

Measuring Alignment Between Academic Programs and the Workforce

Evaluating Southern University's Academic
Programs by Their Workforce Alignment

Gallup-Southern University and A&M College Study |

What Are the Goals?

Where are Southern University's academic offerings **aligned** with workforce demands in Louisiana and the U.S.?

Where are Southern University's academic offerings **misaligned** with workforce demands in Louisiana and the U.S.?

What insights can Southern University draw from measured alignment/misalignment?

Context – Current Issues Facing HBCUs

- Historically black colleges and universities (HBCUs) are facing declining enrollment as the changing higher education landscape has increased options for black college students.

1976-1977

35% of black graduates with bachelor's degrees came from HBCUs

2010-2011

16% of black graduates with bachelor's degrees came from HBCUs

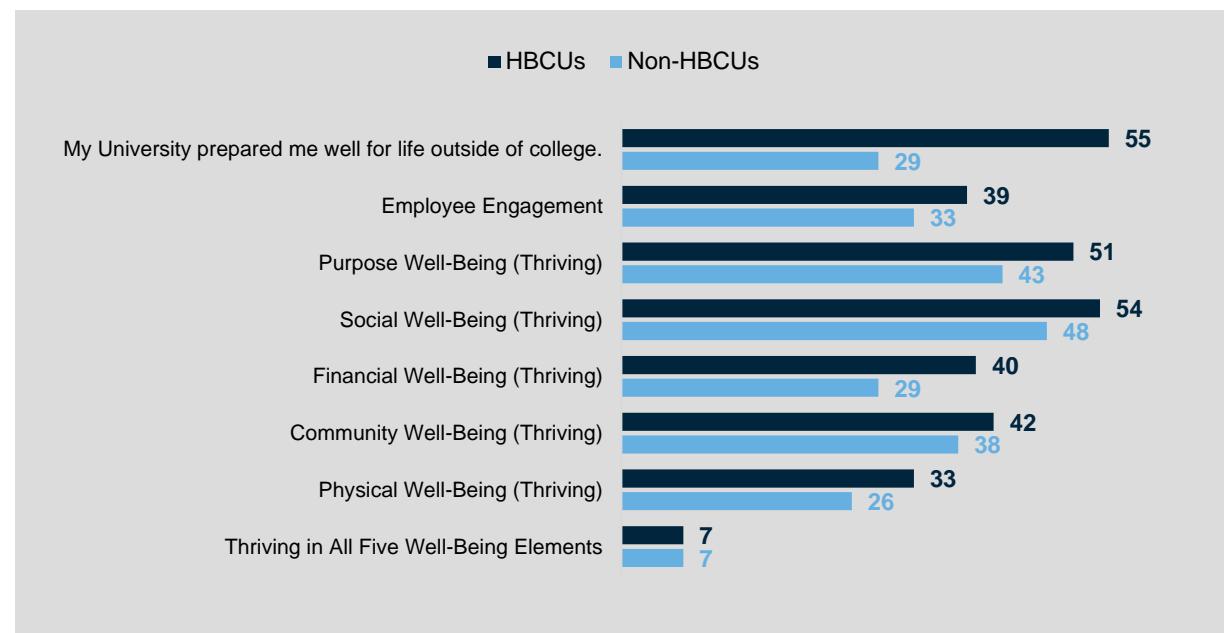
Today, about 90% of black college students attend non-HBCUs.

The HBCU Experience

- Despite these challenges, Gallup has found that HBCUs provide a high-quality experience for their graduates:
 - Gallup-Strada report (2015) → Among black graduates, HBCU alumni were more likely than those who graduated from non-HBCUs to have **received support, had experiential learning opportunities** and have higher **well-being** and **workplace engagement**.

