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The Brightening Path

Placement Strategies, Readiness, and Corequisite Support

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THE HISTORY OF PLACEMENT

- Remediation began at Harvard with Latin tutoring in the 1600s and freshman comp in the 1800s
- In the 1920's, college readiness predictors were first studied scientifically, including IQ and HSGPA. HSGPA was found to be the best predictor and has been used for competitive admissions ever since.
- With community colleges and the open door came a rejection of HSGPA as elitist, in favor of standardized tests for fairness and objectivity

THE HISTORY OF PLACEMENT

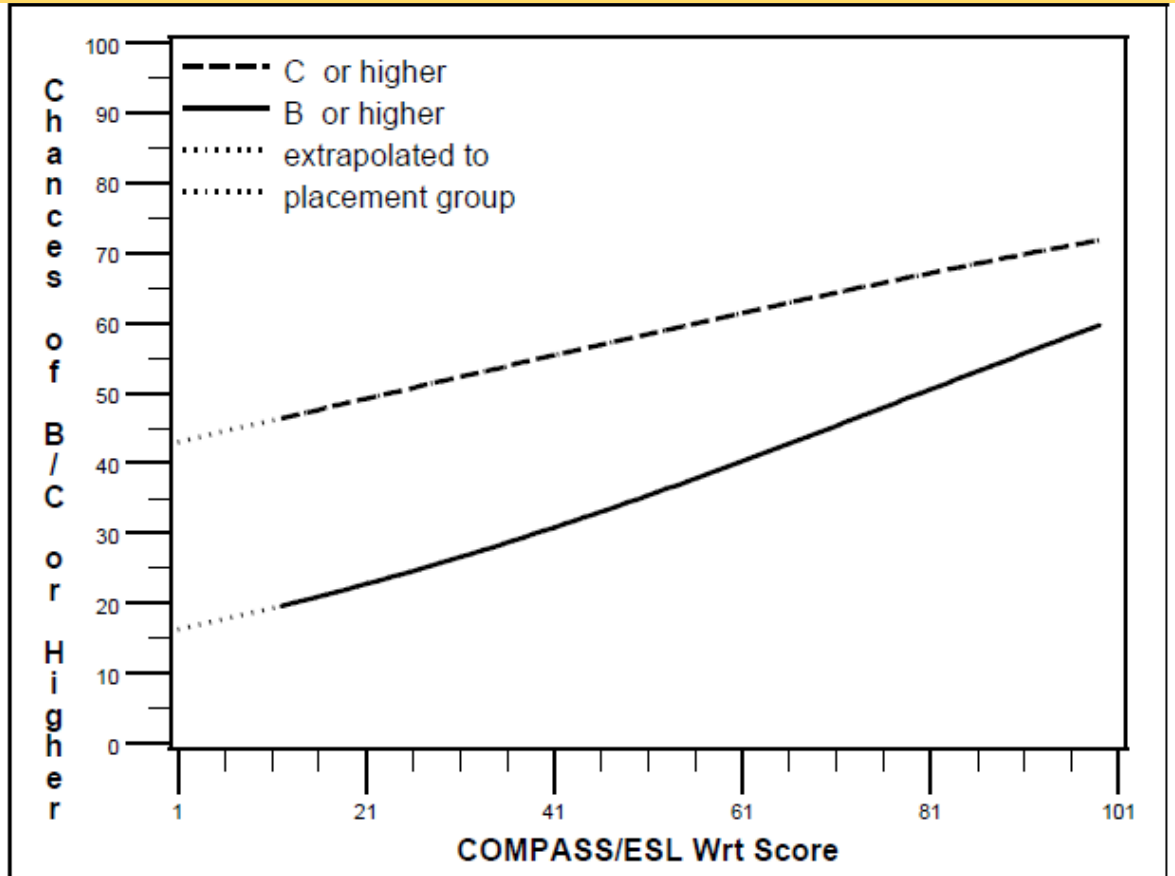
- In the 1980's, the accountability movement brought a new focus on outcomes, and therefore consequence validity
- In California, William Armstrong showed that the two best predictors of college grades were HSGPA and who the college instructors were. This started us on the road to HSGPA and multiple measures
- With some new arrivals: placement by diplomas., degrees, military service, noncognitive assessments

What is good about tests?

- They are cheap, and relatively quick
- They appear to be fair since they are standardized
- They measure important subjects
- They are predictively valid
- Placement tests are usually created by experts, meaning psychometricians in consultation with SMEs

Is this data from a North Carolina or a South Carolina COMPASS Study?

	COMPASS/ESL Wrt Score		Chance (percent)	
	Score	Cumulative N-count*	B or higher	C or higher
	99	8946	60	72
	98	7893	59	72
	97	7330	59	71
	96	6850	58	71
	95	6556	58	71
	94	6352	57	71
	93	5491	57	70
	91	5067	56	70
	89	4662	55	69
	87	4202	54	69
	85	3407	53	68
	84	3121	52	68
	82	2939	51	67
opt. B	**81**	2565	51	67
	79	2185	49	67
	78	1799	49	66
	76	1458	48	66
	74	1235	47	65
	73	889	46	65
	70	579	45	64
	69	225	44	64
	65	188	42	63
	61	168	40	61
	60	143	40	61
	56	132	38	60
	52	109	36	59
	51	100	35	58
	42	61	31	56
	35	46	28	54
	25	18	24	50
opt. C	**24**	14	24	50
	18	13	22	48
	1		16	43

