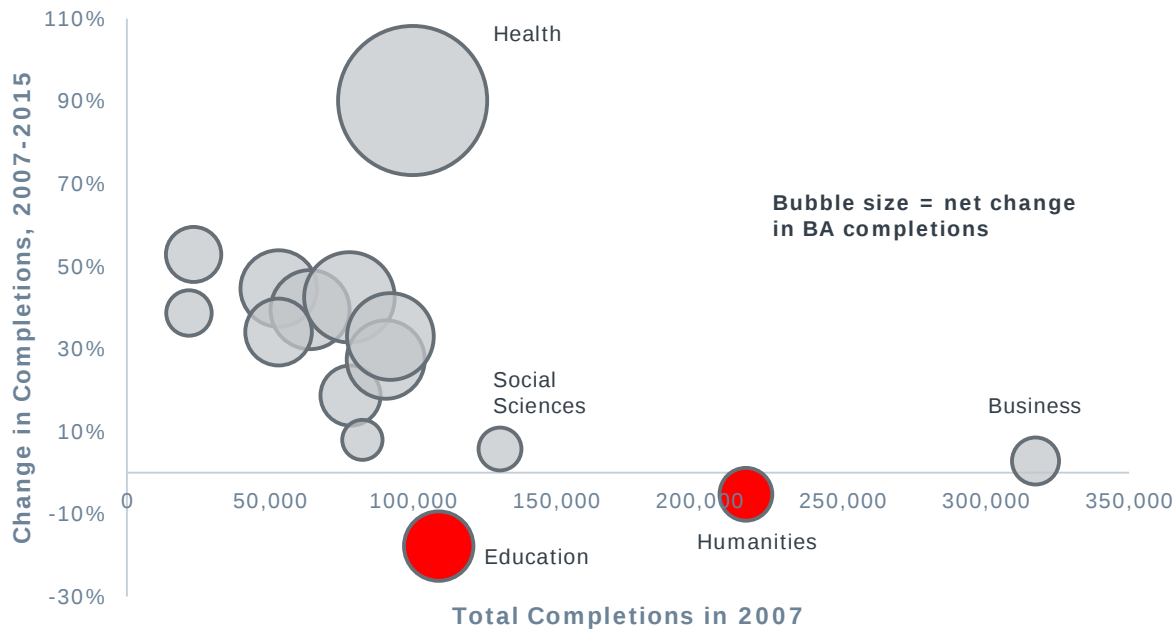


Instructional Costs
Research Costs
Cross-Subsidies

The Great Migration

Largest Major Categories Slowing or Declining While Health Accelerates

Total BA Completions and Percentage Change by Major Group, 2007-2015



Understanding Our Analysis

IPEDS Degree Completion Data

▶ DATA SOURCE

NCES Degree Completions

- Degree completions at all Title IV institutions including institution, discipline, gender, race/ethnicity of students
- Download complete data files at <https://nces.ed.gov/ipeds/datacenter/DataFiles.aspx>
- Or build custom tables at <https://ncesdata.nsf.gov/webcaspar/>

▶ METHODOLOGY

Selecting IPEDS Fields

Degree completions at 2 and 4 digit level by Carnegie class, gender, race/ethnicity

Mapping CIP to Major Groups

We used the Georgetown Center for Education and the Workforce Major Groups to simplify analysis

Looking at Absolute Growth

Rather than focusing on percentage growth (which overemphasizes small programs), we concentrated on absolute gains in completions and share of incremental completions

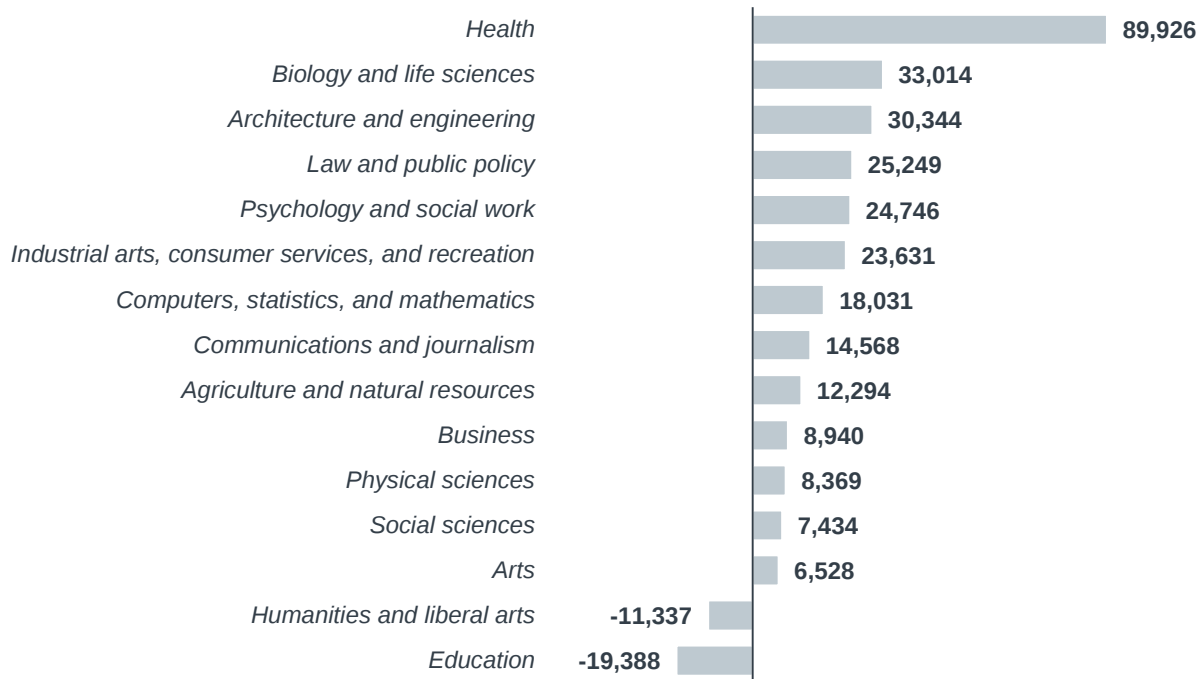
▶ DATA LIMITATIONS

- Tracks completions not total enrollments by major
- Does not link first and second majors
- Lagging indicator: Most recent completions are 2015 completions, students probably started 2009-2011
- Institutional standards may vary at the 4 and 6 digit level
- Level of aggregation is very important, choice of categories can change the results

