EAB | Academic Performance Solutions

Shaping Class Size

Benchmarking Insights Series:
Aligning Academic Resource Allocation and Student Outcomes

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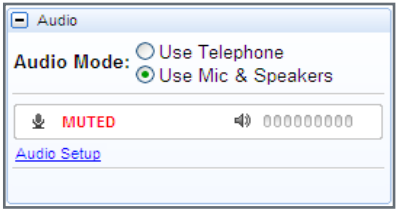

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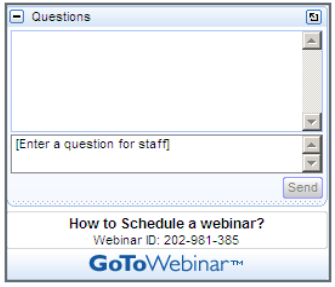

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Speakers

Chris Miller
Senior Vice President

Catherine Ewell
General Manager, Decision Support and Analytics

Chris Gronberg
Senior Analyst

APS Benchmarking Insights Series

Aligning Academic Resource Allocation and Student Outcomes

TODAY	JULY	OCTOBER	NOVEMBER	JANUARY
 **Shaping Class Size** Establishing appropriate class sizes	**Reducing Unproductive Credits** Focusing on student success investments	**Departmental Cost per SCH** Managing unit budgets	**Enabling Program Growth** Allocating faculty lines by growth	**Optimizing Faculty Instructional Efforts** Discovering how loads compare across schools

Seeking Your Input

Please take the brief survey at the end of the webinar to share what topics you would like to see explored using the APS Benchmarking Dataset.

1 About Our Benchmarking Methodology

2 A First Look at Class Size Benchmarks

3 Class Size and Completion Rate Insights

4 Translating Insight to Action

Creating the APS Benchmarking Dataset

Developing Apples-to-Apples Comparisons

Member Data

- Identified all members who have completed the APS data validation and configuration process

APS Benchmarking Dataset

- Developed standardized data dictionary
- Transformed each member's data into comparable data points

APS Platform Benchmarks

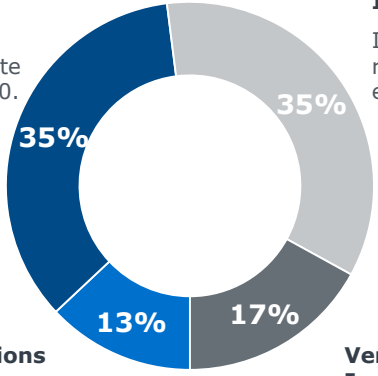
- Across 2017, an initial set of benchmarks will become available on the platform
- Members will have the opportunity to select their own cohort of peers in 2018

43 Institutions Grouped into Four Cohorts

APS Benchmarking Cohort Distribution
(N = 43)

High-Research Comprehensive Institutions

Institutions with more than $10M in research activity and an undergraduate enrollment between 5,000 and 10,000.



Regional Comprehensive Institutions

Institutions with less than $10M in research activity and an undergraduate enrollment around 10,000.

Small, Teaching-Focused Institutions

Institutions with little to no research activity and an undergraduate enrollment less than 5,000.

Very Large Research-Intensive Institutions

Doctoral institutions with high to very high research activity and an undergraduate enrollment greater than 10,000.

1) The four APS Benchmarking Cohorts are derived using undergraduate student population size, research activity, and Carnegie Classification.

Speaking the Same Language

Defining Terms Used For Class Size Data and Benchmarks

Courses vs. Sections

Course
The unique teaching moment where a student registers and can receive student credits for completion.

E.g. ENG101: Composition and Writing I

Section
Within each course, the individual scheduled class where students and teacher interact.

E.g. ENG101A, ENG101B, ENG101C

Course Type

Discussion
Where students prepare and present their original written work for discussion or critique.

Laboratory
Where students engage in practical aspects of the course topic.

Lecture
Where the instructor gives lectures with minimal student-teacher interaction.

Academic Year

2011 Fall 2010; Spring 2011; Summer 2011

2012 Fall 2011; Spring 2012; Summer 2012

2013 Fall 2012; Spring 2013; Summer 2013

2014 Fall 2013; Spring 2014; Summer 2014

2015 Fall 2014; Spring 2015; Summer 2015

Other Conventions

Class Size
The number of students enrolled in a section at an institution's set census date.

Maximum Class Capacity
The maximum number of students allowed to enroll in a section.

Completion Rate
Earned student credit hours divided by attempted student credit hours.