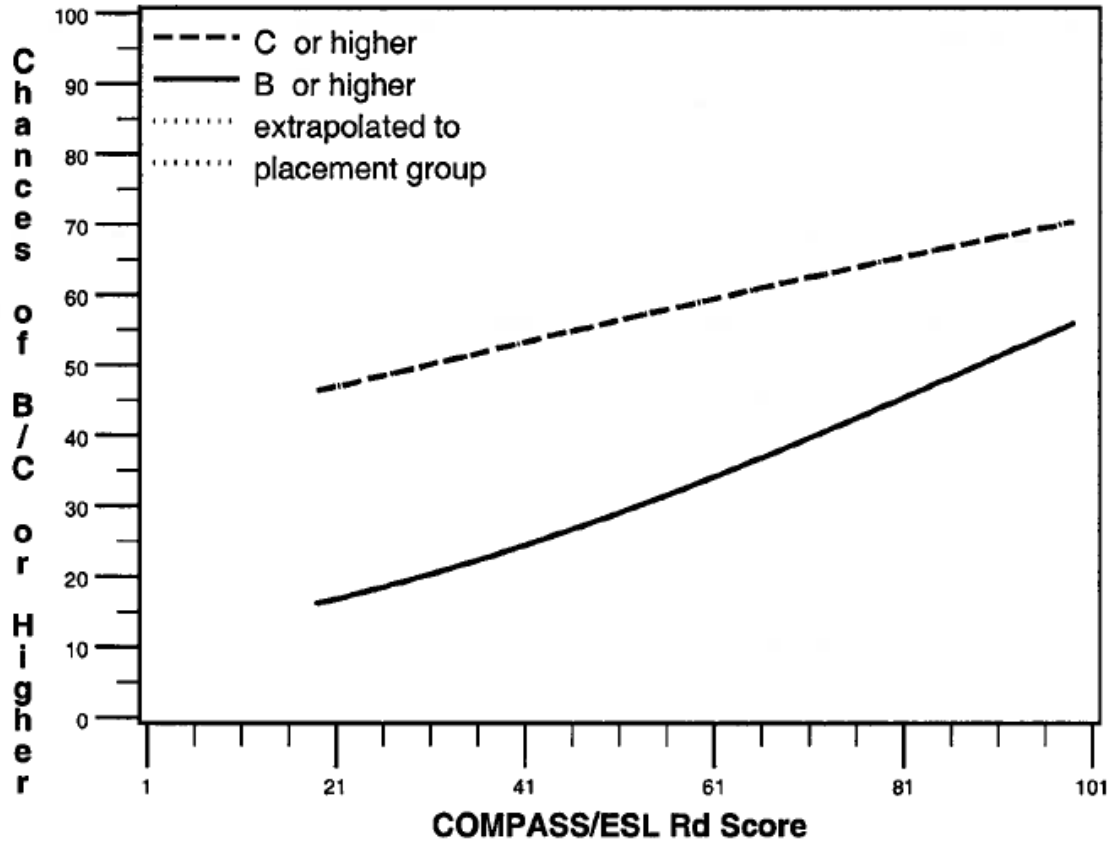


Example: If the chance of B or higher corresponding to an COMPASS/ESL Writing Score of 81 is 51, then we would expect that about 51 out of 100 students with an COMPASS/ESL Writing Score of 81 would be successful in ENG 110 Group.

Note: The 'opt.' labeled score refers to the optimal cutoff score for each success criteria.

Is this data from a North Carolina or a South Carolina COMPASS Study?

	COMPASS/ESL Rd Score		Chance (percent)	
	Score	Cumulative N-count*	B or higher	C or higher
	99	10845	56	70
	98	10490	55	70
	97	10279	55	70
	96	9917	54	70
	95	9522	54	69
	94	9065	53	69
	93	8602	52	69
	92	8081	52	68
	91	7540	51	68
	90	7021	51	68
opt. B	**89**	6488	50	68
	88	5965	49	67
	87	5430	49	67
	86	4876	48	67
	85	4376	48	67
	84	3960	47	66
	83	3557	46	66
	82	3192	46	66
	81	2829	45	65
	80	2480	45	65
	79	2210	44	65
	78	1965	44	65
	77	1753	43	64
	76	1594	42	64
	75	1425	42	64
	74	1288	41	63
	73	1170	41	63
	72	1038	40	63
	71	925	40	62
	70	837	39	62
	69	749	38	62
opt. C	**31**	10	20	50
	19	3	16	46

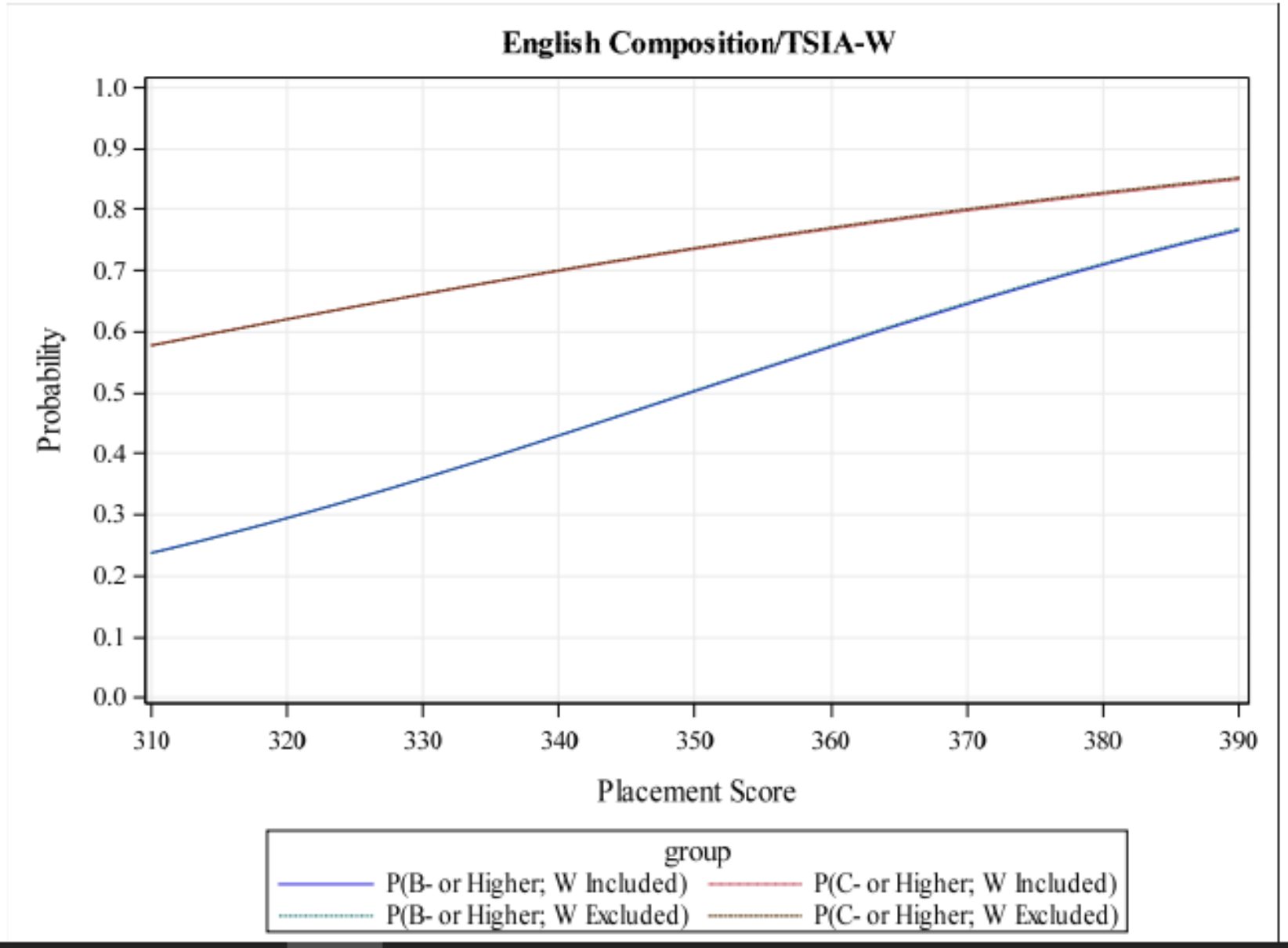


Example: If the chance of B or higher corresponding to an COMPASS/ESL Reading Score of 89 is 50, then we would expect that about 50 out of 100 students with an COMPASS/ESL Reading Score of 89 would be successful in Eng 101.

