Astra Academy: Bending the Curve to Graduate More Students Faster

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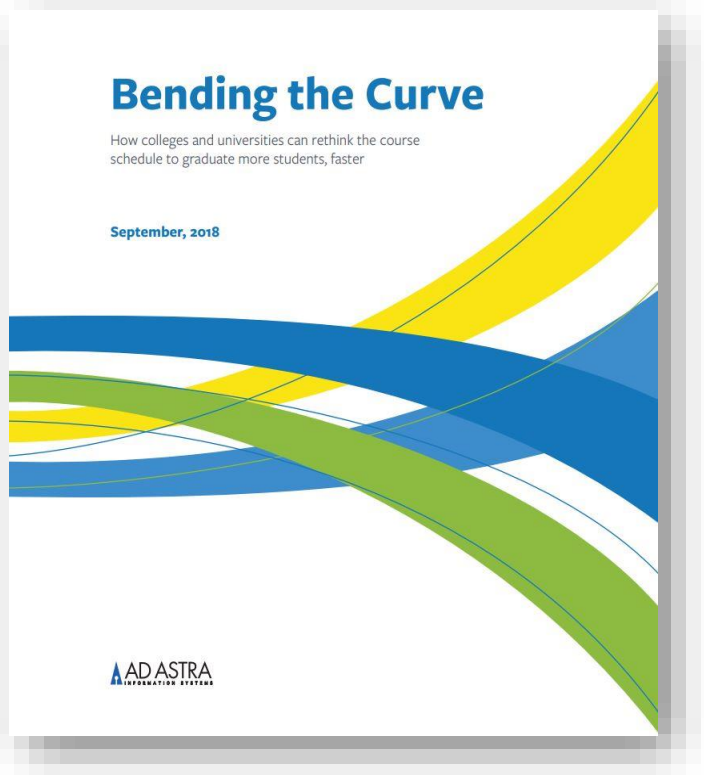


Presentation Overview

- Introduction (10 Minutes)
- Bending the Curve to Graduate More Students Faster (40 Minutes)
- Comments, Questions, Survey (10 Minutes)

AD ASTRA
INFORMATION SYSTEMS

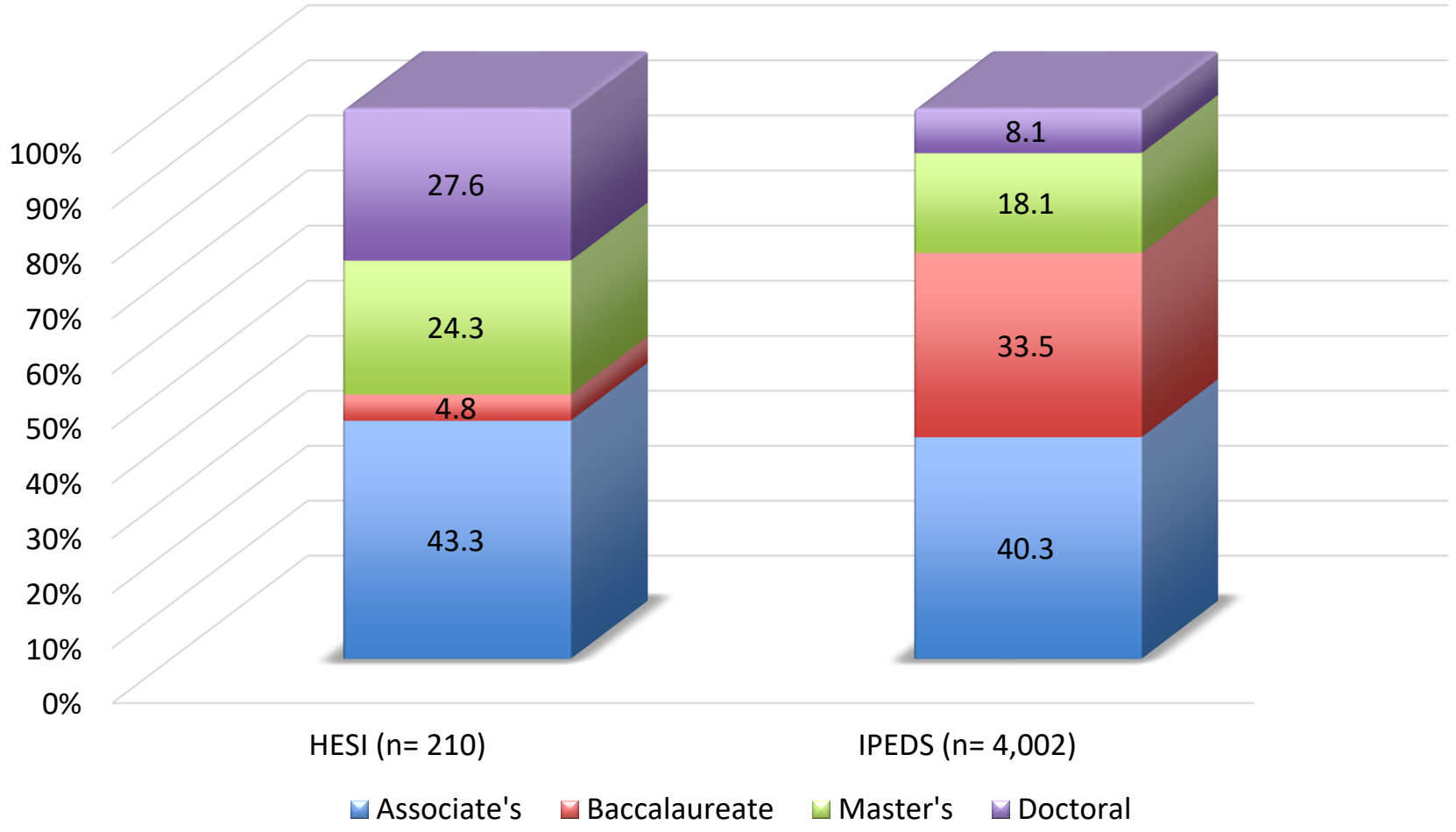
- Ad Astra is a course scheduling and enrollment management organization that partners with over 600 institutions annually to improve course scheduling efficiency and accessibility for students.

- Ad Astra offers unique solutions designed to graduate more students faster.

- Astra Academy is a webinar series that brings together diverse stakeholders across the higher education landscape to share with you how their work is helping to improve student outcomes with a focus on student retention, time-to-completion, or graduation.

Can the course schedule help graduate more students faster?