Winners and Losers

Students Move to Health & Engineering, Away from Education & Humanities

Change in Number of BA Degree Completions by Major Group, 2007-2015, All Institutions

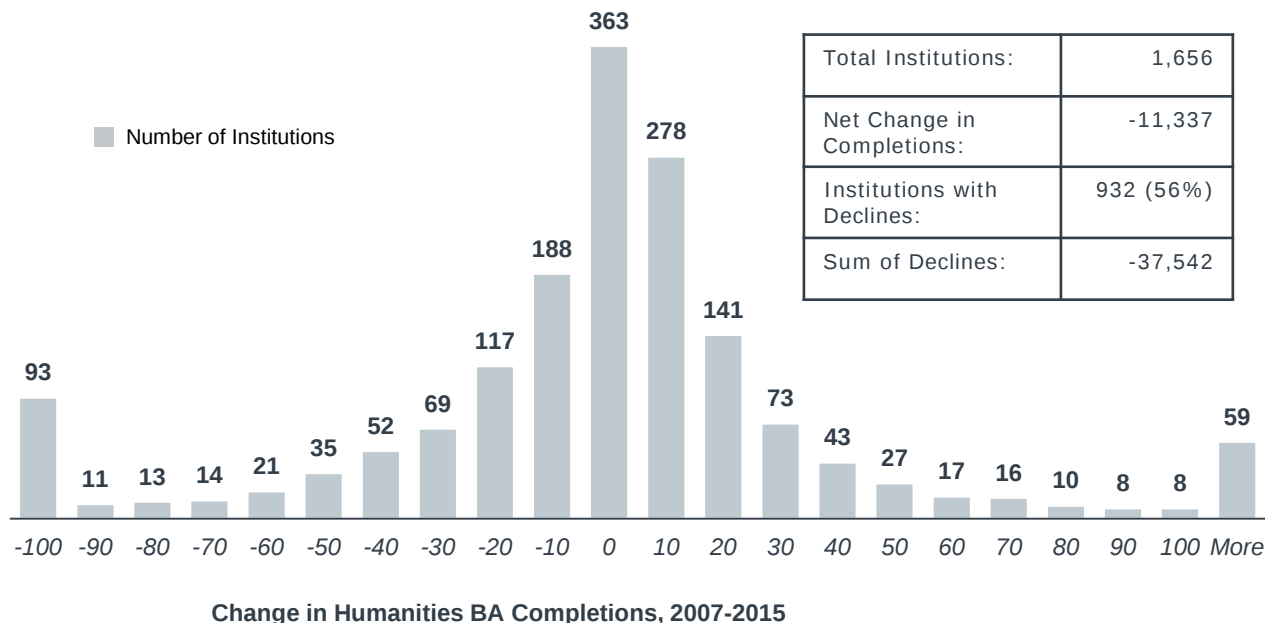


Net Changes in Completions Hide Wide Variation



Many Institutions Growing Humanities BA's, While a Few See Large Losses

Institutional Distribution of Changes in Humanities BA Completions, 2007-2015



Total Institutions:	1,656
Net Change in Completions:	-11,337
Institutions with Declines:	932 (56%)
Sum of Declines:	-37,542

Biggest Gainers and Losers

National Online Providers Made the Biggest Gains

Changes in Humanities BA Completions, 2007-2015

Top 10 Largest Increases

Liberty University	1,624
Ashford University	895
Southern New Hampshire University	668
University of North Texas, Denton	574
Moody Bible Institute	493
Mercy College	347
Northern Arizona University	347
U. Oklahoma, Norman & Health Science Center	345
Brigham Young University, Rexburg	340
Wayland Baptist University	320

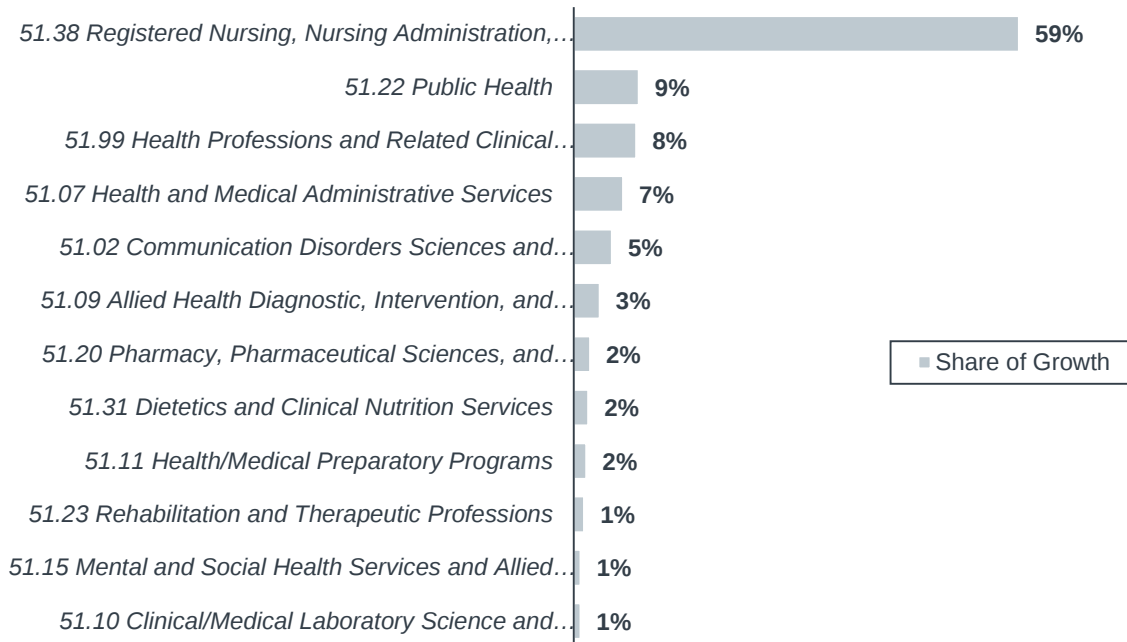
Top 10 Largest Declines

University of Washington	-669
Fort Hays State University	-627
Excelsior College	-527
University of Phoenix	-475
San Diego State University	-463
California State University, Long Beach	-459
SUNY, University Buffalo, Buffalo	-445
California State University, Northridge	-386
Louisiana State University, Baton Rouge	-372
University of St. Francis, Joliet	-368

It's All About the Nurses

Nursing Responsible for Vast Majority of Incremental Health Completions

Share of Incremental Health Sciences Bachelor's Completions, 2007-2015



Just Because You Called It STEM...

