



EAB

Academic Performance Solutions

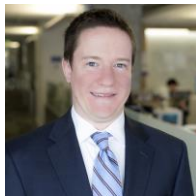
Optimizing Instructional Workload by Utilizing Benchmarks

March 7, 2019

Today's Presentation



Today's Presenter



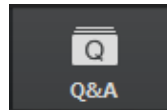
Matthew Hagerty

Director

Navigating Zoom

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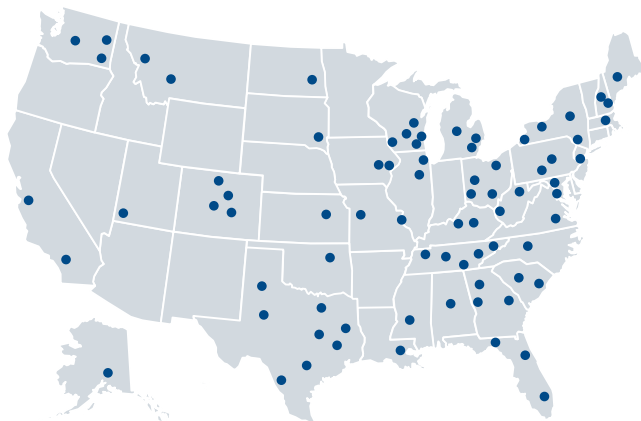
A Growing Collaborative of Like-Minded Institutions

Academic Performance Solutions



3

Partnering with Institutions Nationwide



Our Services



APS Platform

*College and
Department-Level
Performance Data*



Discipline-Level Benchmarks

*Unique Cost, Enrollment
Demand, and Faculty
Utilization Metrics*



Networking Opportunities

*Annual APS Summit
in Washington, D.C.
to share latest
insights and research*

Defining Optimal Instructional Capacity...

...To Set Realistic Goals Based on Benchmarks

Maximum Theoretical Capacity

SCH created if...



All students have a
100% completion rate
in every course



All sections have a
fill rate of 100%



Tenure/tenure-track faculty teach a
minimum of **6 sections** and non-tenure
track faculty a minimum of **3 sections**

Optimal Capacity

SCH created if...



All students earn the **75th percentile completion rate²** of their institution's cohort in every course



All sections have a
minimum **fill rate of 85%**



Tenured/tenure-track and non-tenured faculty each teach at least the **75th percentile course load¹** of their institution's cohort

1) 75th percentile faculty course load: High-Research Comprehensives (Tenured/tenure-track: 5; Non-tenure track: 3), Regional Comprehensives (Tenured/tenure-track: 7, Non-tenure track: 5), Small Teaching-Focused (Tenured/tenure-track: 7, Non-tenure track: 4), and Very Large Research (Tenured/tenure-track: 4, Non-tenure track: 3).

2) 75th percentile completion rates: High-Research Comprehensives (93%), Regional Comprehensives (93%), Small Teaching-Focused (97%), and Very Large Research (94%).

Three Drivers of Instructional Costs

The Difference Between Optimal and Actual Capacity

22%

Unproductive Credits

Credits are lost due to failing grades and student withdrawals from courses



Three Approaches to Closing the Gap

1 Improve course completion rates

25%

Underfilled Sections

Institutions commonly offer more sections than needed to meet student demand



2 Right-size section offerings

52%

Instructional Load

Faculty often teach less than the optimal course load



3 Balance faculty course loads

APS Insights Shed Light on Workload Questions

Today's Roadmap

?

Should we adjust workload expectations for full-time faculty?

1



**Contextualize
Workload Expectations
with Benchmarks**

?

Are we fully utilizing existing capacity?

2



**Adjust Workload
Across Instructor
Types**

?

Do we have the right instructors teaching the right students?