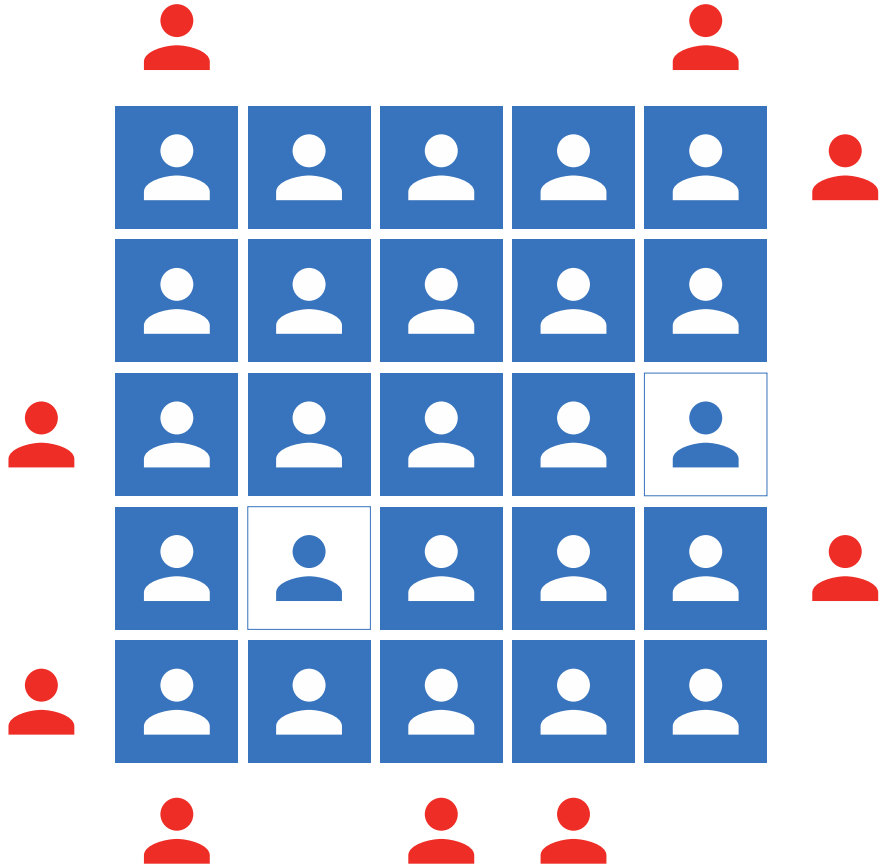
Higher Education Scheduling Index (HESI) and Integrated Postsecondary Education Data System (IPEDS) Institutional Participation by Carnegie Classification, 2017