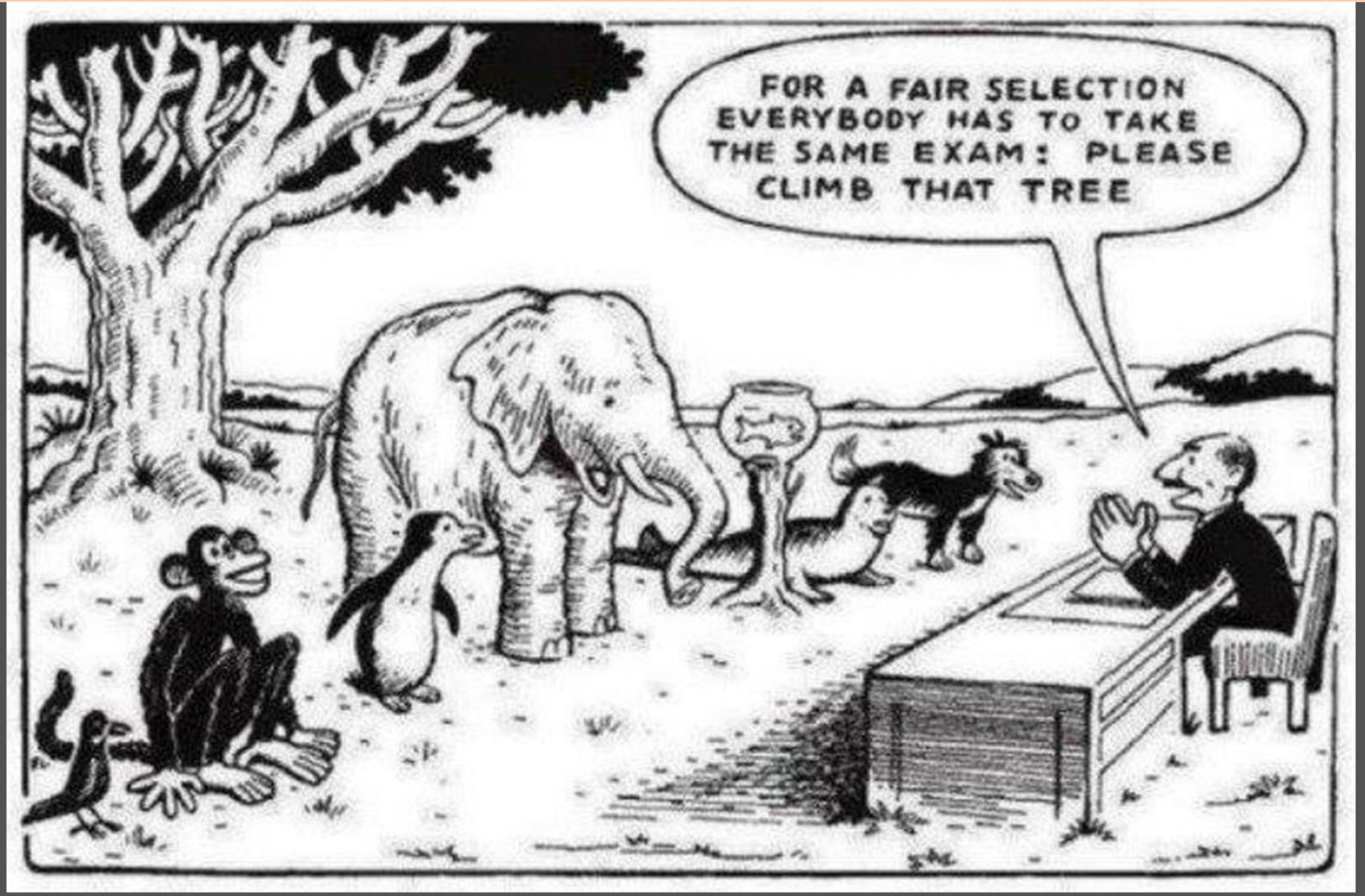
Note: The 'opt.' labeled score refers to the optimal cutoff score for each success criteria.

Or Texas and the TSIA-W?

Figure 4: Expected Probability of Successful English Composition Course Completion Predicted by TSIA-W



What is wrong with tests?



What is wrong with tests?

- Students are not standard. This is why education can never be standardized
- The tests miss other important subjects
- Tests mostly snapshot content knowledge in an artificial environment
- Tests are relatively weak predictors

Tests are not the problem. The tests generally do exactly what they are designed to do

- Tests predict tests, while grades predict grades, yet we have traditionally used tests to predict grades

Long Beach City College results are interesting: left = predicting placement test; right = predicting college grade

LBCC Institutional Research Application – Executive Summary
Mertes Award for Excellence in Community College Research

Figure 1. Ordinal regression coefficients predicting level student assessment in English.