3



**Match Instructor
Capacity to
Curriculum Demand**

1

Contextualize Workload Expectations with Benchmarks

2

Adjust Workload Across Instructor Types

3

Match Instructor Capacity to Curriculum Demand

4

Activate the Data Through Informed Decisions

Standard Loads Don't Reflect Reality

67%

Members set full-time
standard loads of 9 or 12
credits per term



2.6

Average difference
(credit hours taught) between
standard loads and actual
median teaching loads for
tenured and tenure track staff¹

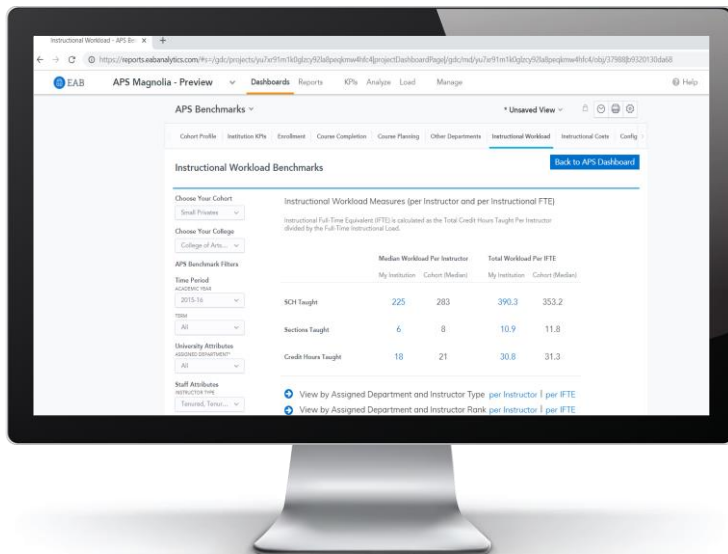
"Standard" Is Subjective



Departmental **goals**, **mission**, and student **demand** should be used to determine a standard teaching load and balance against research, advising and other administrative tasks.

1) Includes only tenured and tenure track instructors teaching courses with enrollment caps set at greater than zero and with greater than zero attempted student credit hours; fall 2017. Averages weighted by total attempted student credit hours at the institution.

APS Benchmarks Make It Easier to Gauge Loads



Three Ways to Measure Teaching Activity in APS

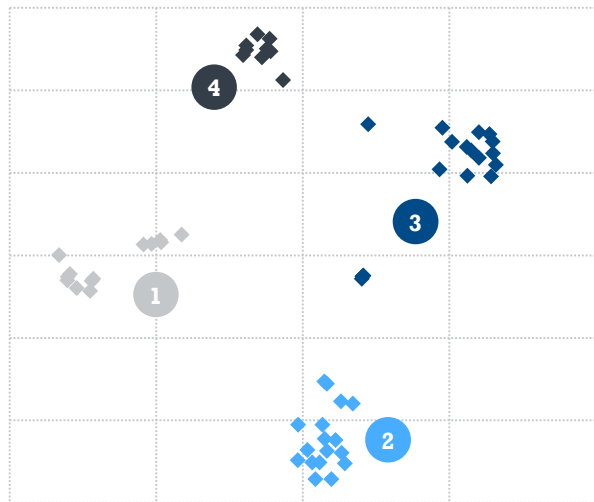
- 1 SCH Taught
- 2 Sections Taught
- 3 Credit Hours Taught

Institutions Drawn into Peer Groups for Benchmarking



Four Cohorts Identified Using Cluster Analysis

Variables Included: Sector, Carnegie Classification, Undergraduate Enrollment, and Expenditures