Overloaded

>95%

23%



Higher Education Scheduling Index (HESI), All Institutions, 2017

Balanced

70-95%

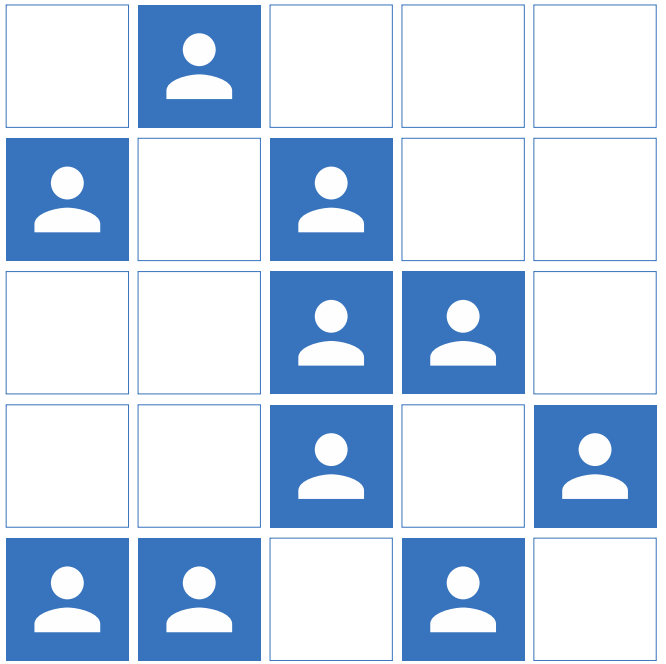
32%

Higher Education Scheduling Index (HESI), All Institutions, 2017

Underutilized

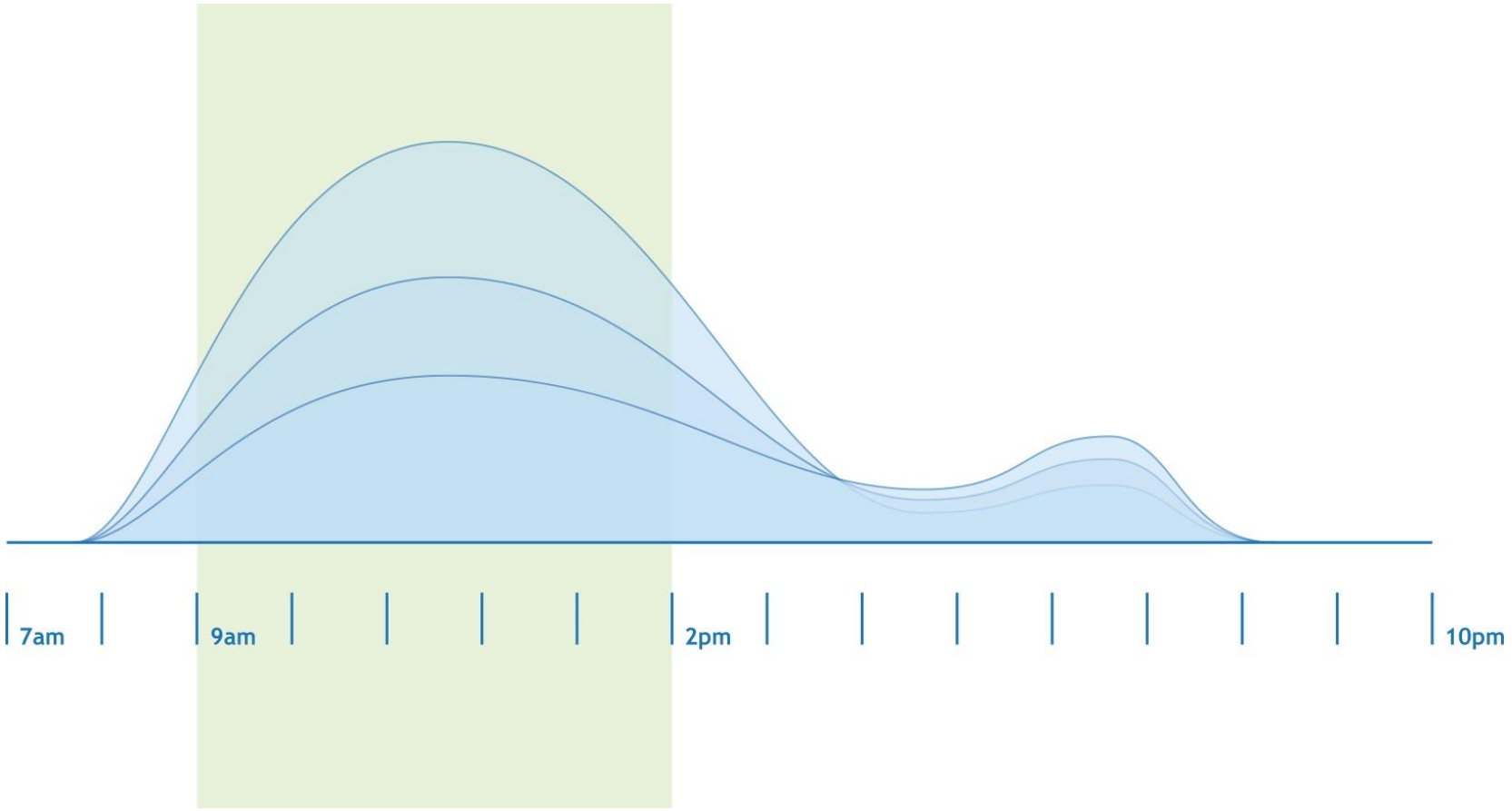
<70%

44%

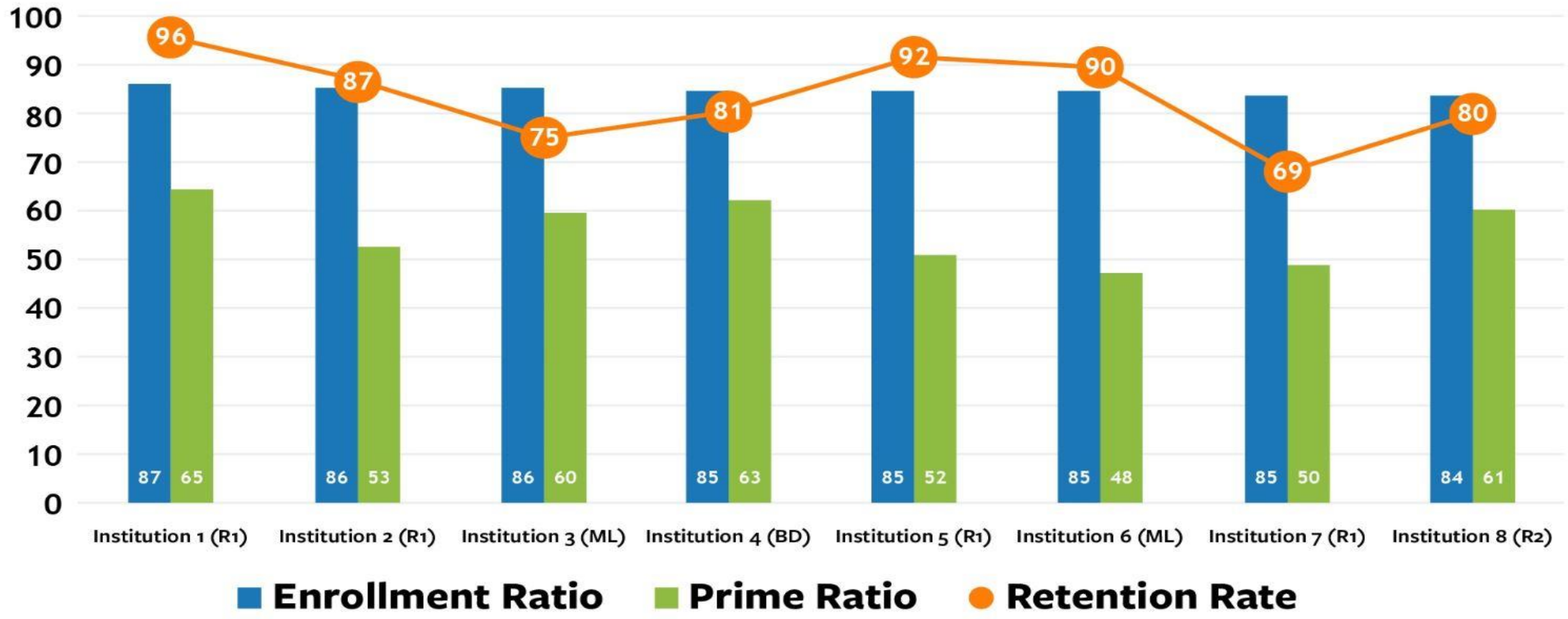


Higher Education Scheduling Index (HESI), All Institutions, 2017

Prime Time Ratio

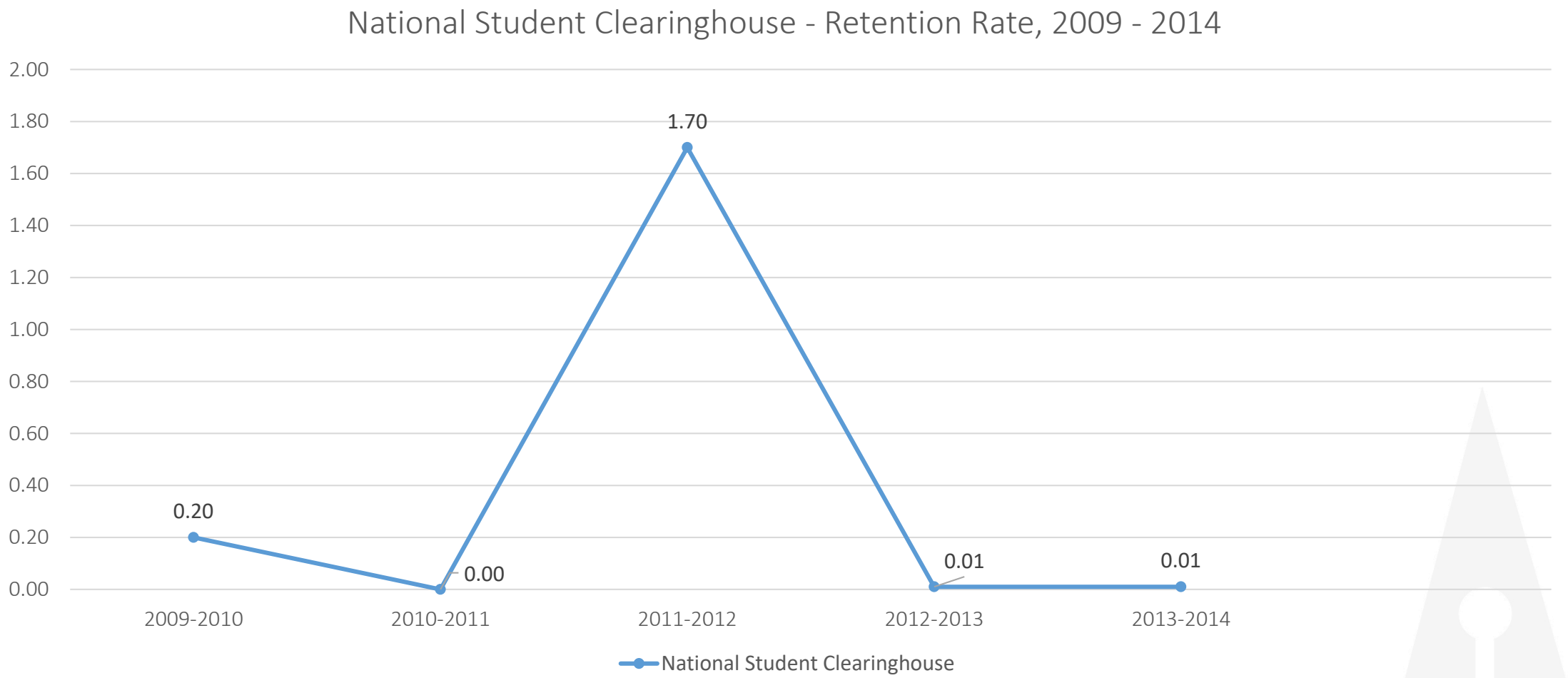


HESI Enrollment Ratio, Prime Ratio, Retention Rates by Institution, 2013-2014



First-Year Retention

Percent Change in Fall-to-Fall Retention, 2009 - 2014



What helps retain more students?

Selectivity

+.936%

SAT Math

What helps retain more students?

Course Enrollment

+.533%

Enrollment Ratio

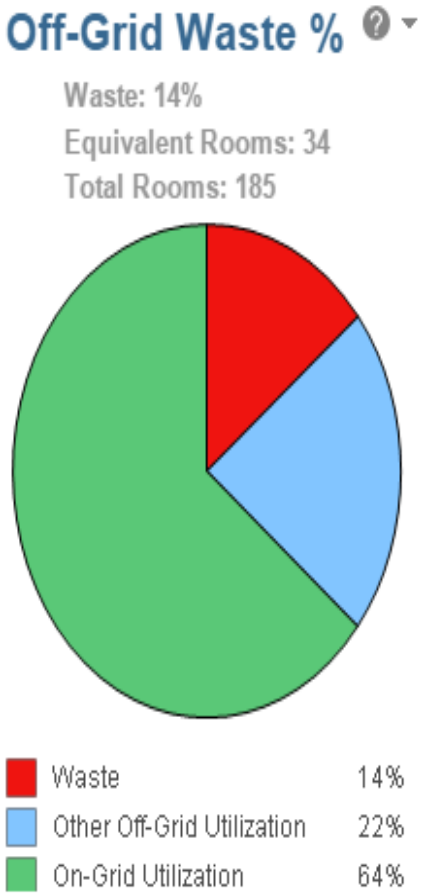
Time-to-Completion and Graduation

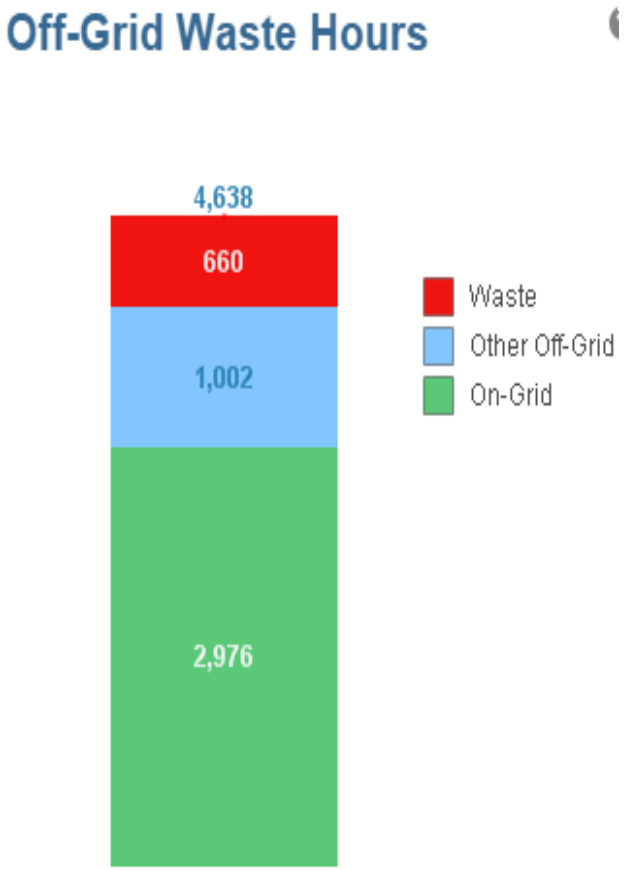
Off Grid Waste

Waste Matters

Off Grid Scheduling	Off Grid Waste	Off Grid Scheduling
-.194%	-.189%	-.387%
Six-Year Graduation Rate (All Four-Year)	Six-Year Graduation Rate (All Four-Year)	Six-Year Graduation Rate (Carnegie: Master's)

Reducing Off-Grid Waste to Facilitate Improvement





- ✓ Reducing "Off-Grid Waste" can improve course access which is associated with:
- ✓ Increases in enrollment ratio.
- ✓ Increases in classroom utilization in prime-time.
- ✓ Increases in student credit hour production.
- ✓ Increases in retention.
- ✓ Decreases in time-to-completion.
- ✓ Decreases in instructional expenditures.

Adult Learners

Customized Research Solutions to Improve Student Satisfaction and Retention

	Full-Time Student (Age 18 – 24)	Full Time Student (Age 25+)
Sample Population	343 (60%)	229 (40%)
Completed ≤ 30 Student Credit Hours	52.7%**	47.3%***
Frequently work outside of class to prepare assignments.	32.8%*	23.2%*
Percent Reported Never Skipping Class	61.0***	79.5***
Percent Reported Working 0 Hours Each Week	29.8***	48.0***
Percent Reported Working 30+ Hours Each Week and/or Taking Care of Dependents	16.4***	54.2***
Percent of Students Earning "A"	18.5	25.4