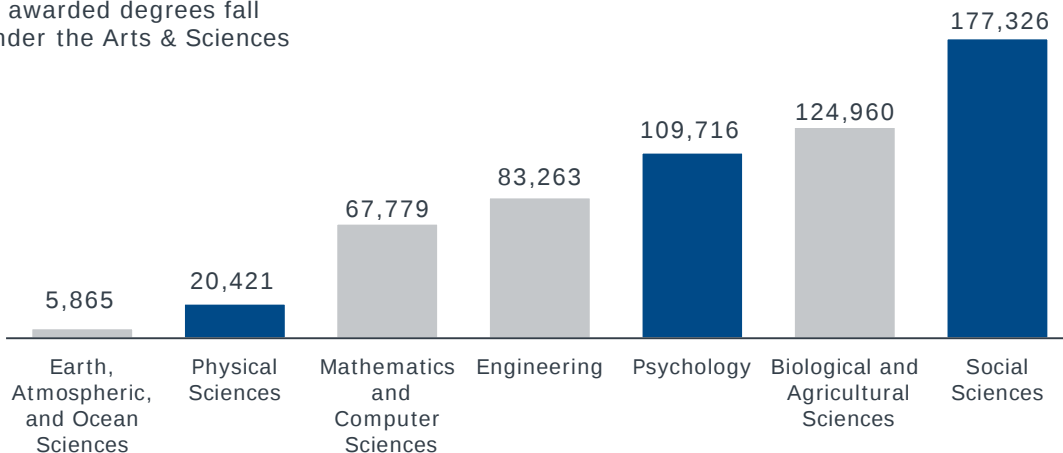
Significant Differences in Interest and Growth Across STEM Fields

Social Sciences Largest Degree Field for Science & Engineering

Bachelor's Degrees Awarded by Major Field Group 2012

>52%

of awarded degrees fall
under the Arts & Sciences

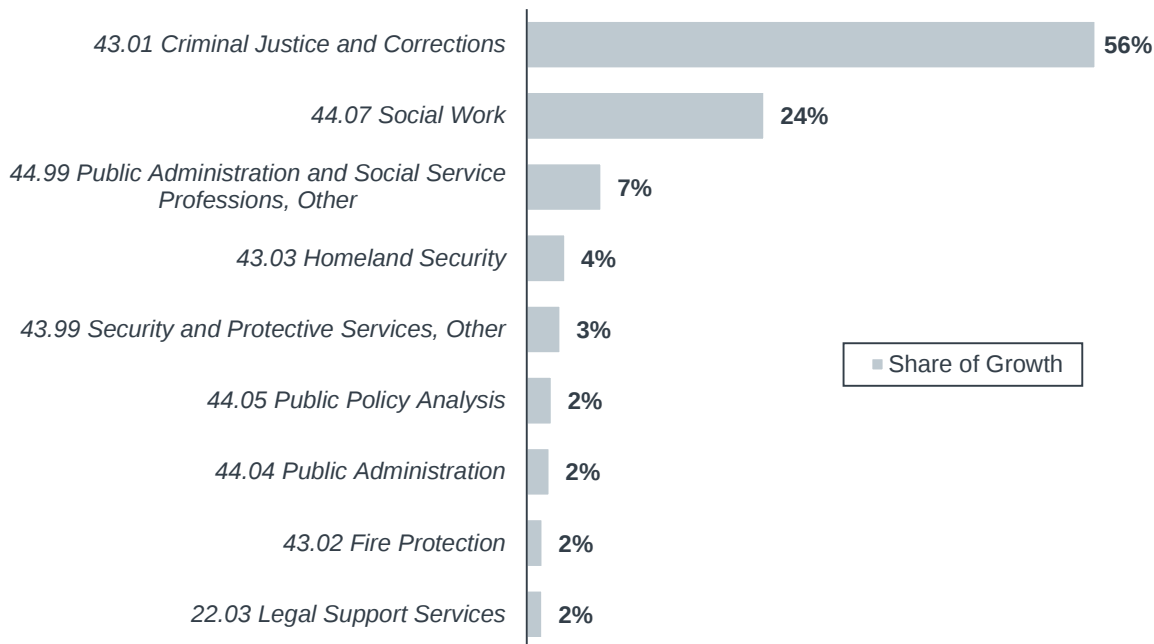


Crime and Punishment



“Law and Public Policy” Really Criminal Justice and Social Work

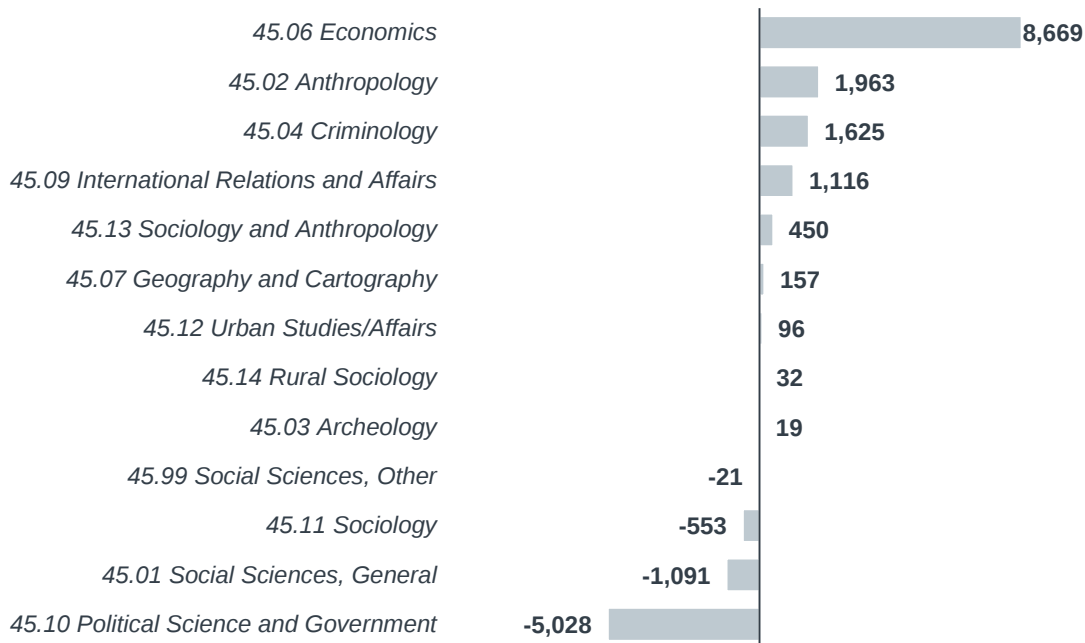
Share of Incremental Law and Public Policy Bachelor's Completions, 2007-2015