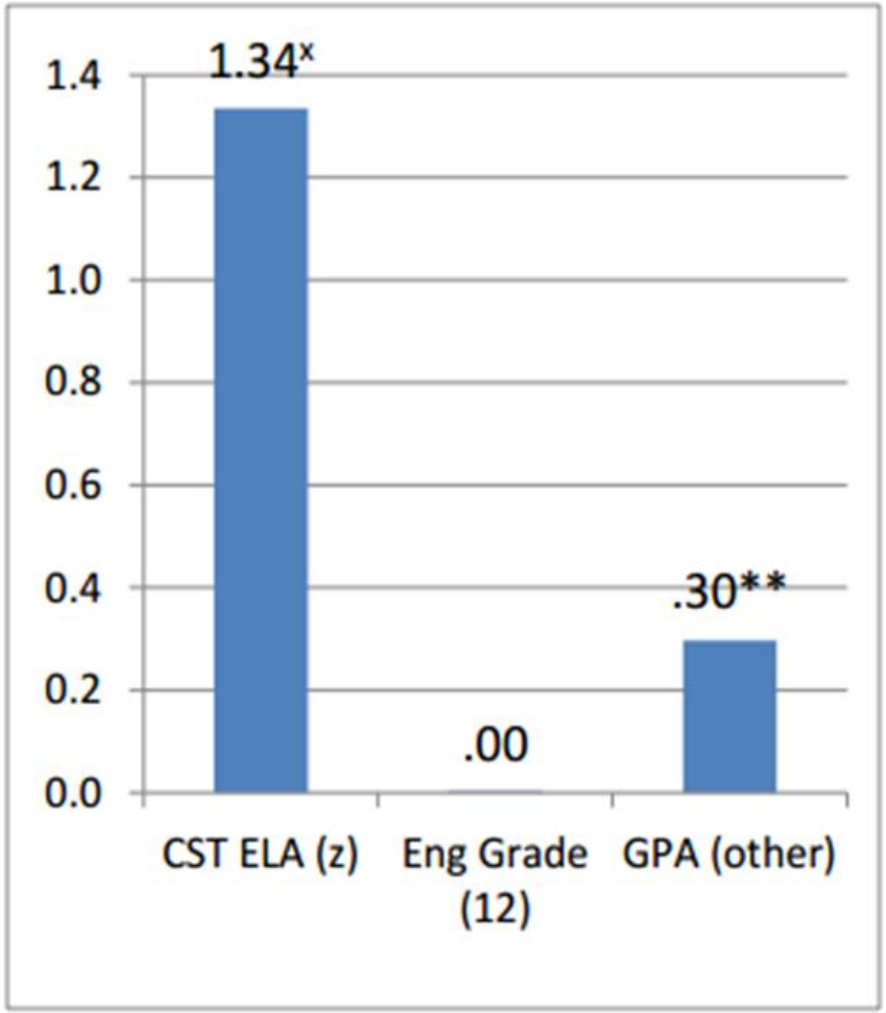
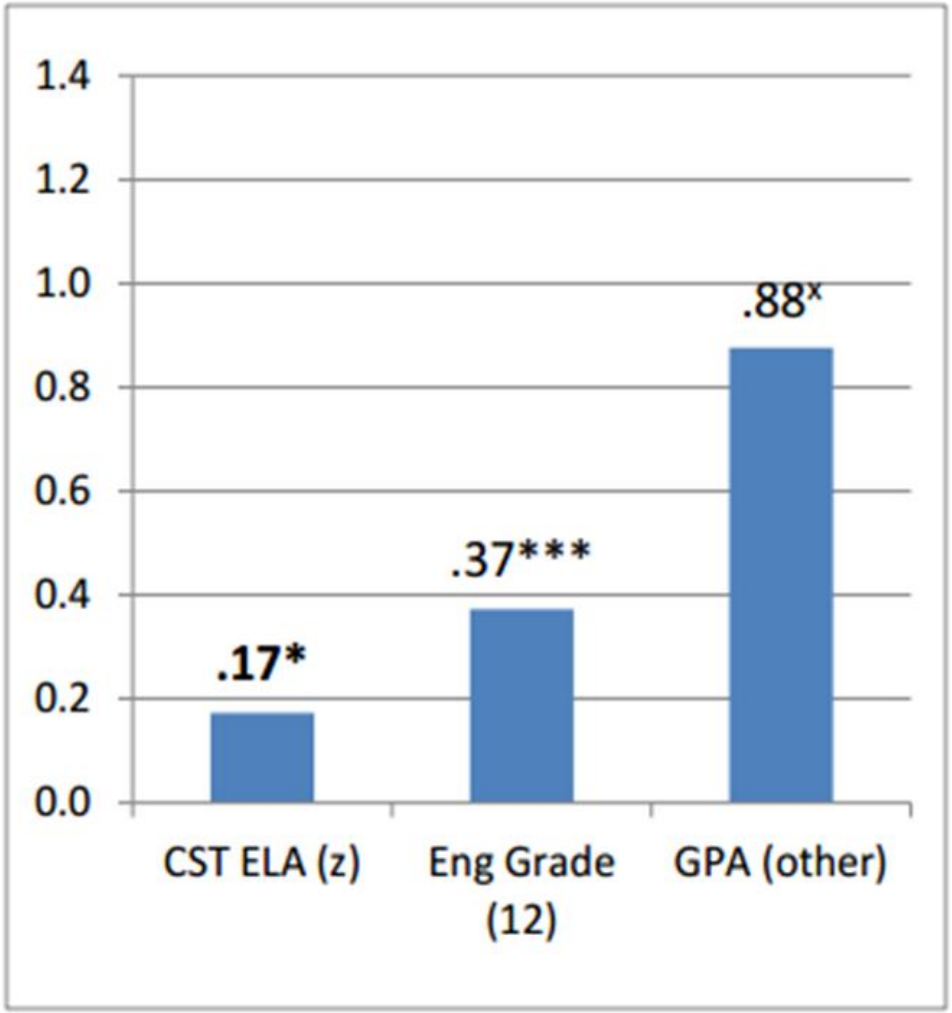


Figure 2. Logistic regression coefficients predicting student performance in English.



And for math. The high school math test predicts the math placement test score well. HSGPA predicts college GPA

Figure 3. Ordinal regression coefficients predicting level student assessment in Math.