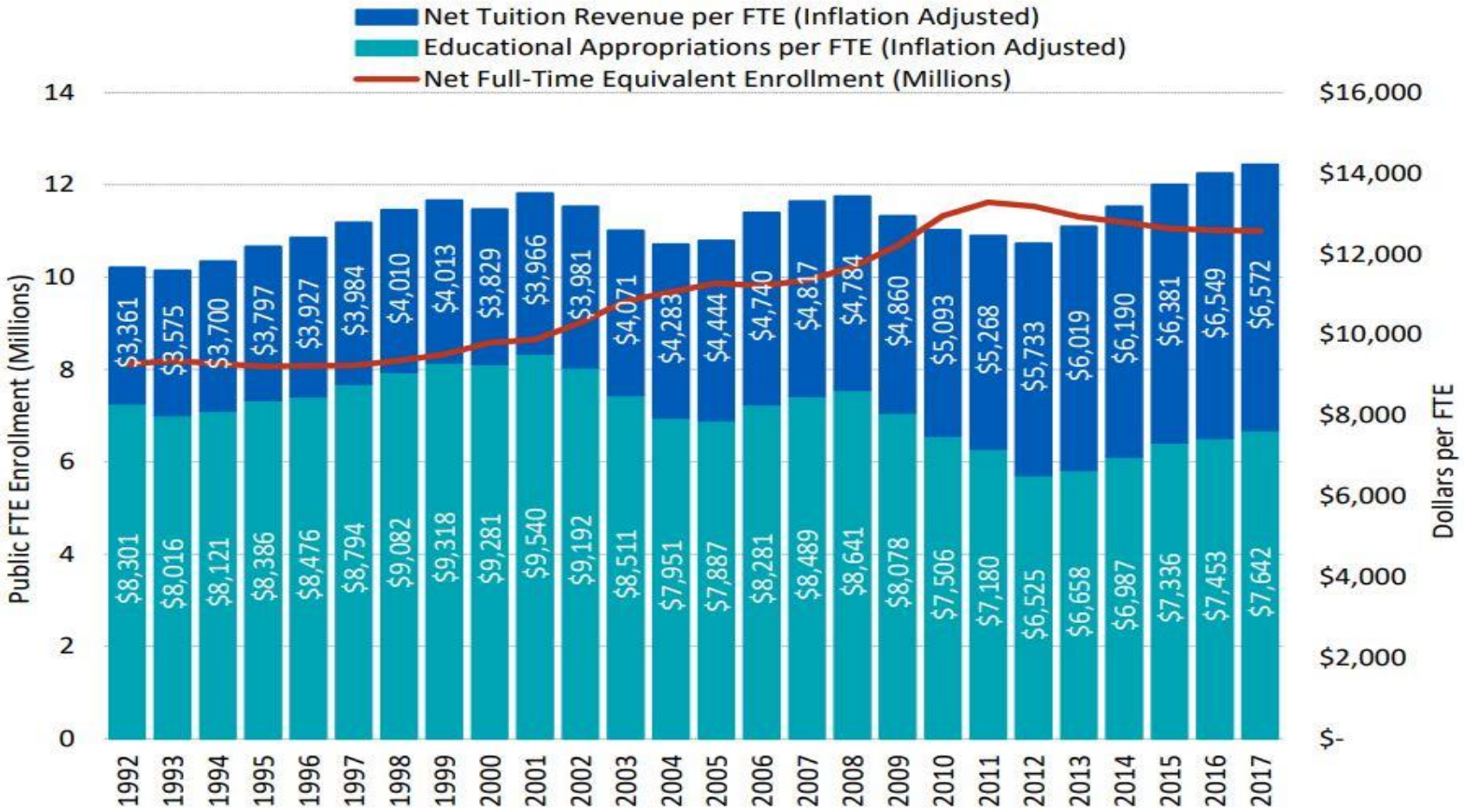
* - $p \leq .05$ ** - $p \leq .01$ *** - $p \leq .001$

Regression Predicting Cumulative Student GPA at a Two-Year Institution

Variable	Beta	Standardized Coefficient	Significance	Tolerance	VIF
Constant	2.340		.000		
Total Cumulative Student Credit Hour Production (Hours)	.004	.233	.000	.860	1.163
Age (Years at Semester Start)	.010	.161	.012	.789	1.267
Developmental Writing (1= Have Not/Do Not Plan)	-.105	-.135	.019	.986	1.014
Parent/Spouse Source of Income (1= Not a Source)	.182	.132	.030	.883	1.133
How Supportive is Immediate Family (1= Not Very)	.202	.182	.002	.969	1.033
Likelihood Being Academically Underprepared Cause Withdrawal (1=Not Likely)	-.145	-.175	.003	.952	1.050
Skip Class (1= Never)	-.188	-.136	.025	.879	1.137

Doing More with Existing Resources

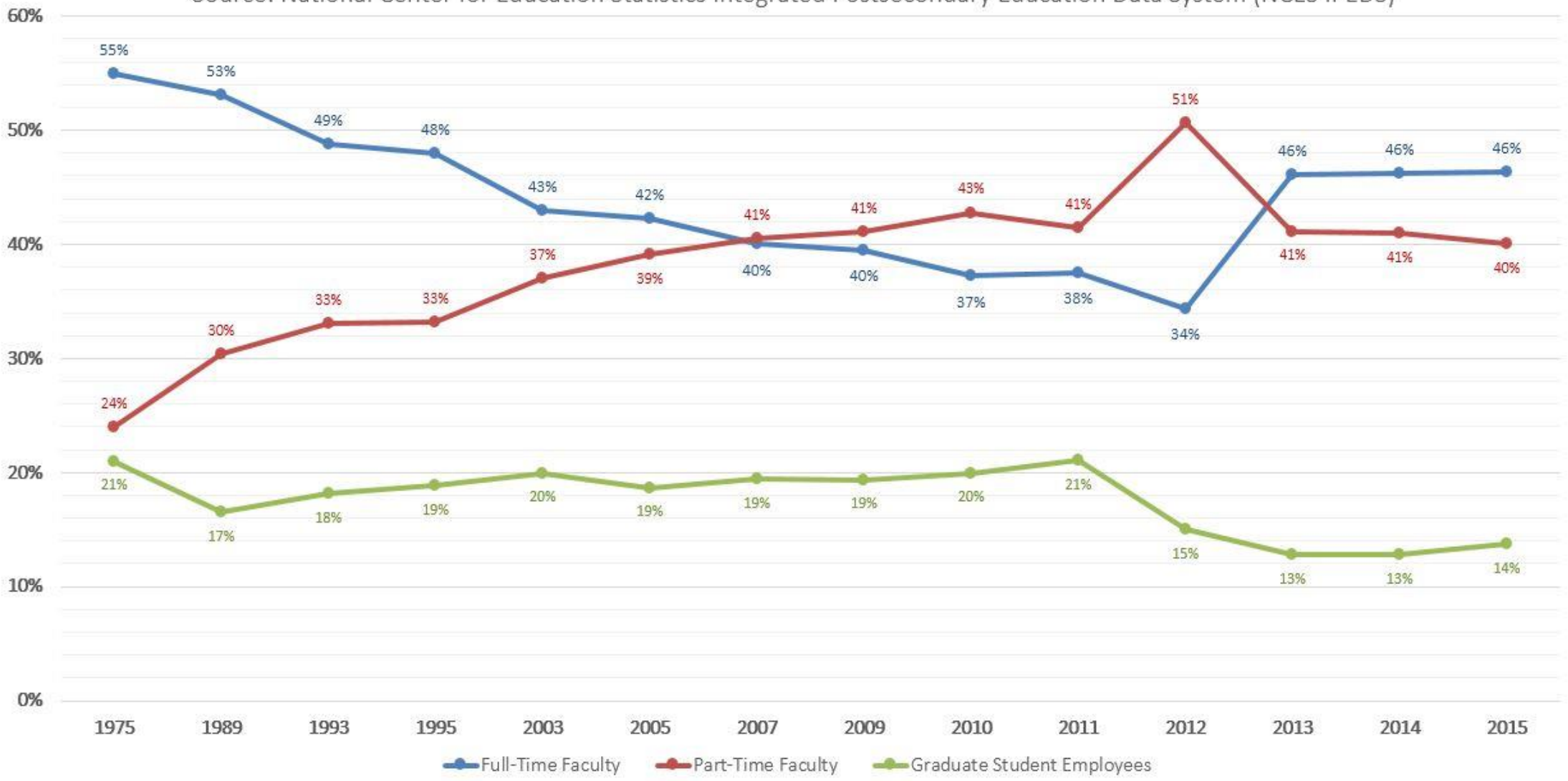
Public FTE Enrollment, Educational Appropriations, Net Tuition Revenue, 1992-2017