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Class Size Matters

Optimizing Class Size Involves a Complex Web of Considerations

Constraints

- Classroom size and availability
- State and association accreditation requirements
- Faculty capacity
- Graduate student and TA availability

Values-Based Considerations

- Faculty pedagogical preference
- Professional recommendations
- Institutional mission
- Faculty workload
- Competitiveness
- Department tradition

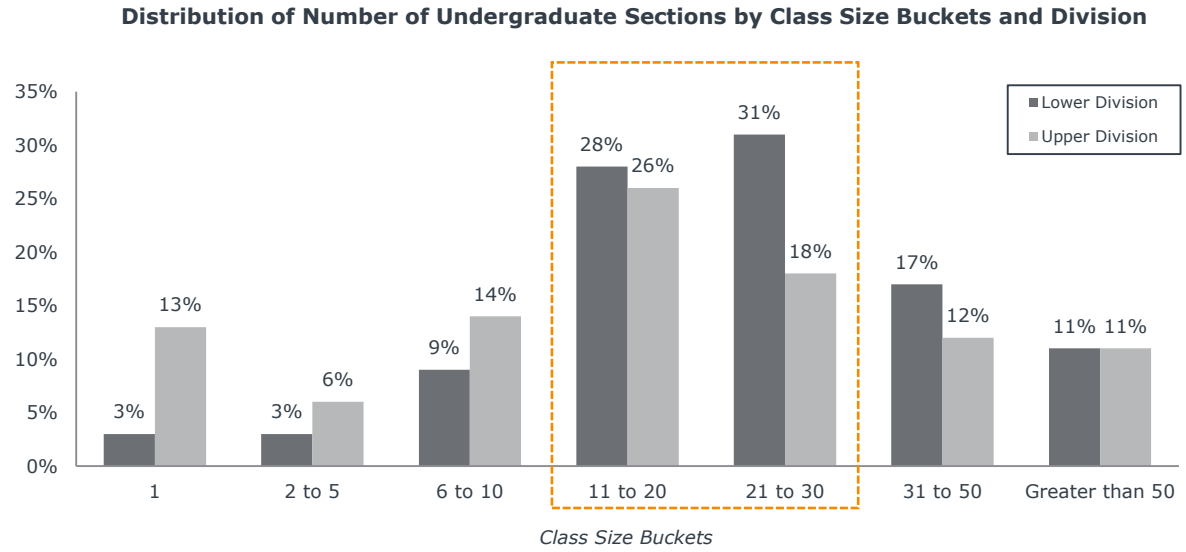
Impact on Outcomes

- Completion rates
- Student access
- Spending on adjuncts
- Cost per student credit hour
- Opportunity costs

Putting Class Size Benchmarks in Context

- Class size benchmarks are not best practice targets to aim for
- Classes can be intentionally small
- Opportunities exist to shape class size without compromising faculty workload or student success

Majority of Sections Have a Class Size of 11 to 30



59%

*of **Lower Division** courses have a class size of 11 to 30*

44%

*of **Upper Division** courses have a class size of 11 to 30*

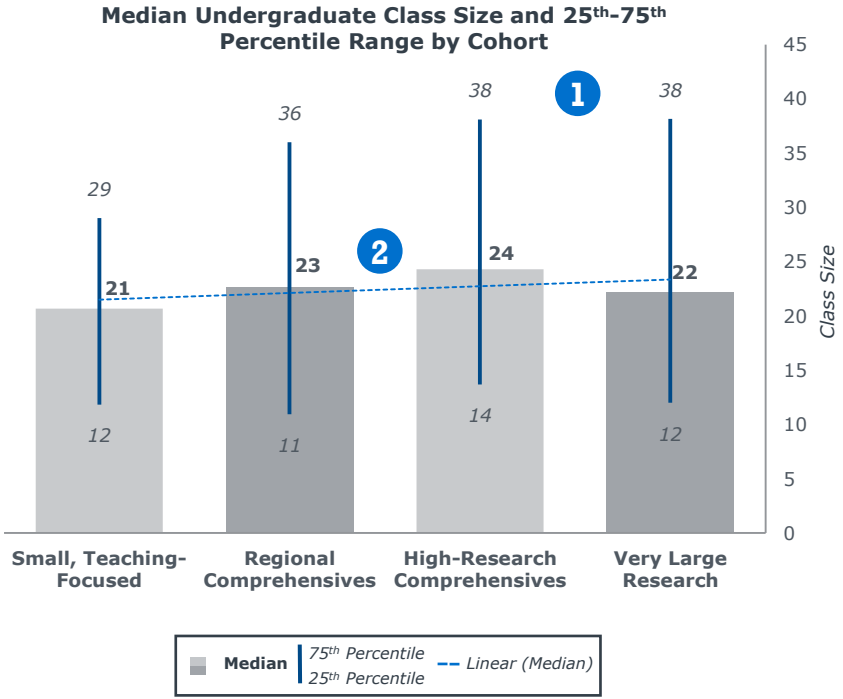
1) The chart depicts all sections in the 2015 academic year, excluding online and summer courses.