Adam Smith Wins Again

Economics, Anthro and Criminology Drive Growth in Social Sciences

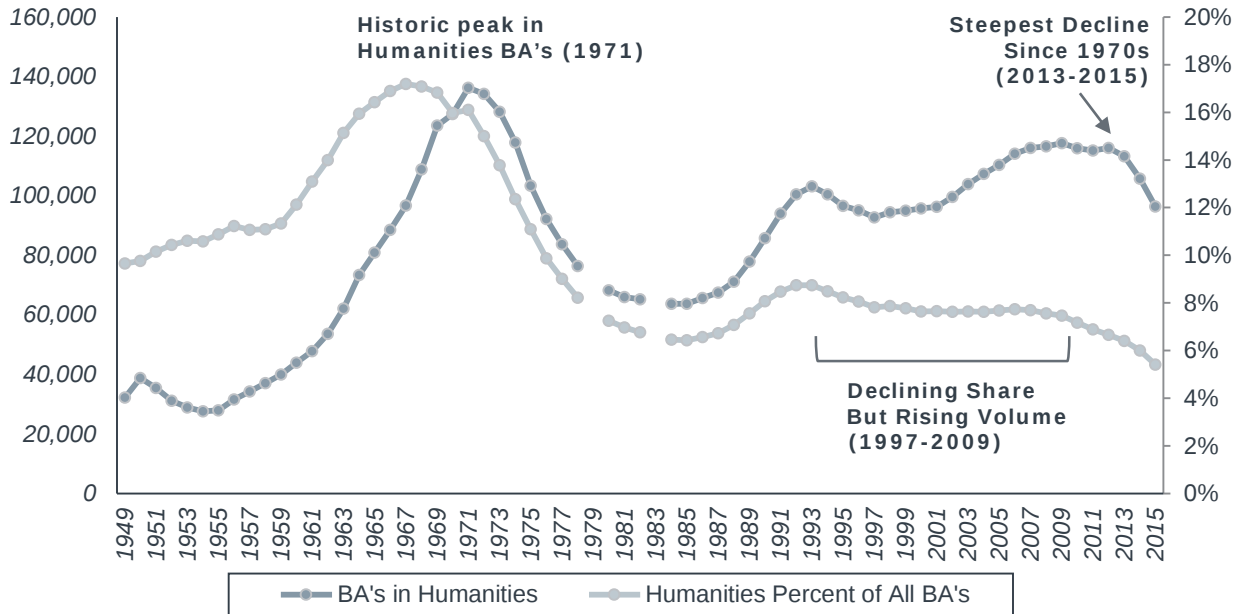
Change in Social Science Bachelor's Completions, 2007-2015



Rumors of Humanities' Demise Greatly Exaggerated

Humanities Stable for Most of the Past Decade

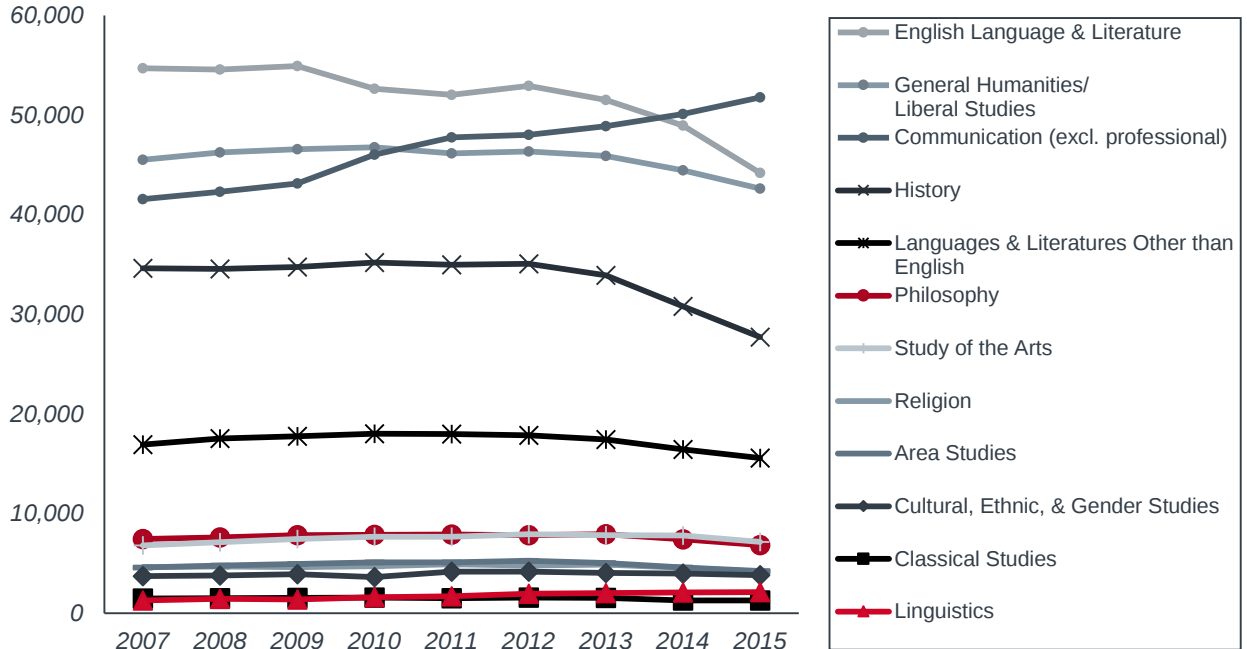
Number and Percentage of BA Degree Completions in Humanities¹, 1949-2015



1) Humanities disciplines that have been tracked by the federal government since 1949: English language and literature, history, languages and literatures other than English (including linguistics and classical studies), and philosophy.