State Higher Education Executive Officers, 2018

Trends in the Academic Labor Force, 1975 - 2015

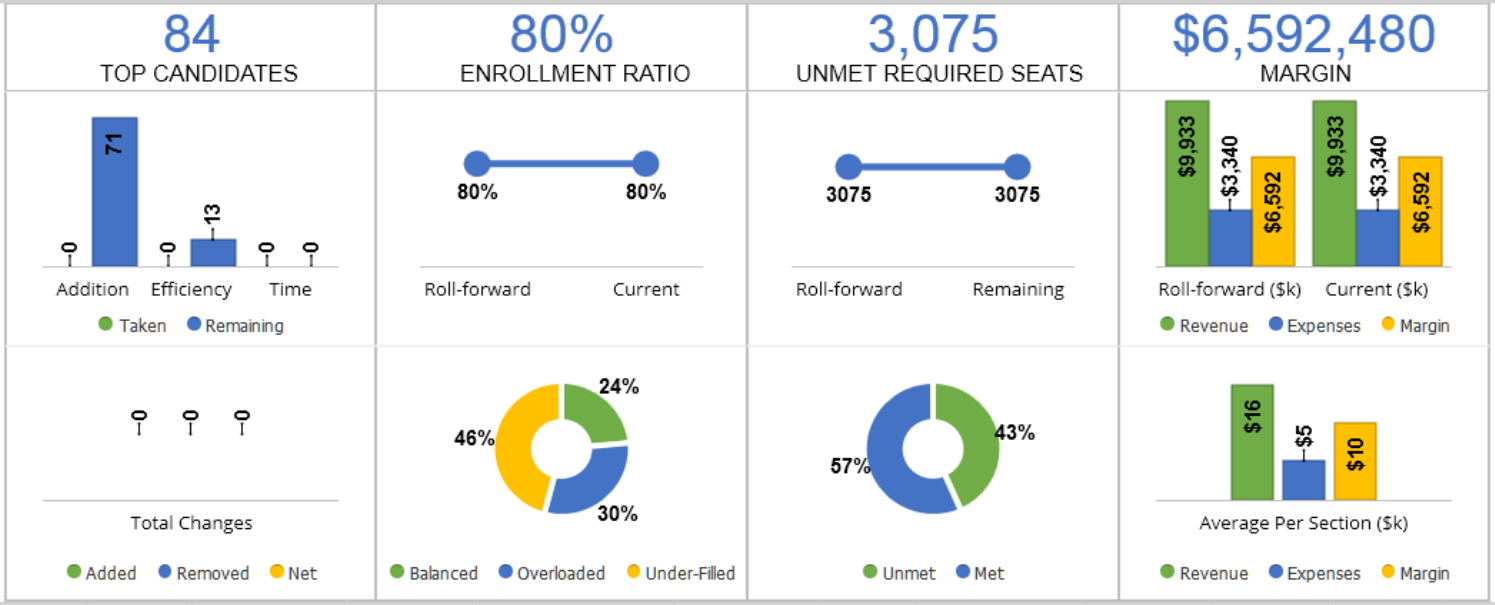
Source: National Center for Education Statistics Integrated Postsecondary Education Data System (NCES IPEDS)



The Value of Full-Time Faculty

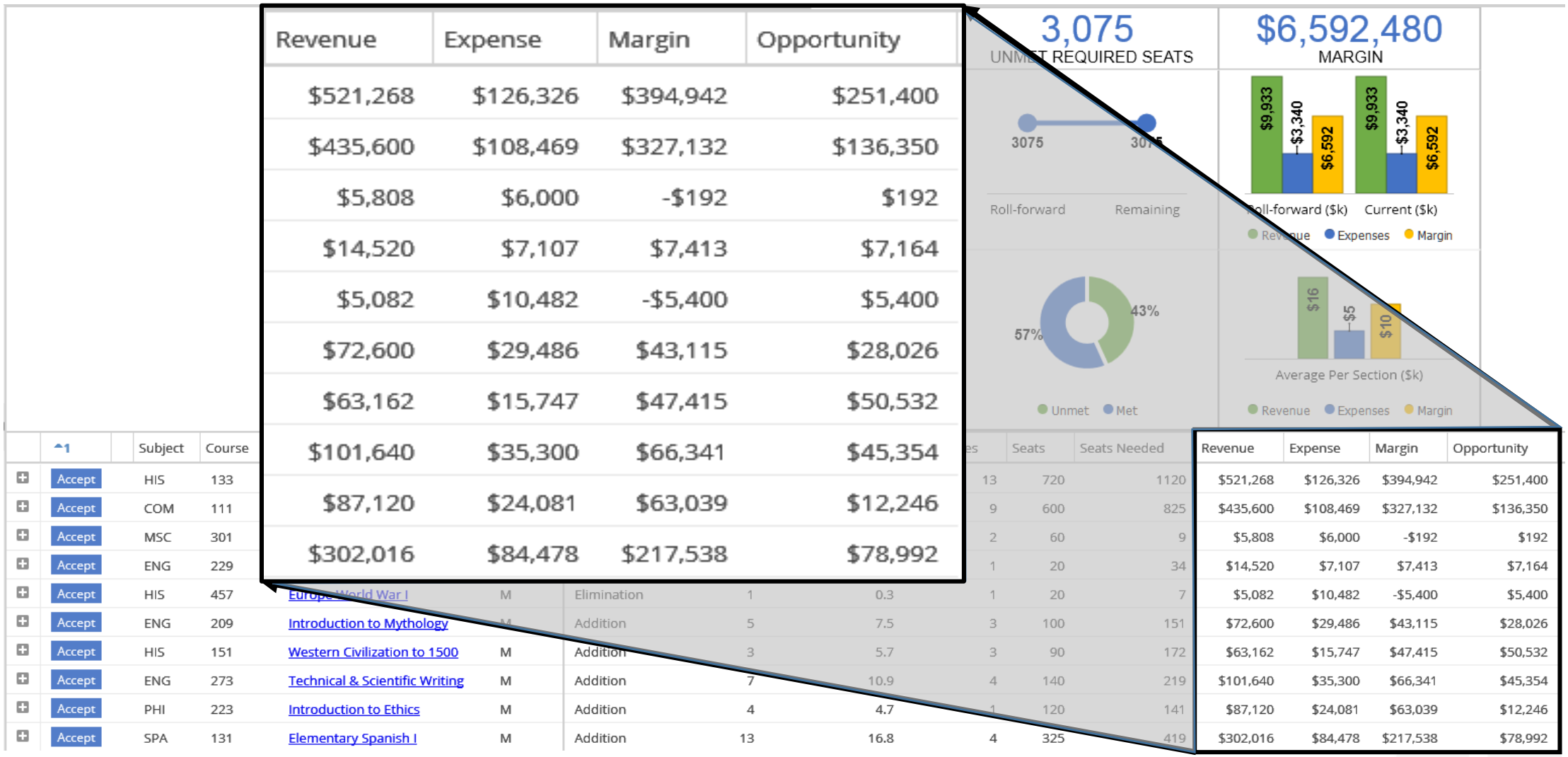
- Part-time faculty make exceptional contributions to institutions and many are dedicated to their courses, students, and institution.
- Part-time faculty are significantly less likely to experiment with teaching methods, experiment with course content, conduct research, present, or publish.
- Part-time faculty are less likely to be on campus, have fewer resources available to them, and spend 50 percent less time per credit hour on instruction than full-time faculty.
- Taking courses from a part-time faculty decreases the likelihood a student will take subsequent classes in a subject.
- Every ten percent increase in part-time faculty at public institutions is associated with a 2.65 percent decline in an institution's graduation rate.