Source: Academic Performance Solutions benchmark collaborative data.

Narrow Distribution Across Cohorts

Observations

1. As expected, larger schools have bigger sections at the 75th percentile
2. Yet, median class size varies by only **three students** across all cohorts



1) The chart includes all undergraduate courses with more than one section in the 2011-2015 academic years, excluding online and summer courses

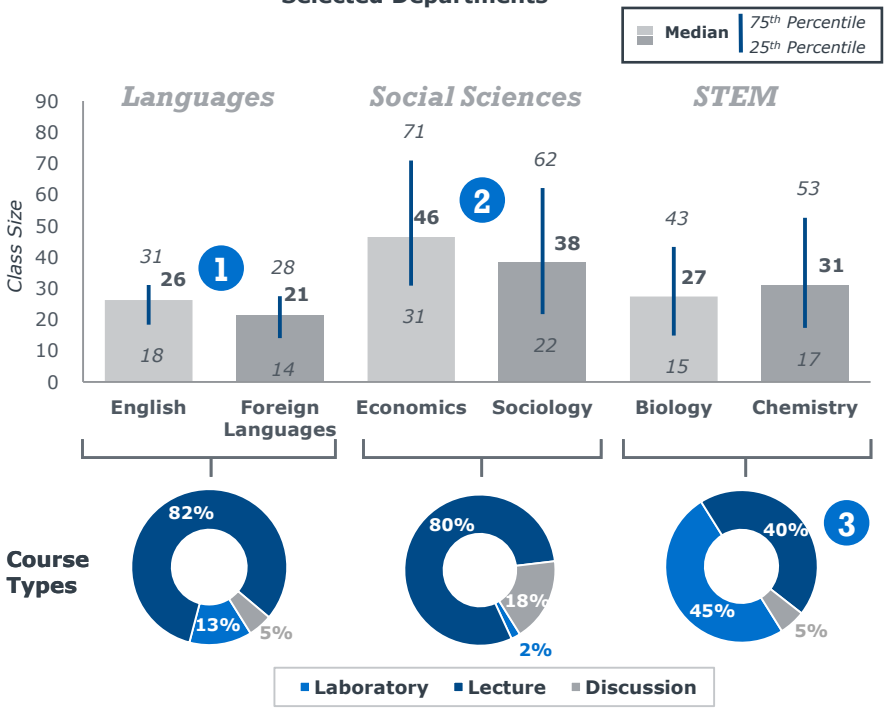
Source: Academic Performance Solutions benchmark collaborative data.

Wide Variation Across Disciplines

Observations

1. Languages have small median class sizes and narrow band of variation
2. Social Sciences have much larger classes and greater variation in class size
3. STEM sections fall in the middle, with a high percentage of laboratory sections

Median Undergraduate Class Size and 25th-75th Percentile Range by Selected Departments



1) The chart includes all undergraduate courses with more than one section in the 2011-2015 academic years, excluding online and summer courses.

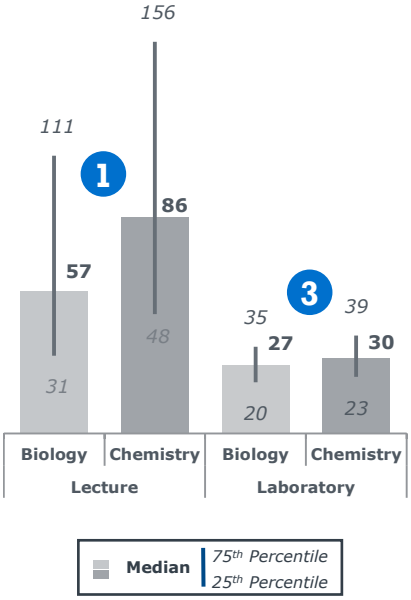
Source: Academic Performance Solutions benchmark collaborative data.