Communications Overtakes English

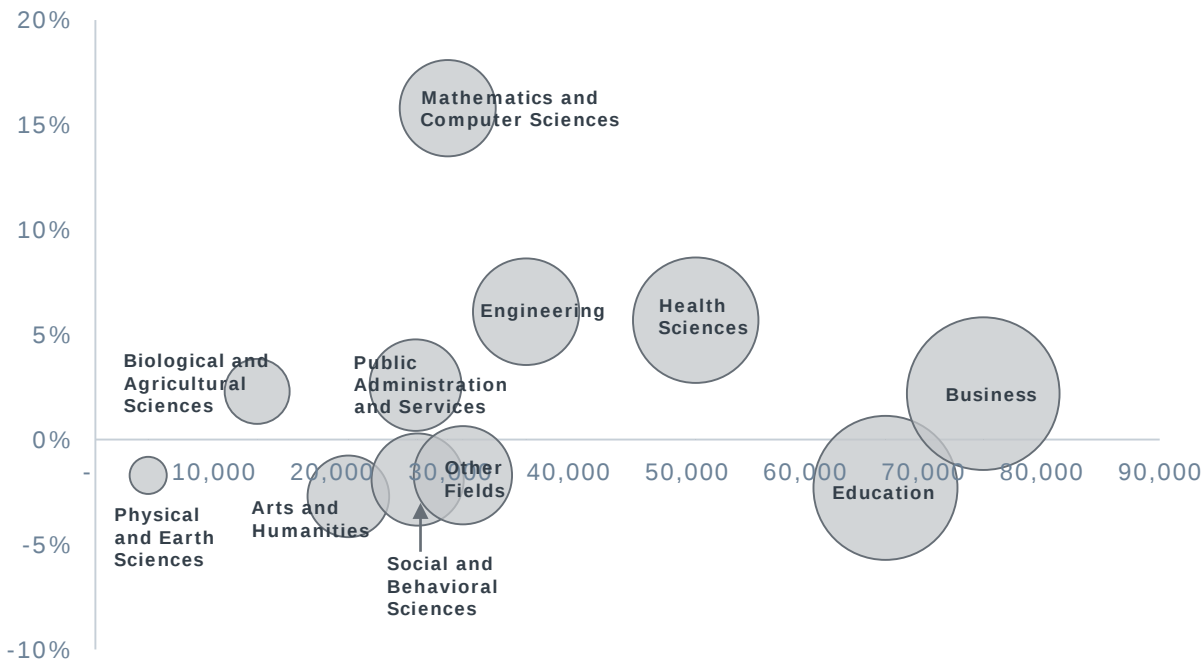
All of the Top Humanities Disciplines Declining, While Communications Rises



Masters Driven More by Professional Goals

Math and Computer Science, Engineering and Health Lead Master's Growth

First Time Enrollment in MASTER'S Degree Programs by Broad Field (2015) and Percentage Change 2010-2015

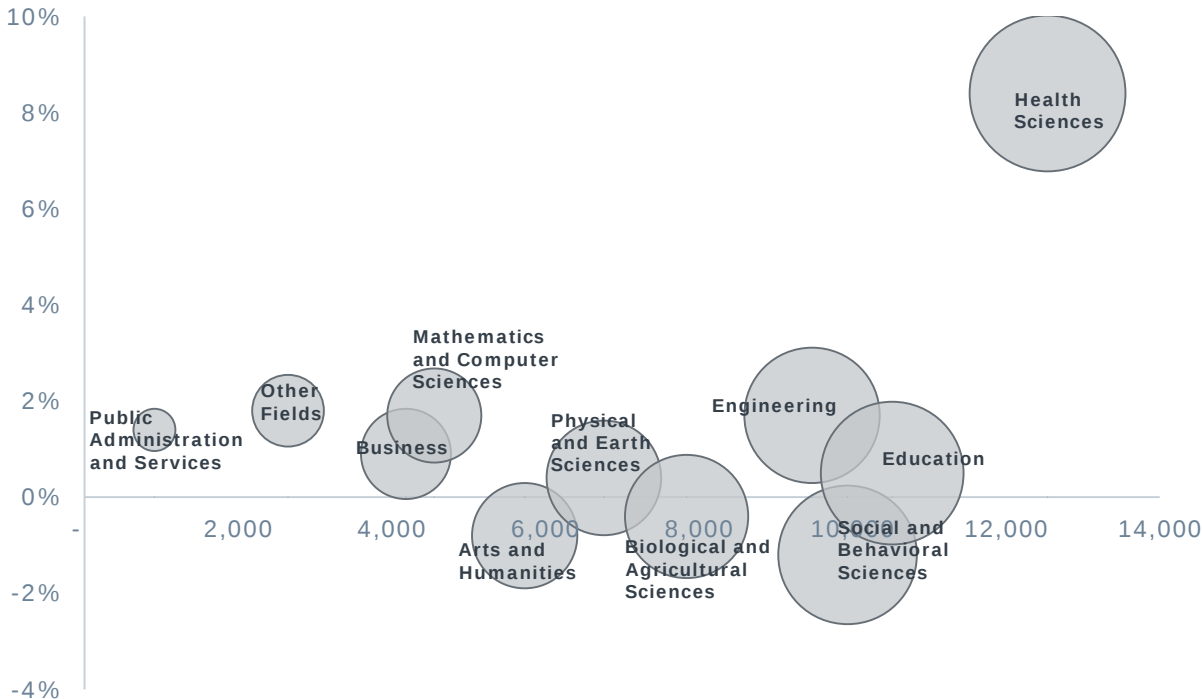


1) Masters enrollment numbers also include graduate level certificate and education specialist programs

Even Doctorates Shaped by Professional Concerns

Health Sciences Dominate New Doctoral Enrollments

First Time Enrollment in DOCTORAL Degree Programs by Broad Field (2015) and Percentage Change 2010-2015