1 Small, Private (n=13)

- Median research expenditures: \$0
- Median undergraduate enrollment: 3,500

2 Regional Comprehensive (n=17)

- Median research expenditures: \$2.8M
- Median undergraduate enrollment: 9,500

3 High-Research Comprehensive (n=18)

- Median research expenditures: \$28M
- Median undergraduate enrollment: 11,700

4 Very Large Research (n=9)

- Median research expenditures: \$178M
- Median undergraduate enrollment: 23,400

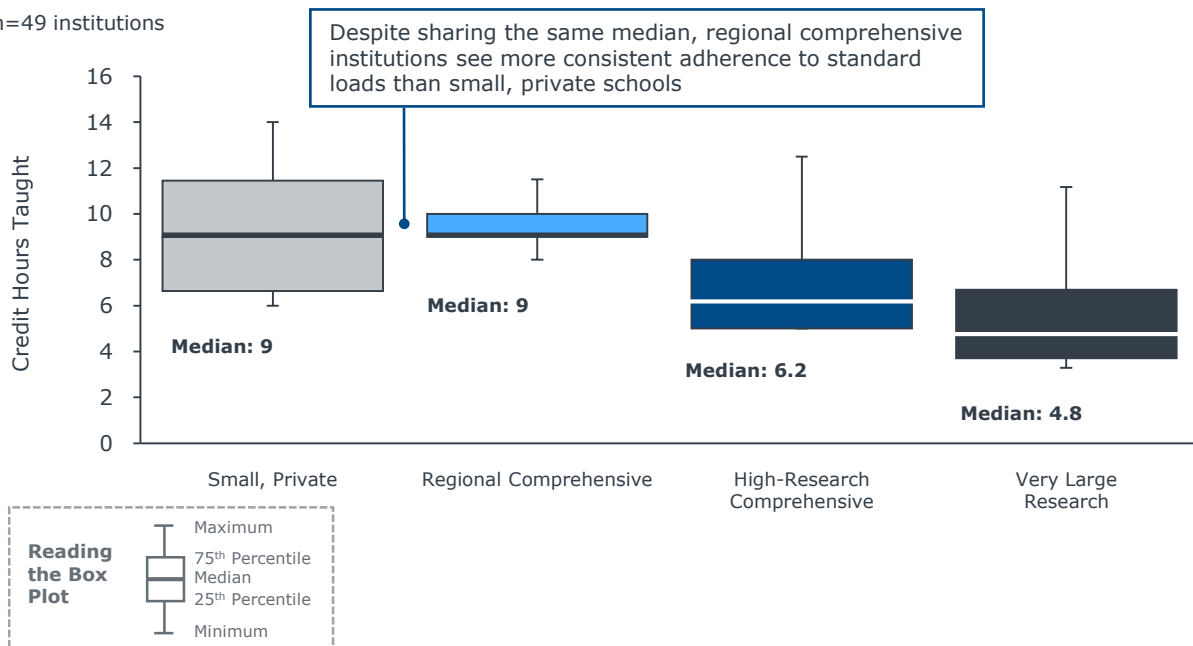
Variability Reflects Mission-Related Expectations



Distribution of Credit Hours Taught by Tenured and Tenure Track Faculty¹

Fall 2017

n=49 institutions



¹ Includes only tenured and tenure track instructors teaching courses with enrollment caps set at greater than zero and with greater than zero attempted student credit hours; fall 2017. Medians weighted by total attempted student credit hours at the institution.

Measure Workload Beyond Credit Hours Taught

Couple with Measures of Student Demand

Student Credit Hours Taught

Measure student credit hours taught to avoid misalignment between capacity and demand



SCH Taught by Tenured and Tenure Track Faculty¹

Fall 2017

n=49 institutions

	Median Credit Hours Taught	Median Section Size	Median SCH Taught
Small, Private	9	17.6	139
Regional Comprehensive	9	18.2	178
High-Research Comprehensive	6.2	16	100
Very Large Research	4.8	17	93

Both credit hours taught and section size inflect SCH and can be adjusted to help match capacity to demand

1) Includes only tenured and tenure track instructors teaching courses with enrollment caps set at greater than zero and with greater than zero attempted student credit hours; section size calculation excludes individual instruction; fall 2017. Medians weighted by total attempted student credit hours at the institution.

Use Department and Cohort Filters to Trim Variability

Ranges of Median SCH Taught by Tenured and Tenure Track Faculty¹

Fall 2017

n=49 institutions

All Departments, All Cohorts

14–429 Median SCH/Instructor

Δ 415

Psychology Department, All Cohorts

59–290

Δ 231

Even within a single department, there is significant variability among institutions

Psychology Department by Cohort

125–234

Δ 109

Small, Private

176–290

Δ 114

Regional Comprehensive

107–166

Δ 59

High-Research Comprehensive

59–100

Δ 41

Very Large Research

Drilling down by both department and cohort paints the clearest picture

1) Includes only tenured and tenure track instructors teaching courses with enrollment caps set at greater than zero and with greater than zero attempted student credit hours; fall 2017. Interquartile range (25th – 75th percentile) displayed. Distribution of department medians weighted by total attempted student credit hours at the department.