Platinum Analytics Projected Results – Fall 2017



	^1	Subject	Course	Title	Campus	Candidate Type	Sections	Sections Needed	Candidates	Seats	Seats Needed	Revenue	Expense	Margin	Opportunity
⊞	Accept	HIS	133	U.S. History, 1000-1877	M	Addition	23	36.1	13	720	1120	$521,268	$126,326	$394,942	$251,400
⊞	Accept	COM	111	Public Speaking	M	Addition	24	33.0	9	600	825	$435,600	$108,469	$327,132	$136,350
⊞	Accept	MSC	301	Ldrshp Meth Instr & Oral Com	M	Elimination	2	0.3	2	60	9	$5,808	$6,000	-$192	$192
⊞	Accept	ENG	229	American Literature to 1865	M	Addition	1	1.7	1	20	34	$14,520	$7,107	$7,413	$7,164
⊞	Accept	HIS	457	Europe World War I	M	Elimination	1	0.3	1	20	7	$5,082	$10,482	-$5,400	$5,400
⊞	Accept	ENG	209	Introduction to Mythology	M	Addition	5	7.5	3	100	151	$72,600	$29,486	$43,115	$28,026
⊞	Accept	HIS	151	Western Civilization to 1500	M	Addition	3	5.7	3	90	172	$63,162	$15,747	$47,415	$50,532
⊞	Accept	ENG	273	Technical & Scientific Writing	M	Addition	7	10.9	4	140	219	$101,640	$35,300	$66,341	$45,354
⊞	Accept	PHI	223	Introduction to Ethics	M	Addition	4	4.7	1	120	141	$87,120	$24,081	$63,039	$12,246
⊞	Accept	SPA	131	Elementary Spanish I	M	Addition	13	16.8	4	325	419	$302,016	$84,478	$217,538	$78,992

Platinum Analytics Projected Financial Data – Fall 2017



Revenue	Expense	Margin	Opportunity
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⊞	Accept		ENG	209	Introduction to Mythology	M	Addition	5	7.5	3	100	151	
⊞	Accept		HIS	151	Western Civilization to 1500	M	Addition	3	5.7	3	90	172	
⊞	Accept		ENG	273	Technical & Scientific Writing	M	Addition	7	10.9	4	140	219	
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Faculty Positions Created to Meet Demand

Program	Positions Discussed	Positions Approved	Positions Created	Positions Filled
Mathematics	3	3	1	1
Chemistry	1	1	1	1
History	4	4	3	3
English	4	4	4	4
Communication Studies	4	4	3	3
Philosophy	0	1	1	1
Political Science	2	2	2	2
Total	**18**	**19**	**15**	**15**

*Converted Fulltime Adjunct with No Backfill

Fall 2017 Results

Subject	Analysis Projected Enrollment	Total GenEd Seats Offered	Total GenEd Enrollment	GenEd Enrollment Ratio	New Sections	Enrollment Gain	Enrollment Gain Gross Tuition Revenue	New Lecturer Cost (Semester)	Net Tuition Revenue
CHE	688	662	647	97.73%	3	242	$120,516	$32,250	$88,266
COM	1,665	1,400	1,336	95.43%	13	318	$230,868	$77,400	$153,468
ENG	2,435	2,569	2,458	95.68%	16	307	$222,882	$103,200	$119,682
HIS	2,631	2,373	2,181	91.91%	10	329	$238,854	$77,400	$161,454
MTH	2,214	1,814	1,928	94.00%	6	199	$144,474	$29,025	$115,449
PHI	612	536	520	97.01%	4	115	$83,490	$25,800	$57,690
PSC	2,744	2,121	1,992	93.92%	6	260	$188,760	$51,600	$137,160
					58	**1770**	**$1,229,844**	**$396,675**	**$833,169**