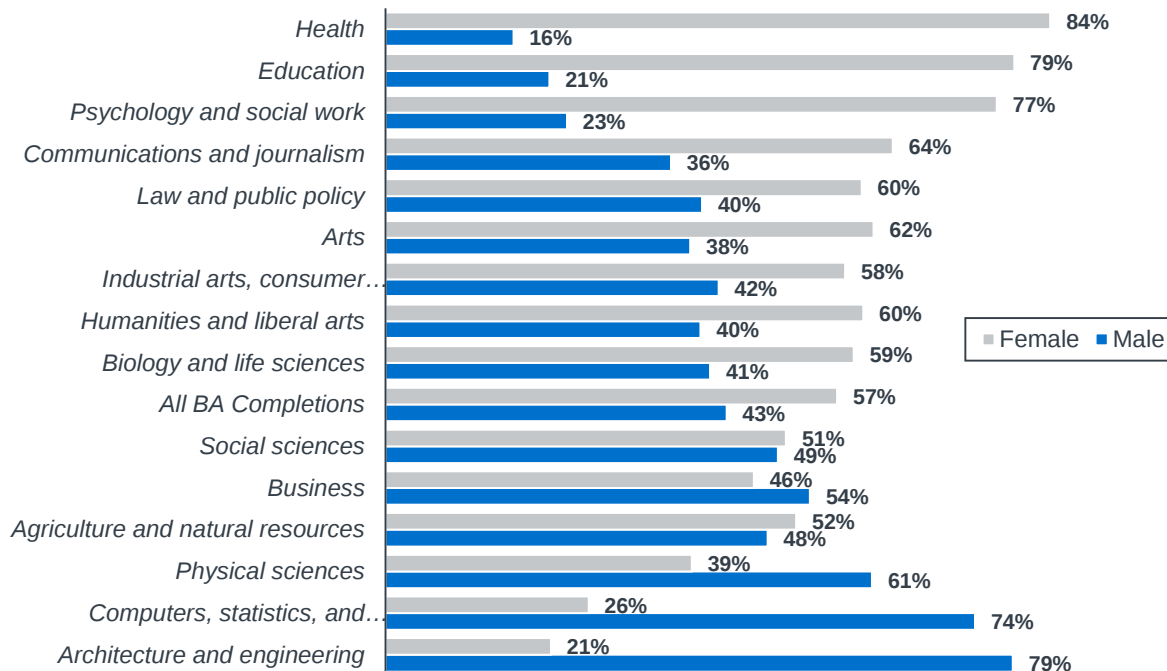


Source: Council of Graduate Schools, *Graduate Enrollment and Degrees: 2005 to 2015* (Sep 2016).

Most Majors Remain Highly Gendered

Health, Education, and Psychology Predominantly Female

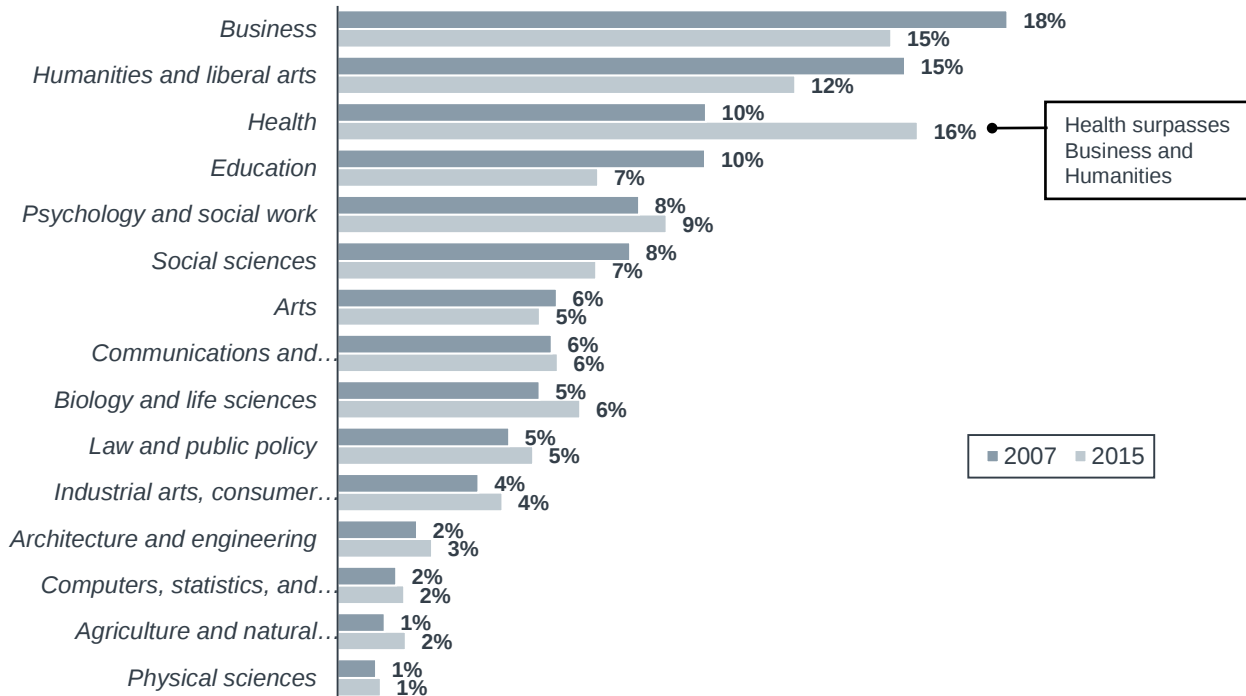
Percentage of BA Degree Completions by Gender by Major Group, 2015