How Do You Respond When Below the Benchmark?

**Resource constrained?
Look for opportunities to
reallocate resources.**

Psychology at a Small, Private Institution

Research Expenditures: Institution = \$0; Cohort Median = \$0
Undergraduate Enrollment: Institution = 3K; Cohort Median = 3.5K

I Below the Benchmark for SCH Taught¹

Median SCH Taught, Tenured and Tenure Track Instructors

143

Sample Institution

184

APS Benchmark (weighted average)

II Below the Benchmark for Credit Hours Taught and Section Sizes¹

Median Credit Hours Taught, Tenured and Tenure Track Instructors



10

Median Section Size, All Instructor Types



17

■ Sample Institution ■ APS Benchmark (weighted average)

III Increase Teaching Loads and Section Sizes to Free Up Resources

If two tenured staff each teach one more section each term ...



Increases median teaching load to 9 credit hours



\$13,800

If one section collapsed per term ...



Increases median section size to 17



Annual reallocation opportunity by reducing credit hours taught by adjuncts²

- 1) Includes instructors teaching only courses with enrollment caps set at greater than zero and with greater than zero attempted student credit hours; fall 2017.
- 2) Product of the number of sections that could be reallocated from adjuncts to tenured and tenure track faculty and average adjunct compensation per section at the institution.

Source: Academic Performance Solutions data and analysis, 2018. Integrated Postsecondary Education Data System (IPEDS), 2015. The Chronicle of Higher Education data on adjunct compensation, <https://data.chronicle.com/>.

Equally Important to Examine High Activity

**Instructors over capacity?
Look for opportunities to
reduce loads.**

Computer Science at a Very Large Research Institution

Research Expenditures: Institution = \$185M; Cohort Median = \$178M
Undergraduate Enrollment: Institution = 25K; Cohort Median = 23.4K

I Above the Benchmark for SCH Taught¹

*Median, Tenured and Tenure
Track Instructors*

162

Sample Institution

121

APS Benchmark (weighted average)

II Above the Benchmark for Credit Hours Taught¹

*Median Credit Hours Taught,
Tenured and Tenure Track
Instructors*



■ Sample Institution — APS Benchmark (weighted average)

III Low Section Fill Rates¹

76%

Average fill rate for tenured and tenure track instructors teaching lower division courses

IV Faculty Asking for More Releases? Opportunity to Align with Peers

Hire two more full-time instructors ...



Decreases median teaching load to 8 credit hours



\$70,000–\$140,000
New instructional salary costs²

Collapse six sections of multi-section courses ...



Decreases median teaching load to 7 credit hours



Cost-neutral
New fill rate of 84%

1) Includes instructors teaching only courses with enrollment caps set at greater than zero and with greater than zero attempted student credit hours; fall 2017.
 2) Based on the average salary equated to 9 months of full-time instructional staff for instructors/assistant professors.

1

Contextualize Workload Expectations with Benchmarks

2

Adjust Workload Across Instructor Types

3

Match Instructor Capacity to Curriculum Demand

4

Activate the Data Through Informed Decisions

Find Excess Instructional Capacity

Distribution Depends on Institution Goals, but Start by Optimizing Full-Time Staff

Calculate the maximum **theoretical** teaching capacity of tenured and tenure track faculty.

$$\text{Tenure/Tenure Track Faculty Headcount} \times \text{Standard Load Credit Hours Taught per Instructor} - \text{Approved Course Releases} = \text{Theoretical Instructional Capacity}$$

Calculate the **optimal** teaching capacity of tenured and tenure track faculty.