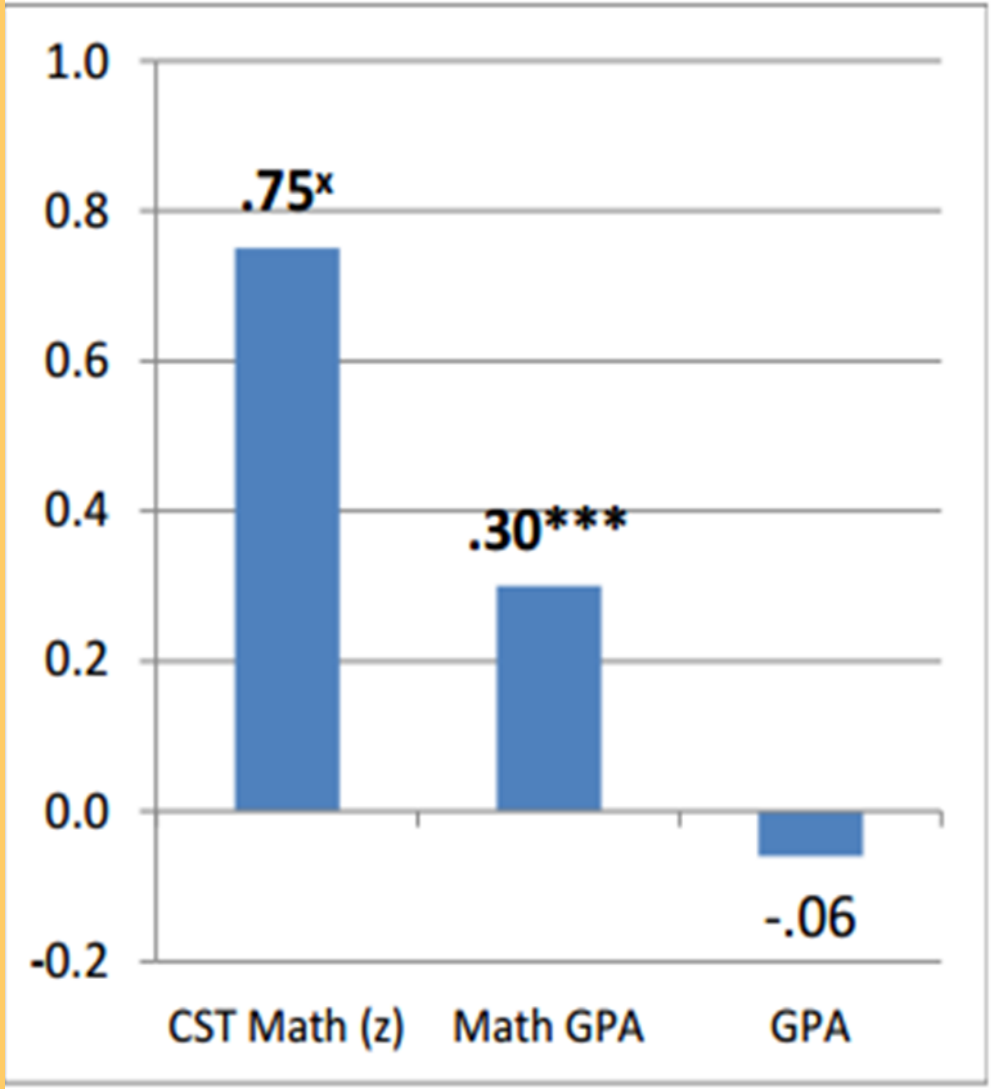
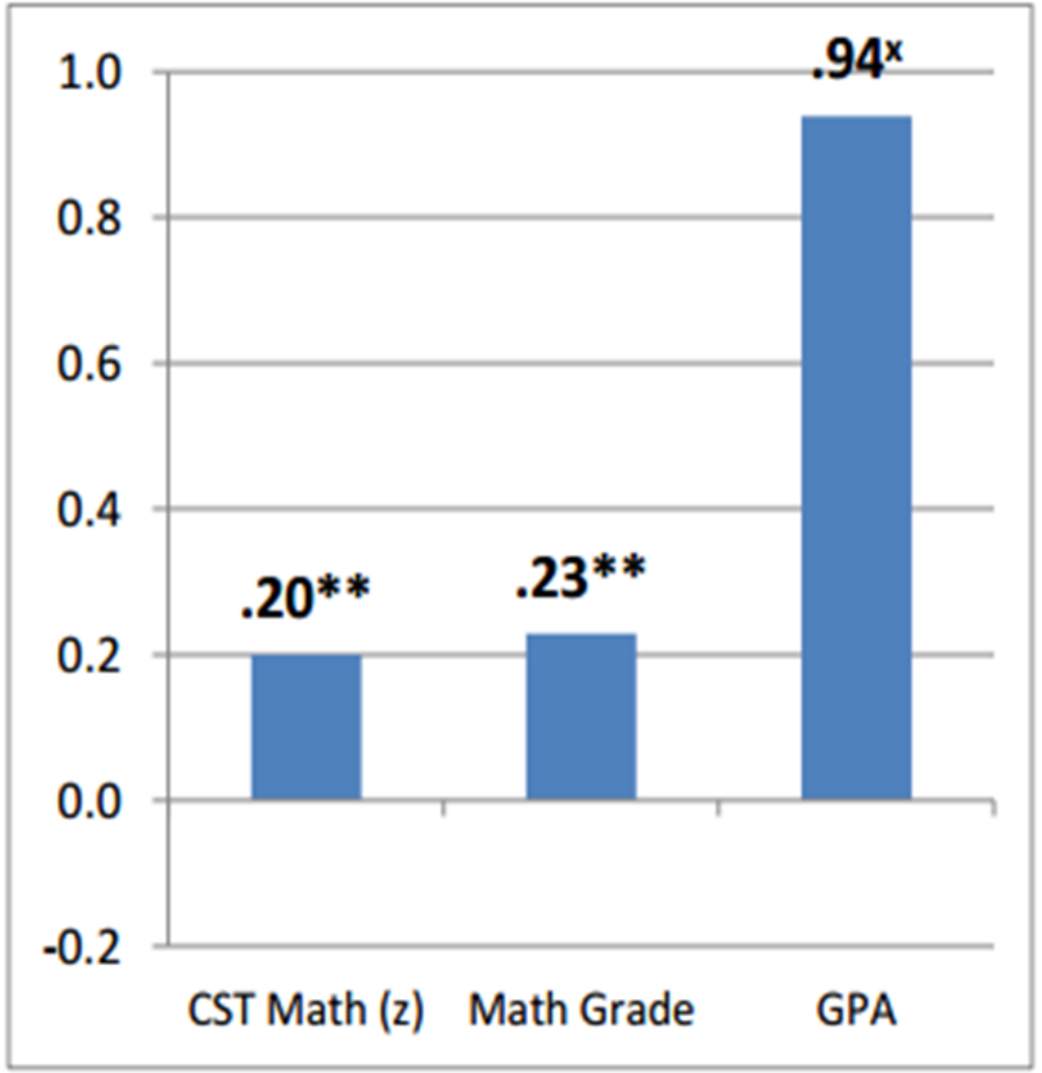


Figure 4. Logistic regression coefficients predicting student performance in Math.



* p <.05 **, p <.01, *** p<.001, x = p< 1 x 10^{-18}

*D*_____

- The student is older, so had to take the placement test, yet has test anxiety. Placed at the bottom in math, and one level below for reading and English. Had a 100 on the classwork, an 85 on the final exam, and a 79 on the in-class essay
- Mastery level is set at 80, so the student failed and has to retake the class
- Student is an abuse victim with a dangerous ex living 7 hours away
- Student is homeless and living in a storage unit
- Student did not show up to class last week

What about the High School GPA

- Free and potentially immediate
- Measures many subjects
- Measures a broad set of skills over time
- Is a relatively strong predictor
- Respects prior learning
- Grades are given by experts

*M*_____

- Student graduates from high school
- Just spent 12 years writing papers
- GPA and test scores are below the cut
- Student is told he can’t start learning to write papers in college
- What are we doing wrong?