	Black Graduates	
	HBCUs	Non-HBCUs
Support and Experiential Learning Opportunities		
My professors at My University cared about me as a person.	58%	25%
I had at least one professor at My University who made me excited about learning.	74%	62%
While attending My University, I had a mentor who encouraged me to pursue my goals and dreams.	42%	23%
Felt Support	35%	12%
While attending My University, I had an internship or job that allowed me to apply what I was learning in the classroom.	41%	31%
While attending My University, I worked on a project that took a semester or more to complete.	36%	30%
I was extremely active in extracurricular activities and organizations while attending My University.	32%	23%
Experiential Learning	13%	7%

Black Graduates Thriving in Well-Being and Employee Engagement



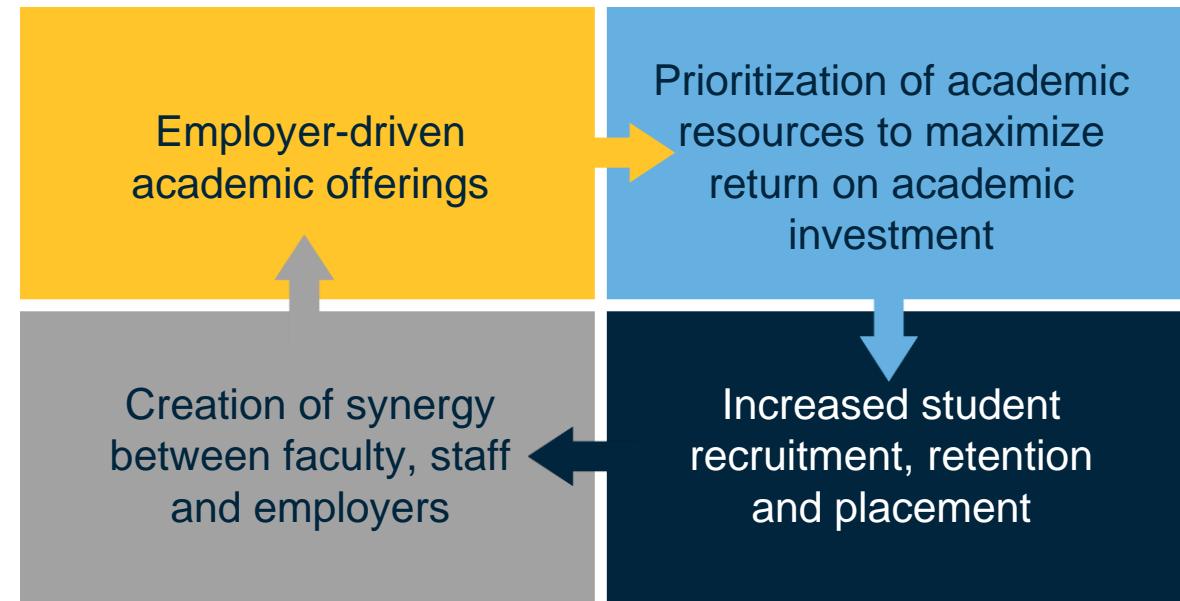
Turning High-Quality Experiences Into High-Quality Workforce Outcomes

- HBCUs already generate \$14.8 billion in economic impact annually, which would rank in the top 200 on the Fortune 500 list (2017 University of Georgia report).

How can HBCUs, including Southern University, continue to produce economic impact?

Adapting to the changing workforce landscape through academic program realignment can help Southern University translate high-quality experiences into high-quality workforce outcomes for its graduates.

Southern University and Louisiana Workforce Commission's "*Louisiana Interagency Alliance for Global Workforce Development*":



Workforce Alignment at Other HBCUs

- **In Maryland:** Non-HBCU public universities have 122 academic programs not duplicated elsewhere within the MD system — MD HBCUs only have 11 nonduplicated programs.
 - 2017 court ruling will help MD HBCUs establish more high-demand programs with competitive workforce outcomes
- **Alabama and Mississippi** have recently increased funding for their states' HBCUs — but funding is only part of the solution. To promote sustainability, HBCUs must prioritize academic alignment with the workforce.
 - **Jackson State University** (MS) used state funding to establish a School of Public Health and create new programs in the College of Science, Engineering and Technology
→ **Overall enrollment increased**

Core Issue: Disparity of high-demand academic programs at HBCUs vs. non-HBCUs puts HBCUs at a disadvantage in recruiting students, faculty and funding.