Changing Degree Completion Patterns

Women Now Choosing Health Over Business and Humanities

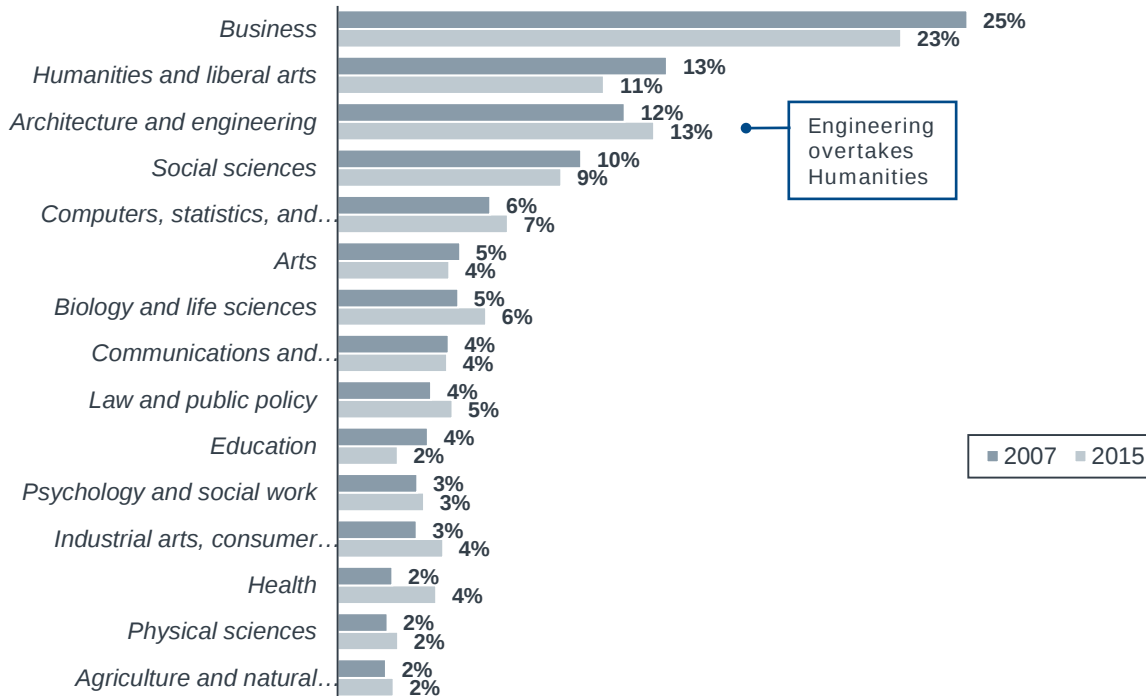
Percentage of Women's BA Degree Completion by Major Group, 2007-2015



Changing Degree Completion Patterns

Men Increasingly Choosing Engineering, Computers, and Biology

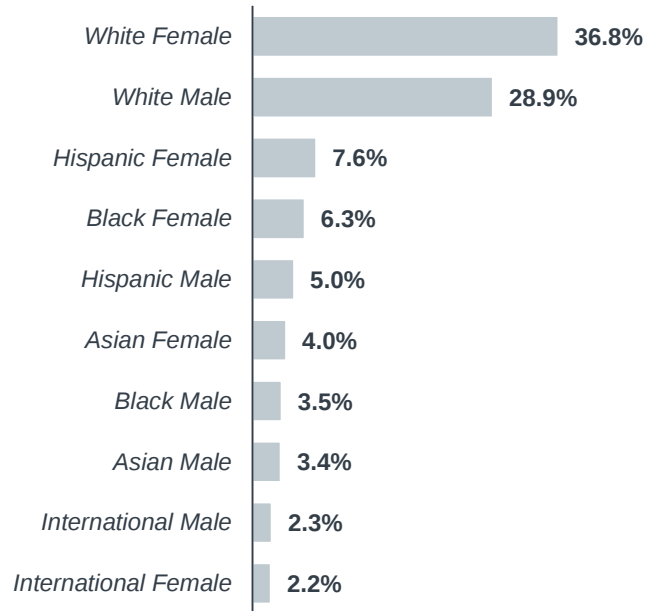
Percentage of Men's BA Degree Completion by Major Group, 2007-2015



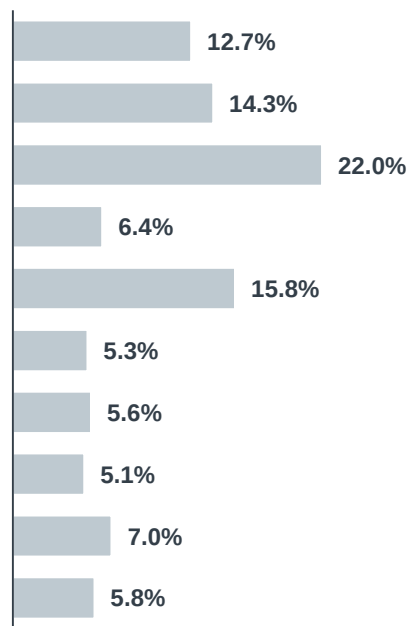
A Diversifying Group of Degree Completers

Whites Still the Largest Group, But Hispanics Driving Growth in Completions

Share of BA Completions 2015



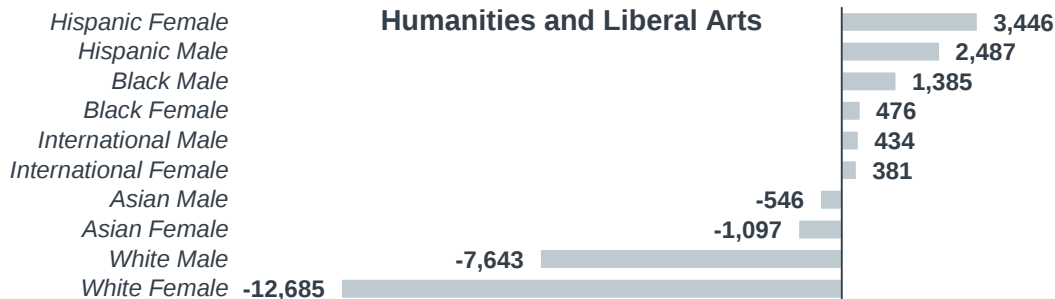
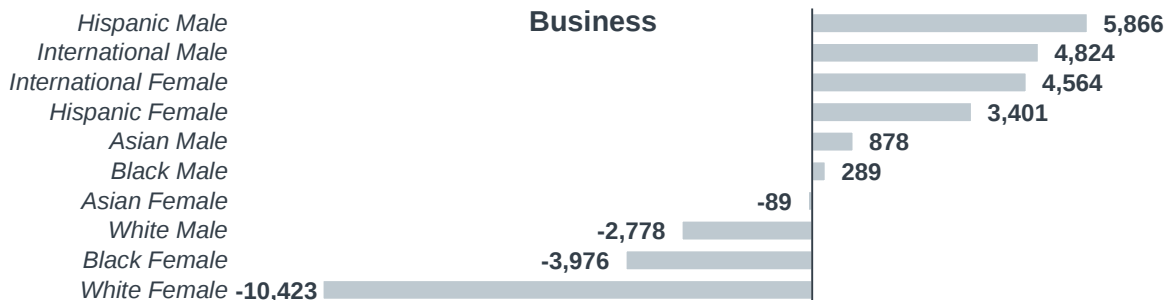
Share of Growth in BA Completions 2007-2015