Instructional Method Impacts STEM Class Size

Observations

1. STEM lecture sections have sizeable variation
2. Further, STEM departments account for three of the top five departments with largest lectures
3. STEM laboratory sections are much smaller and have a tighter distribution than lecture sections

Median Class Size and 25th-75th Percentile Range by Course Type



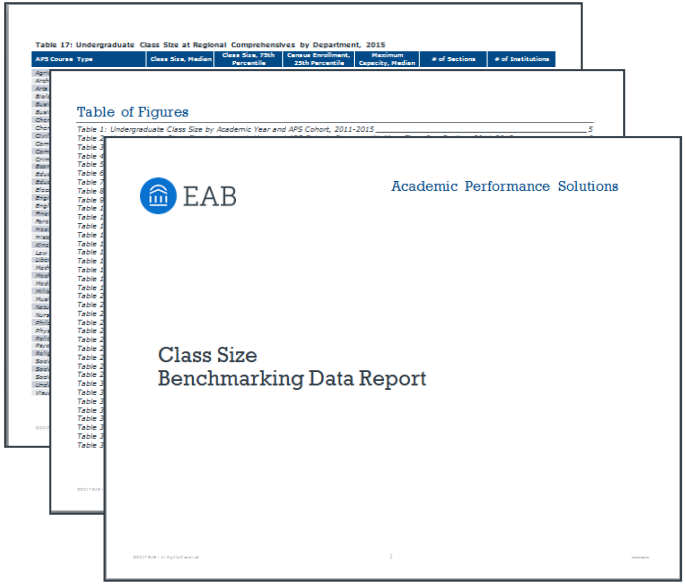
2 Departments with Largest Median Lecture Class Size

1	Chemistry	86
2	Economics	58
3	Biology	57
4	Physics	54
5	Sociology	47

1) The chart includes all undergraduate courses with more than one section in the 2011-2015 academic years, excluding online and summer courses.

Source: Academic Performance Solutions benchmark collaborative data.

Introducing Class Size Benchmark Data Report



All APS members will receive a copy of the APS Class Size Benchmark Data Report.

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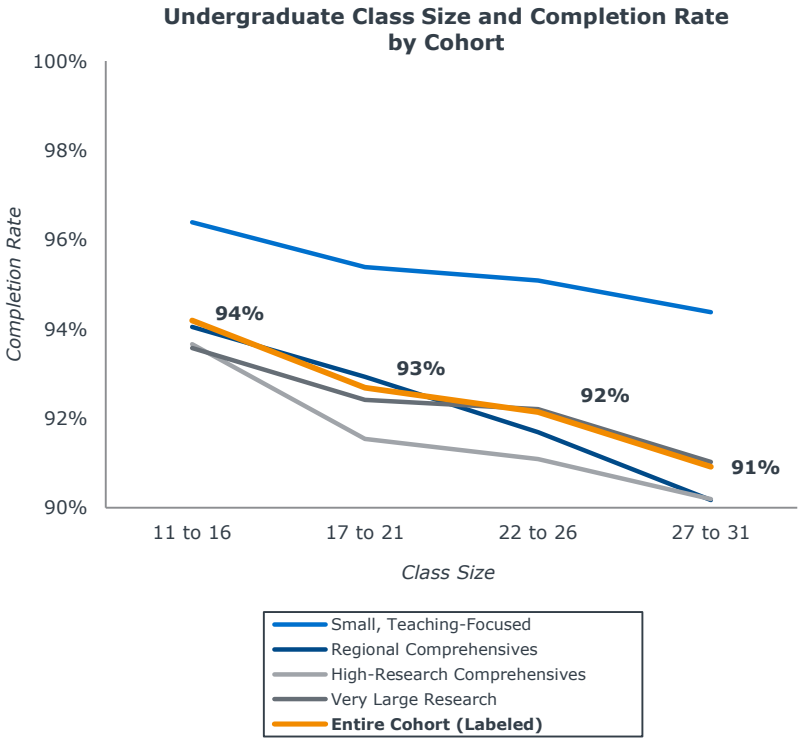
Larger Classes Have Slightly Lower Completion Rates

Observations

A slightly negative linear association between completion rates and class size across the four cohorts.

Only a three percentage point differential between the 11 to 16 class bucket and the 27 to 31 class bucket.