Stephen F. Austin University Results

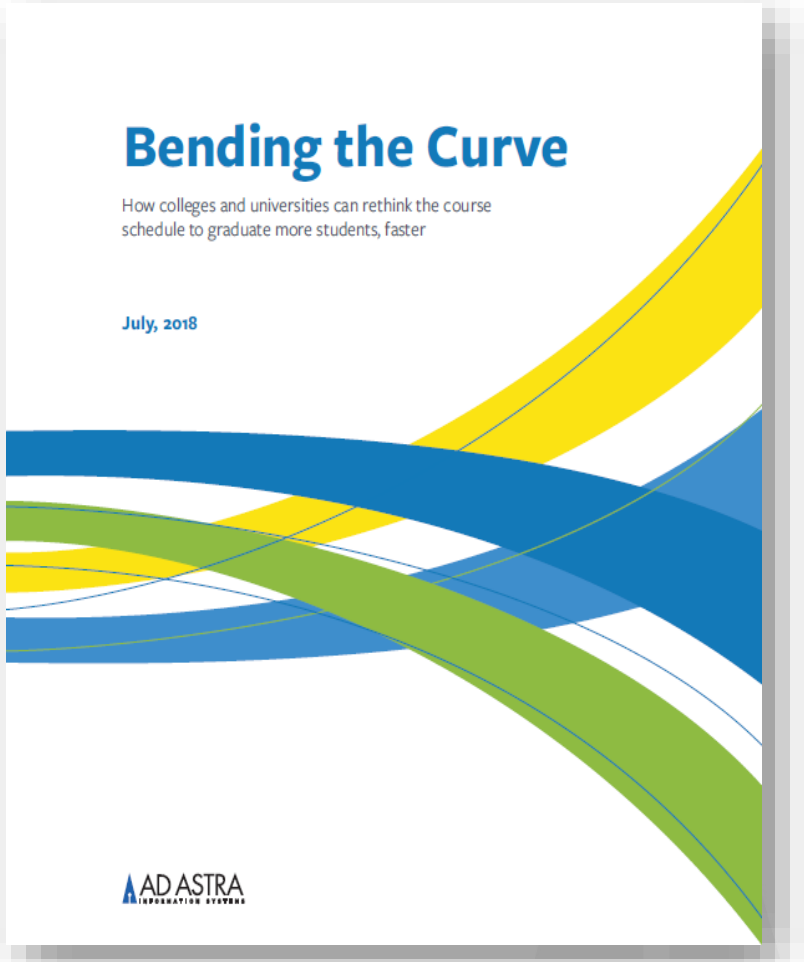
- Over 1,750 students were able to get courses they needed.
- New faculty generated 5,082 SCH, a 3,000 total SCH increase within the GenEd control group from the previous fall term.
- New faculty generated their *annual salaries* plus $833,169 in net revenue in Fall 2017 and $743,387 in net revenue in Spring 2018.
- Total AY net revenue of $1,576,556!
- Proof of Concept
- Departmental Champions

Creating an “Everyone Wins” Scenario

- Greater course access for students.
- Increasing number of full-time faculty.
- Increased credit hour generation
- Greater facility utilization
- Guaranteed employment for full-time faculty.
- Ease departmental needs with full-time faculty.
- Generated margin in the process.

Bending the Curve: Index of Topics Addressed

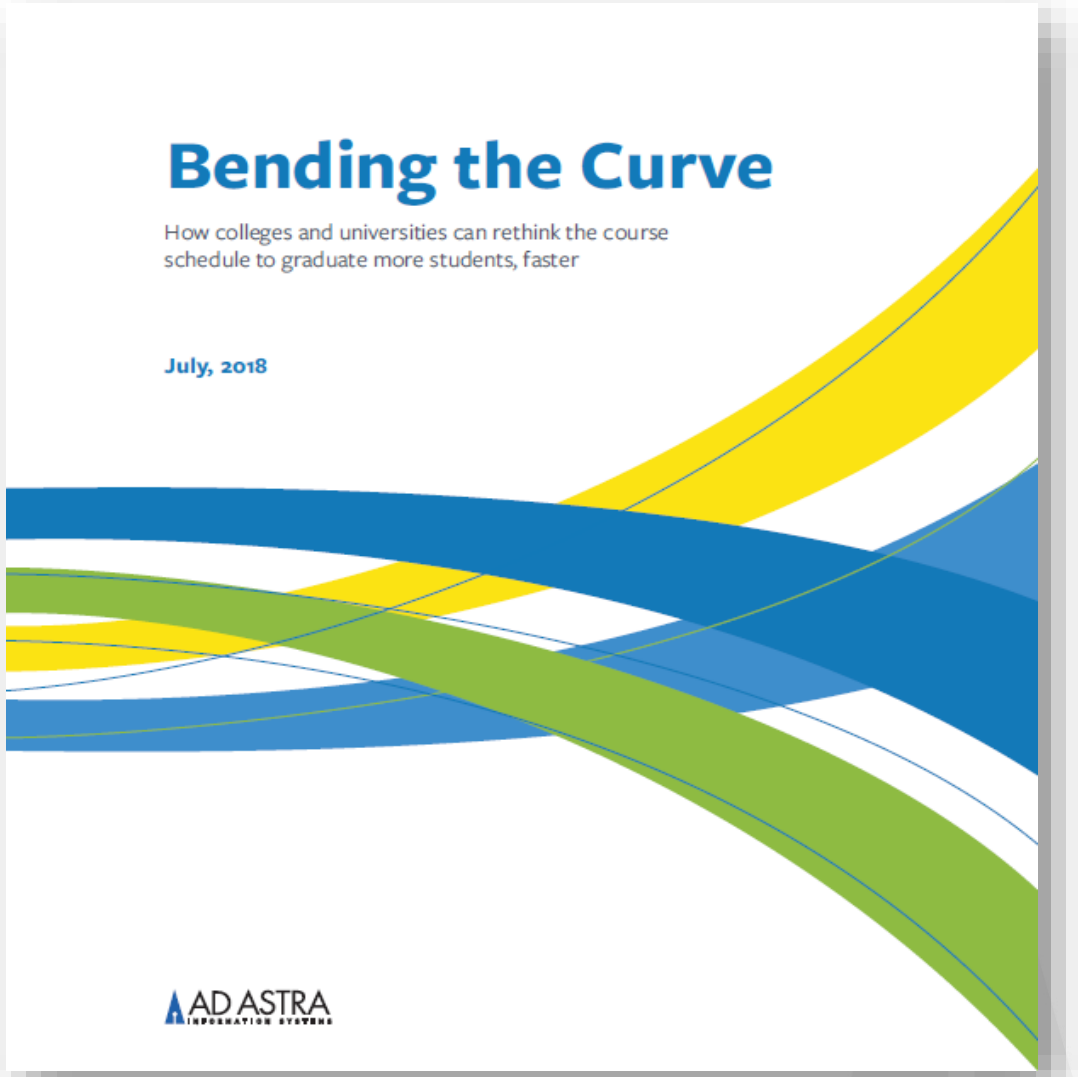
- Adult Learner/At-Risk Students
- Cost Alignment
- Course Pathways
- Decreasing Reliance of Part-Time Faculty
- Expanding Full-Time Faculty
- First-Year Retention
- Increasing Student Credit Hour Production
- Revenue Generation
- Scheduling Optimization
- Six-Year Graduation Rates



Keys to Remember

- Effective scheduling can improve retention.
- Waste matters when it comes to graduation.
- Break down the schedule into manageable parts and foster change.

Institutions of higher education can use the course schedule to positively influence student outcomes including the institutional graduation rate.



Opportunities for Engagement!

- *Bending the Curve*
- College Promise Campaign (with Martha Kanter)
- Aspire - October 14 – 17 in Kansas City
- NACUBO Integrating Analytics Forum – November 28 – 30 in Phoenix
- Contact me jbarnshaw@aais.com about presenting or Customized Research Solutions.

Addressing Your Questions, Comments, Critiques