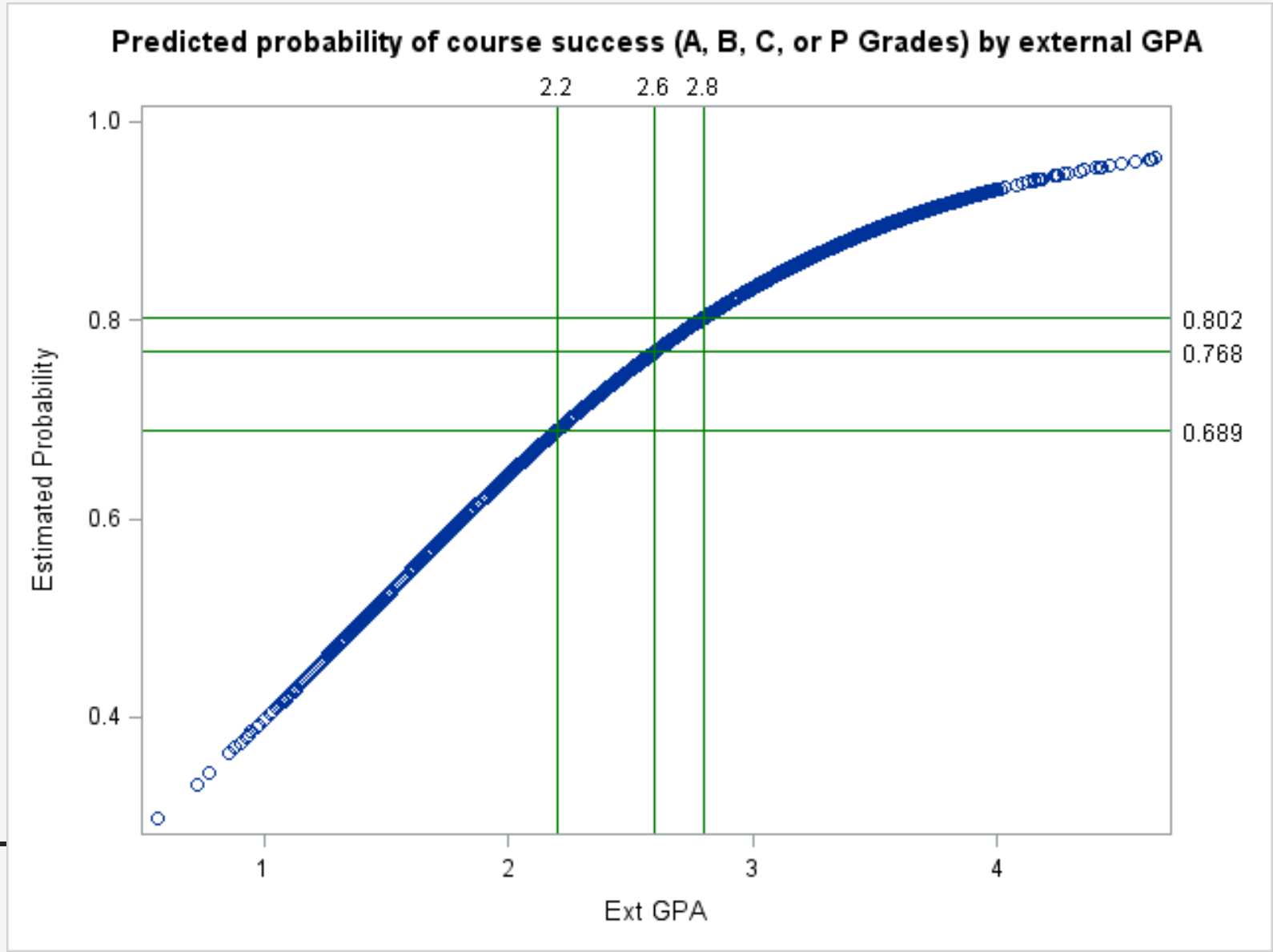
Question:

- Is it our job to generate incapacity?

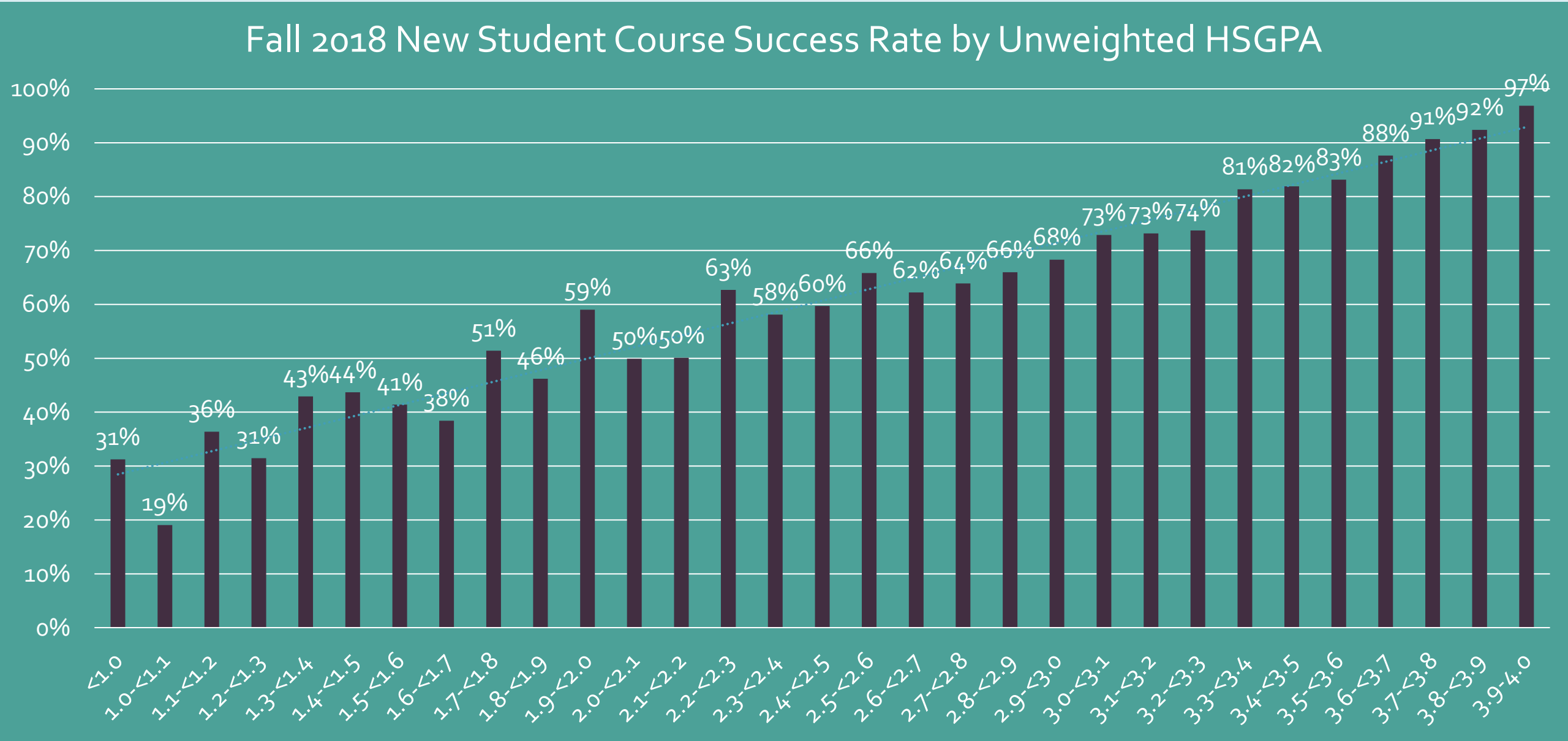
College readiness is much broader than a test score

- Financial?
- Social?
- Language?
- Science? Economics? Communication? Humanities?
- Family support?
- Technology?
- Emotional?
- Psychological?