Solution: Investing in competitive academic programs promotes long-term sustainability.

Measuring Competitiveness of Institutions' Academic Programs

Academic Program Orientation of Top Institutions

Institutions	Share of Awards in STEM Fields*
Top four-year colleges by alumni earnings	78%
Top four-year colleges ranked by Forbes	52%
Southern University and A&M College	48%
Louisiana four-year colleges	40%
HBCUs	33%

- Schools whose alumni earn the highest salaries and top-ranked schools have a higher orientation of STEM degrees.
- Southern University — along with other HBCUs and other Louisiana institutions — confer far fewer STEM degrees.

Highest-Paying Majors in Louisiana for Adults Aged 30-50

Field of Study	Median Income, 2015
Mechanical engineering	\$116,000
Chemical engineering	\$98,000
Civil engineering	\$95,000
Electrical engineering	\$88,000
Finance	\$70,000

- The highest-paying majors in Louisiana are dominated by STEM degrees.

*Note: Any CIP field is considered STEM if it tends to place graduates in occupations that score one standard deviation or higher on knowledge in one or more STEM fields (i.e., biology, chemistry, physics, computer science, engineering and math). STEM is defined using O*NET knowledge data in STEM fields and linking it to likely occupations from O*NET-SOC concordance. Top colleges by alumni earnings uses 10-year median earnings from the College Scorecard database. Incomes come from the 2015 American Community Survey.

Measuring Competitiveness of Southern's Academic Programs

Degree of Disparity Between SU and Top Forbes Schools

Fields of Study	Related to Louisiana Workforce Commission 4/5 Star Jobs	Top Forbes Schools' Share of Awards	SU Share of Awards
Health professions and related programs		5.03%	21.15%
Homeland security, law enforcement, fire fighting and related protective services		0.08%	10.82%
Social sciences		13.85%	5.74%
Engineering		13.27%	5.90%
Biological and biomedical sciences		9.73%	4.43%

- Southern awards four times more degrees in health professions — which have relatively high labor market value — than top-ranked schools → **This academic orientation is a strength for Southern.**
- Southern confers less than half as many engineering degrees — which have high labor market value — as top-ranked schools → **Southern should increase investment in its engineering programs.**
- Southern confers 10 times as many degrees in protective services — which have relatively low labor market value — as top-ranked schools → **Southern could consider reallocating resources from these programs.**

Measuring Competitiveness of Southern's Academic Programs

Top Degrees at Southern and Their Labor Market Value*

 Related to Louisiana Workforce Commission 4/5 Star Jobs

Field of Study	SU Share of Awards	Labor Market Value of Degree
Registered nursing / Registered nurse	13.4%	\$60,000
Criminal justice / Safety studies	10.8%	\$52,200
Multi-/Interdisciplinary studies, other	7.4%	\$48,000

Uncommon Degrees at Southern and Their Labor Market Value*

Field of Study	SU Share of Awards	Labor Market Value of Degree
Electrical and electronics engineering	1.8%	\$90,000
Computer science	1.6%	\$78,000
Civil engineering, general	1.5%	\$90,000

Southern's most common academic programs have **lower** labor market values than many of its least common programs — many of which are in STEM fields.

*Note: IPEDS 2016; Gallup analysis of 2015 American Community Survey. Labor market value of degree is calculated by using median income for 30–50 year olds with that general bachelor's degree, using data from the 2015 American Community Survey.