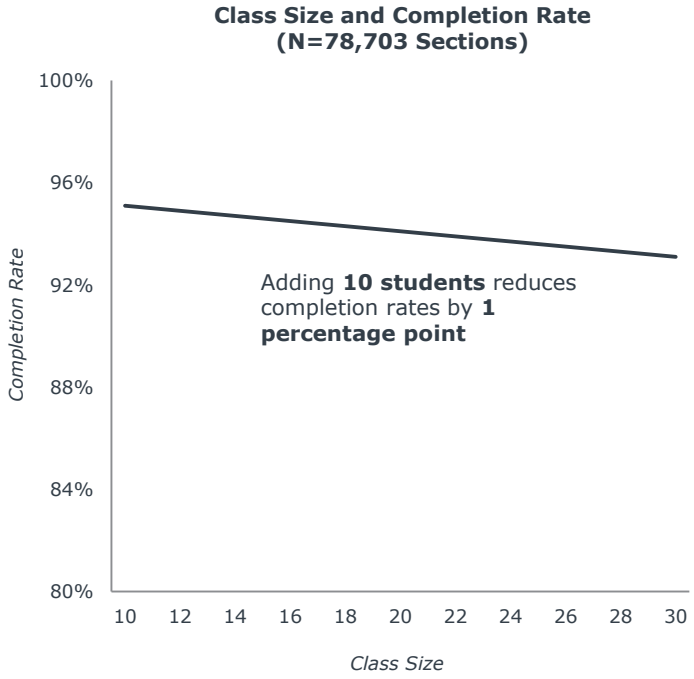
1) The line chart includes only undergraduate lectures taught in the 2011-2015 academic years and excludes summer and online courses.

Source: Academic Performance Solutions benchmark collaborative data.

Effect Holds When Controlling for Key Factors

Factors controlled for

- Department/Subject
- Course Level
- Course Type
- Academic Year
- Institution Type
- Institution-Level Variation in Completion Rates



1) The line chart depicts the linear regression results with institution-fixed effects by institution and department in the 2011-2015 academic years across sections with a class size of 11 to 31 students, excluding summer and online sections.
2) $R^2 = .2$

Source: Academic Performance Solutions benchmark collaborative data.

Shaping Class Size at Eastern Kentucky University

Optimizing Maximum Cap for Cost, Student Success, and Quality

1 Identifying the Opportunity

Facing challenging budget and program review, Dean explored class size as a lever to address high adjunct faculty costs.

2 Taking a Data-Informed Approach

Looked for – but did not identify – any differences in outcomes across sections with 20 vs 22 vs 25 students.

3 Making a Principled Decision

Increased maximum capacity for composition sections from 22 to 25 students and invested in professional development for faculty teaching composition.

60+
Sections collapsed

$200K
Savings reallocated to other academic affairs priorities

Confidence in quality of instruction

Source: Academic Performance Solutions research and analysis.

Levers to Improve Student Success

Look Beyond Class Size to Impact Completion Rates

A Small Piece of the Pie

Class size is often given outsized importance in discussions of course redesign strategies and teaching outcomes.

If you would like an electronic copy of the Academic Affairs Forum's *Course Completion Playbook: Analyses and Tools to Improve Student Outcomes in Critical Gateway Courses,* please indicate so in the survey at the close of this webinar.

Tactics to Improve Course Completion Rates

1. **Assessment**
   - Early and Frequent Low-Stakes Assessment
   - Standardized Assessment
2. **Instruction**
   - Active Learning
   - Supplemental Instruction
3. **Course-Level Advising**
   - Course Behavior Alerts
   - Automated Withdrawal Advising
4. **Pre- and Post- Course Support**
   - Growth Mindset Priming
   - Intensive Early Start Cohorts
   - Accelerated Catch-Up Terms

Source: Academic Affairs Forum's *Course Completion Playbook: Analyses and Tools to Improve Student Outcomes in Critical Gateway Courses*

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Using APS Data to Inform Class Size Decisions

Which Departments Should Consider Class Size Policy Changes?

For Departments Evaluating Strategies to Support Growth and Operational Goals, such as:

- Freeing up capacity or funds to fuel new programs or faculty investments
- Reducing instructional costs
- Adapting to changes in student demand

APS Data Can Inform Class Size Policy Considerations

Departments with:	Consider Increasing Max Capacity	Consider Setting Minimum Enrollment
Courses with >90% fill rates	✓	
Courses with under-filled sections		✓
High cost per SCH	✓	✓
Low cost per SCH		
Growing enrollment	✓	
Declining enrollment		✓
Class sizes well below peer benchmark		✓
Class size well above peer benchmark	✓	

What's Next?

Post-Webinar Survey

Please take our brief survey following webinar to let us know:

- What you thought of the webinar
- What you'd like to see in future benchmarking analyses
- If you'd like a copy of the *Course Completion Playbook*

Class Size Benchmark Data Report

Check your inboxes next week for a copy of the *APS Class Size Benchmark Data Report.*

Questions?