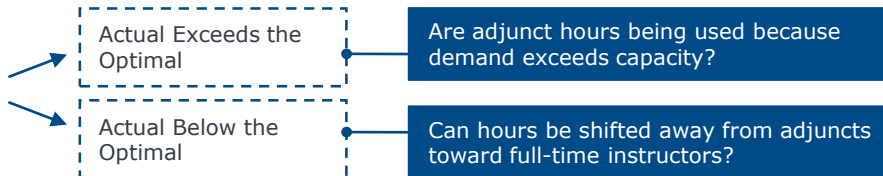
$$\text{Tenure/Tenure Track Faculty Headcount} \times \text{Cohort 75}^{\text{th}} \text{ Percentile Credit Hours Taught} = \text{Optimal Instructional Capacity}$$

36% institutions use 80% or less of the optimal capacity

Using the 75th percentile load sets a realistic goal, accounting for common mission-related activities across the cohort

The Capacity Gap

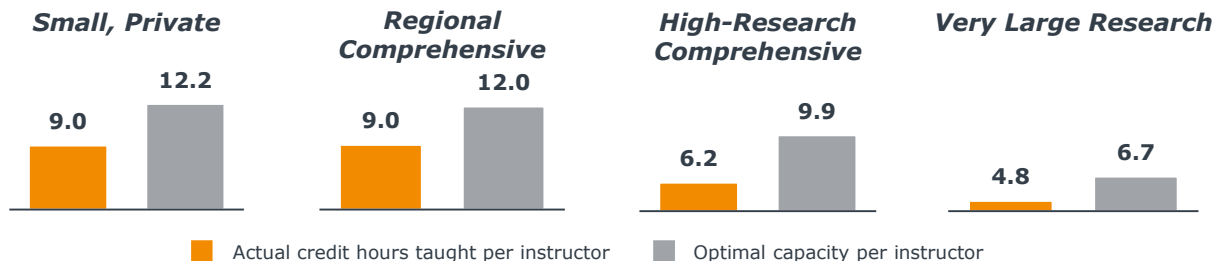
Compare Actual Credit Hours Taught By Tenure/Tenure Track Faculty to the Optimal



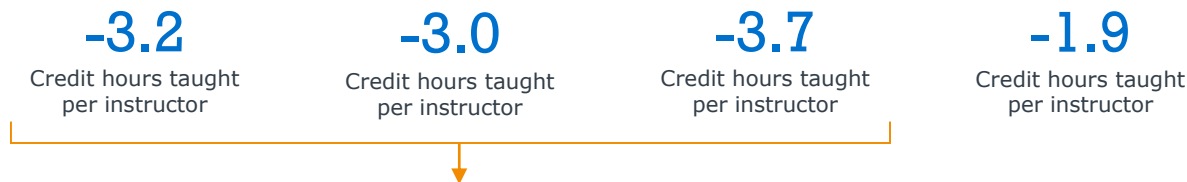
A Closer Look at Unused Capacity

Actual Instructional Capacity Compared to Optimal¹

Median Credit Hours Taught per Tenured and Tenure Track Instructor Compared to Optimal (75th Percentile), Fall 2017



Capacity Gap (Actual Minus Optimal Credit Hours Taught)



Gap to optimal of more than 1 section per term. Are adjunct and part-time instructors filling the gap?

¹) Optimal capacity refers to the 75th percentile of credit hours taught per instructor by cohort (Small, Private: 12.2; Regional Comprehensive: 12.0; High-Research Comprehensive: 9.9; Very Large Research: 6.7). Includes only tenured and tenure track instructors teaching courses with enrollment caps set at greater than zero and with greater than zero attempted student credit hours; fall 2017. Differences weighted by total attempted student credit hours at the institution.

Identify Departments Over and Under Capacity

Evaluating requests for new instructors? Consider current capacity use.

Two Departments at a Small, Private Institution

Research Expenditures: Institution = \$0; Cohort Median = \$0

Undergraduate Enrollment: Institution = 3K; Cohort Median = 3.5K

I Difference Between Actual and Optimal Capacity for Tenured and Tenure Track Instructors¹

	Communication and Journalism	Finance, Accounting, Taxation
Faculty Headcount	12 instructors	14 instructors
Optimal Credit Hours Taught (Cohort 75 th Percentile for Department)	13 credit hours per instructor	13.5 credit hour per instructor
Optimal Instructional Capacity	156 credit hours	189 credit hours
Actual Credit Hours Taught	160 credit hours	122 credit hours
Difference Between Actual and Optimal	+4 credit hours	-67 credit hours
Adjunct Share of Student Credit Hours	6%	17%

II Gather Additional Input to Inform Decision



Communication and Journalism

Exceeding optimal capacity indicates that adjuncts are being used to meet demand. Will this demand continue?