Summarizing the Labor Market Value of a Degree and Defining Alignment

Gallup summarizes the value of a field of study using the following factors, divided into quartiles:

Market Value of Major	=	Occupation Growth Rate (U.S. and LA)	Change in Number of Jobs (U.S. and LA)	Occupation Salary (U.S. and LA)	Number of Job Openings (U.S. and LA)	Share of Major in U.S. Labor Force
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Defining alignment between Southern's programs and workforce demand: Alignment occurs when the market value quartile matches or is within one quartile of the share of Southern degrees.

Southern Majors in Full Alignment With Workforce Demands

Related to Louisiana Workforce Commission 4/5 Star Jobs

SU Field of Study	SU Awards Quartile	Market Value Quartile
Registered nursing / Registered nurse	4	4
Accounting	3	3
Sociology	3	3
Political science and government, general	3	3
Agriculture, general	2	2
Elementary education and teaching	1	1

- Southern awards many **nursing** degrees, which have a high labor market value. **Accounting**, **sociology** and **political science** are also relatively common degrees at Southern and have relatively high labor market values.
- Southern's **elementary education** and **agricultural** majors are uncommon and also have low labor market values. Thus, SU is matching the low labor market value of these majors by granting relatively few awards in these fields.

Southern Majors **Semi-Aligned** With Workforce Demands

Related to Louisiana Workforce Commission 4/5 Star Jobs

SU Field of Study	SU Awards Quartile	Market Value Quartile
Criminal justice / Safety studies	4	3
Multi-/Interdisciplinary studies, other	4	3
Psychology, general	4	3
Business administration and management, general	4	3
Mechanical engineering	3	4
Biology/Biological sciences, general	3	4

- Some of Southern's majors — like **criminal justice/safety studies** and **psychology** — are more popular (fourth quartile of SU awards) than their labor market value (third quartile of market value).
- Other majors in this group are slightly less common at SU than their labor market value would suggest, such as **mechanical engineering** and **biological sciences**.

Southern Majors Misaligned With Workforce Demands

Related to Louisiana Workforce Commission 4/5 Star Jobs

SU Field of Study	SU Awards Quartile	Market Value Quartile
Family and consumer sciences / Human sciences	4	2
Social work	2	4
Electrical and electronics engineering	2	4
Computer science	2	4
Civil engineering	2	4
Finance	1	3
Mathematics	1	3
Chemistry	1	3
History	1	3
Electrical, electronic and communications engineering technology / Technician	1	4

- **Family and consumer sciences/human sciences** is significantly more popular at Southern (top SU quartile) than its labor market value demands (second market value quartile).
- Several SU majors have high labor market value but represent a small share of awards at SU — including many STEM fields.

These areas represent the most actionable programs in which to invest or reallocate resources to bring SU's offerings into alignment with workforce demands.

Fields SU Does Not Offer But Have High Labor Market Values

Related to Louisiana Workforce Commission 4/5 Star Jobs

Field of Study	Market Value Quartile	Median Income, LA
Biochemistry	4	\$58,100
Chemical engineering	4	\$78,000
Pharmacy	4	\$50,000
Industrial engineering	4	\$78,000
Petroleum engineering	4	\$78,000
Naval architecture and marine engineering	4	\$78,000
Dental hygiene/hygienist	4	\$50,000
Bioengineering and biomedical engineering	4	\$78,000

- Many of these fields are related to engineering and other **STEM** fields such as **biochemistry** and **pharmacy**.
- Most proposed fields are related directly to *Louisiana Workforce Commission LA 5-star jobs* and have high median incomes and growth rates in the U.S. and Louisiana.

Ways Southern Can Build From This Research

- **This project has identified actionable ways to bring Southern University's academic offerings into greater alignment with workforce demands:**
 - Boosting investment in STEM programs in particular could help SU graduates compete for high-value jobs both in Louisiana and the U.S.
 - Several competitive majors currently exist at SU, but many suffer from low completion rates and their students earn low GPAs, despite attracting high-GPA high school students. This suggests that a review of these majors could identify valuable ways to boost completion and performance.

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