Central Piedmont and Wake Tech data together show that same kind of relationship



There is a strong relationship between HSGPA and course success rates for new students at Central Piedmont



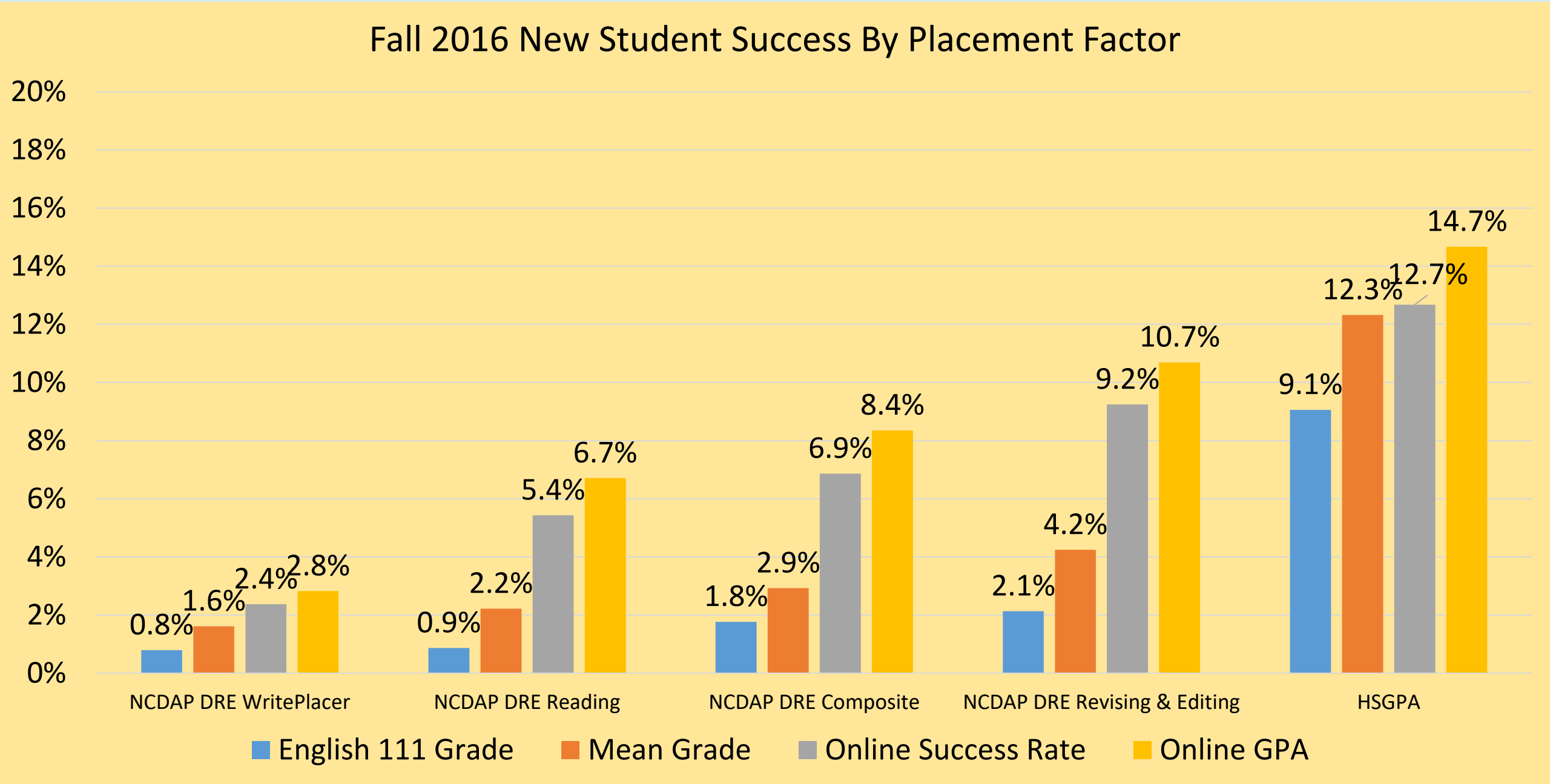
In 2013, the presidents voted to adopt high school GPA 2.6 + a college prep 4^{th} math

- And standardized ACT and SAT scores
- Customized NCDAP placement test by ACCUPLACER
- Modularized math
- Combined reading and English
- Shortened the remedial sequence