Finance, Accounting, Taxation

There is existing capacity. Are there accreditation requirements keeping teaching loads down? Should we review approved releases to find capacity?

1) Includes only tenured and tenure track instructors teaching courses with enrollment caps set at greater than zero and with greater than zero attempted student credit hours; fall 2017.

1

Contextualize Workload Expectations with Benchmarks

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Match Instructor Capacity to Curriculum Demand

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Activate the Data Through Informed Decisions

Allocation Must Be Flexible As Demand Shifts

Can't Continue Staffing Based on Historical Experience

Trends in Demand Impact Staffing and Workload Decisions

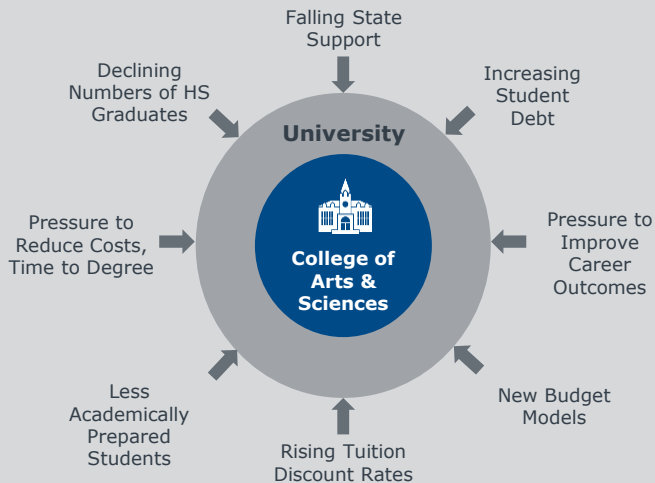
Overall Demand Growth or Contraction

- Will we need additional capacity needed in the short- or long-term?
- Are we at risk of being overstaffed?

Shift in Demand from Majors Versus Non-Majors

- Which courses are most in demand?
- How do we shift resources to meet the type of students we are serving?

Have Already Seen Significant Challenges for Arts & Sciences



Take Note of Shifting Departmental Mission

Not Always Aligned with Shifts in Overall Demand

Trends in Enrollment and Share of SCH Taught to Majors, Select Departments¹

Weighted Average Across APS Membership, AY 2015–17

Physics and Physical Sciences



0%

Attempted SCH



7.3%

Share of Attempted SCH Taught to Majors



No enrollment growth, but increasing share in majors



Shift resources to specialized, upper division courses needed by majors

History



-1.8%

Attempted SCH



-6.5%

Share of Attempted SCH Taught to Majors



Slight enrollment decline and declining share in majors



Shift resources to lower division courses to accommodate increased share of non-majors taking general education courses

Architecture and Planning Studies



17.8%

Attempted SCH



-3.6%

Share of Attempted SCH Taught to Majors



Increasing enrollment, but declining share in majors



Increase resources across entire department, with emphasis on courses that serve non-majors