The Diversity Dividend

New Populations Fuel Growth in Business and Humanities

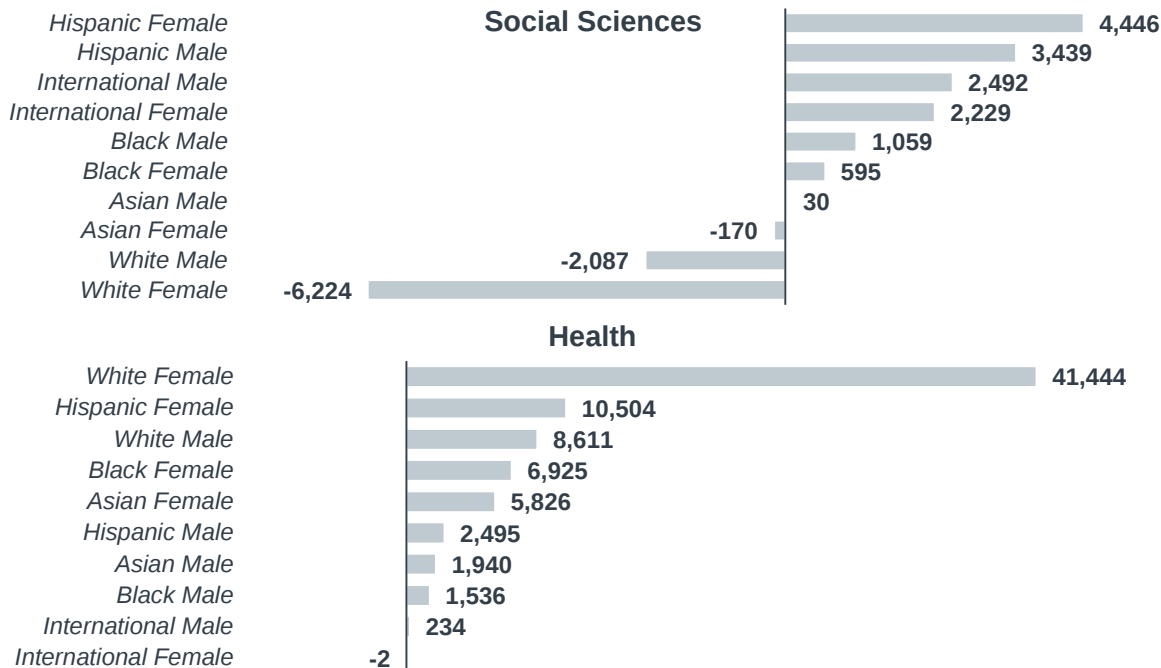
Change in BA Completions by Demographic Group, 2007-2015



The Stampede into Health Programs

White Women Shifting to Health in Larger Numbers

Change in BA Completions by Demographic Group, 2007-2015



Demographics May Not Be Destiny, But...

Significant Differences in Major Preferences for Some Groups

Share of BA Completions by Major Group Within Each Demographic Group, 2015

	White	Hispanic	Black	Asian	Inter- national	Native American
Business	17%	17%	18%	19%	33%	16%
Humanities and liberal arts	12%	12%	12%	8%	5%	15%
Health	11%	9%	12%	11%	3%	10%
Social sciences	7%	9%	9%	9%	12%	7%
Architecture and engineering	7%	6%	3%	10%	14%	5%
Education	6%	4%	4%	2%	1%	7%
Psychology and social work	6%	9%	8%	6%	3%	6%
Biology and life sciences	6%	6%	5%	14%	4%	5%
Communications....	5%	5%	6%	3%	4%	4%
Arts	5%	5%	3%	4%	6%	5%
Industrial arts....	5%	4%	5%	3%	2%	5%
Law and public policy	4%	7%	10%	2%	1%	7%
Computers, statistics...	4%	3%	3%	7%	8%	3%
Agriculture...	3%	1%	1%	1%	1%	3%
Physical sciences	2%	1%	1%	2%	2%	2%

Constrained Choices

Some of the Barriers to Major Selection

Common Barriers

- ✗ Gender stereotypes
- ✗ No exposure to certain career options
- ✗ Poor high school preparation
- ✗ Concern about career ROI
- ✗ Poor academic advising
- ✗ Discomfort with highly competitive majors
- ✗ Interpret early setbacks as sign of poor fit
- ✗ Lack of role models in the field
- ✗ Limited social network
- ✗ The need to work during college



9.6%

Percent of registered nurses that are men

19%

Percentage points more likely white women are to switch out of engineering and computer science majors than white men

20%

Difference in lifetime earnings of African Americans with Bachelor's degrees compared to Whites

Trends by Major

Key Findings



Disciplinary Trends

- Majority of Baccalaureate completions growth in Health Professions
- Absolute declines in Education and Humanities
- Growth in Business and Social Sciences has slowed
- At sub-discipline level big gainers are Nursing, Communications, Criminal Justice



Institutional Variation

- Most institutions saw small declines in humanities – large declines at a small number of institutions drove national trend
- Masters Universities saw largest swings



Demographic Preferences

- Women make up more than half of completers in all major fields except physical sciences, engineering, and computer science/ mathematics
- Changing major preferences among women driving nearly all of the increases in health sciences and decreases in business and liberal arts
- Hispanics driving a larger share of growth than any other population



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Future of Arts & Sciences Webinar Series

Revisiting the Career Outcomes Debate

Tuesday, April 24, 2018

1:00 PM ET – 1:30 PM ET

How Shifts in Course Demand Impact the Liberal Arts

Wednesday, May 9, 2018

1:00 PM ET – 1:30 PM ET

Understanding the Institutional Economics of Enrollment Trends

Wednesday, May 30, 2018

1:00 PM ET – 1:30 PM ET

Avoiding the Most Common Mistakes in New Program Planning

Wednesday, June 27, 2018

1:00 PM ET – 2:00 PM ET



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