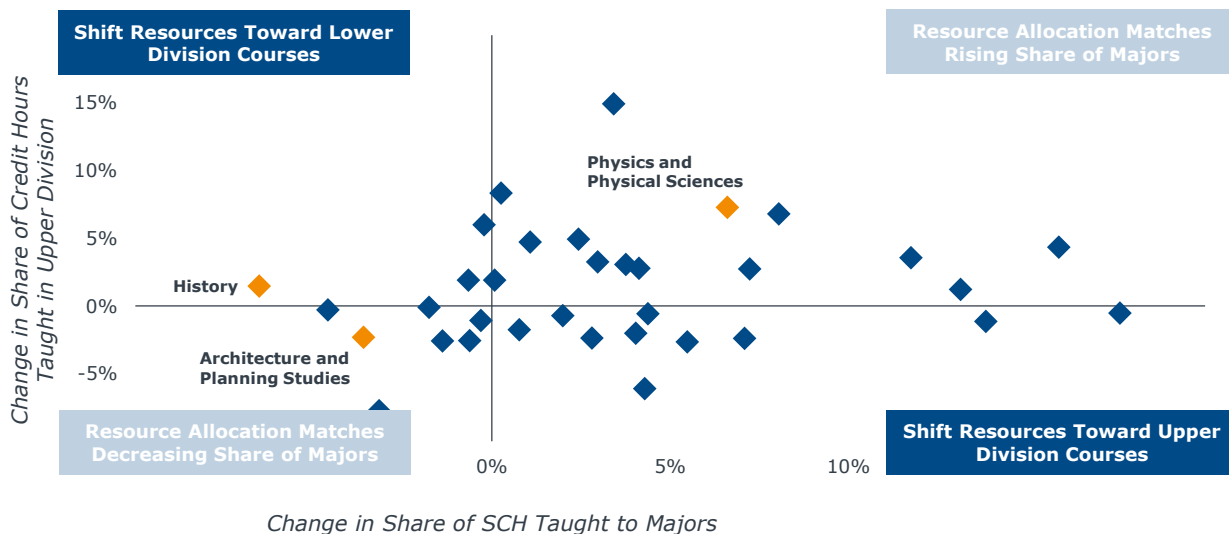
1) Includes only students in undergraduate courses with greater than zero attempted student credit hours; AY 2015–17. Differences weighted by total attempted student credit hours at the department.

One-Third of Departments Misaligned

Change in Share of SCH Taught to Majors vs. Share of Credit Hours Taught in Upper Division Courses¹

Weighted Average Across APS Membership, AY 2015–17

n = 49 institutions



1) Includes all types of instructors teaching only undergraduate courses with enrollment caps set at greater than zero and with greater than zero attempted student credit hours; includes only students in undergraduate courses with greater than zero attempted student credit hours; AY 2015–17. Differences in shares weighted by total attempted student credit hours at the department.

Balancing Demand Against Status Quo

Declining share of majors? Shift resources to lower division.

Health Services at a Regional Comprehensive Institution

Research Expenditures: Institution = \$6M; Cohort Median = \$2.8M
Undergraduate Enrollment: Institution = 10K; Cohort Median = 9.5K

I Growth Consistent with the Cohort Benchmark¹



5.8%

Attempted SCH
Sample Institution



6.8%

Attempted SCH
Cohort Benchmark
(Weighted Average)

II Decreasing Share of Majors, Yet No Change in Resource Allocation¹



-10.7%

Share of Attempted
SCH Taught to Majors



0.5%

Share of Credit Hours
Taught in Upper
Division Courses

III Identify Capacity and Demand Mismatches

7

Upper division sections with
less than 50% fill rate

12

Lower division sections with
greater than 90% fill rate



Consider consolidation
opportunities for upper division
courses to direct capacity to
growing needs

1) Includes only students in undergraduate courses with greater than zero attempted student credit hours; includes all types of instructors teaching only undergraduate courses with enrollment caps set at greater than zero and with greater than zero attempted student credit hours; AY 2015-17. Differences weighted by total attempted student credit hours at the department.

1

Contextualize Workload Expectations with Benchmarks

2

Adjust Workload Across Instructor Types

3

Match Instructor Capacity to Curriculum Demand

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Activate the Data Through Informed Decisions

Start the Conversation with the Right Data from APS



26

Critical Analyses



Should we adjust workload expectations for full-time faculty?



Are we fully utilizing existing capacity?



Do we have the right instructors teaching the right students?

Median student credit hours taught by instructor type

Share of attempted student credit hours by instructor type

Trends in share of attempted student credit hours taught to majors

Data Informing, Not Driving, Workload Decisions



Academic Vital Signs: Recommended departmental performance indicators, including measurement of instructional capacity and productivity in terms of SCH, as well as measurement of scholarly activity

Instructional Capacity Playbook: Practices gathered from member institutions to support realignment of resources to meet changing enrollment patterns

Academic Program Innovation Center: Resources to revitalize existing programs and launch new programs

Next Steps

Familiar with APS

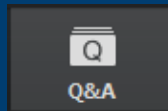
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