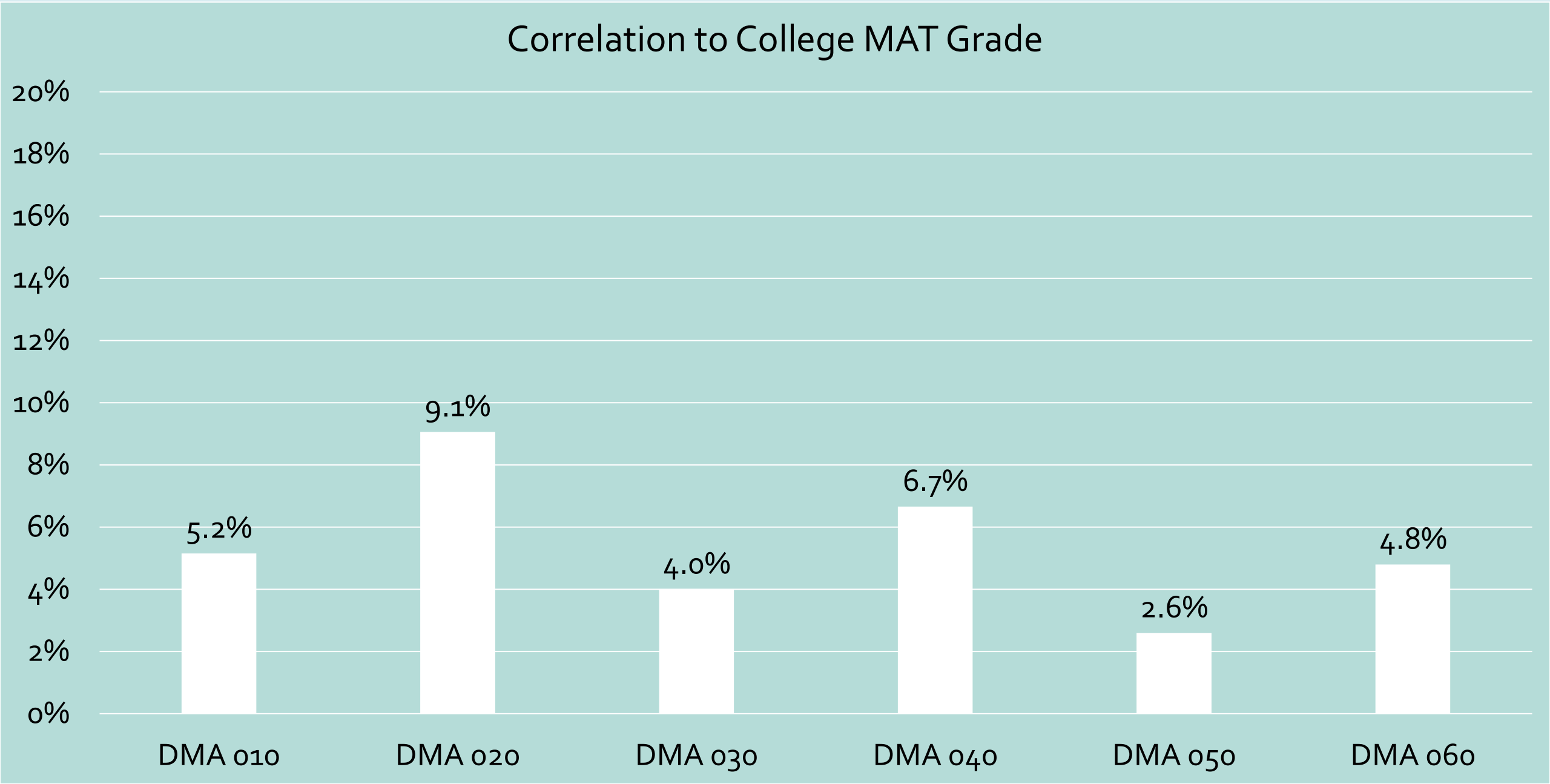
What about the High School GPA

- HSGPA predicts about 15% of first-term college grades, but with a range something like 9% to 17%
- Placement tests, including the TSIA, predict anywhere from 0% to 10% of first-term grades
- You can check out the validity report on that test and see what you will see with any professionally created placement test, such as NCDAP, also created by College Board (see next slides)

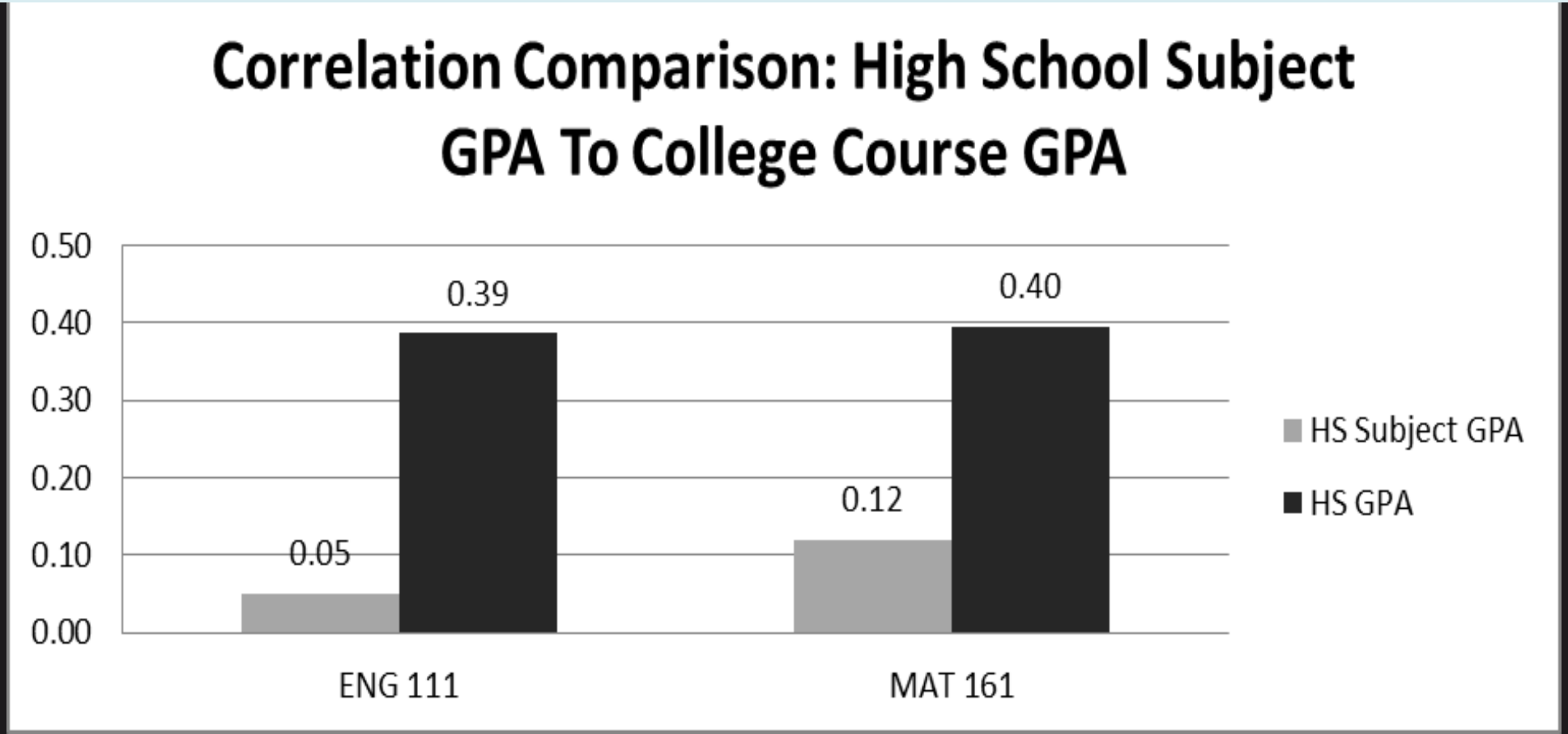
NCDAP scores are statistically significant predictors of 1st term grades. DRE test sections correlated between 2% and 4% of fall grades, more for online. HSGPA has the highest correlations, excepting College GPA at 16.8%



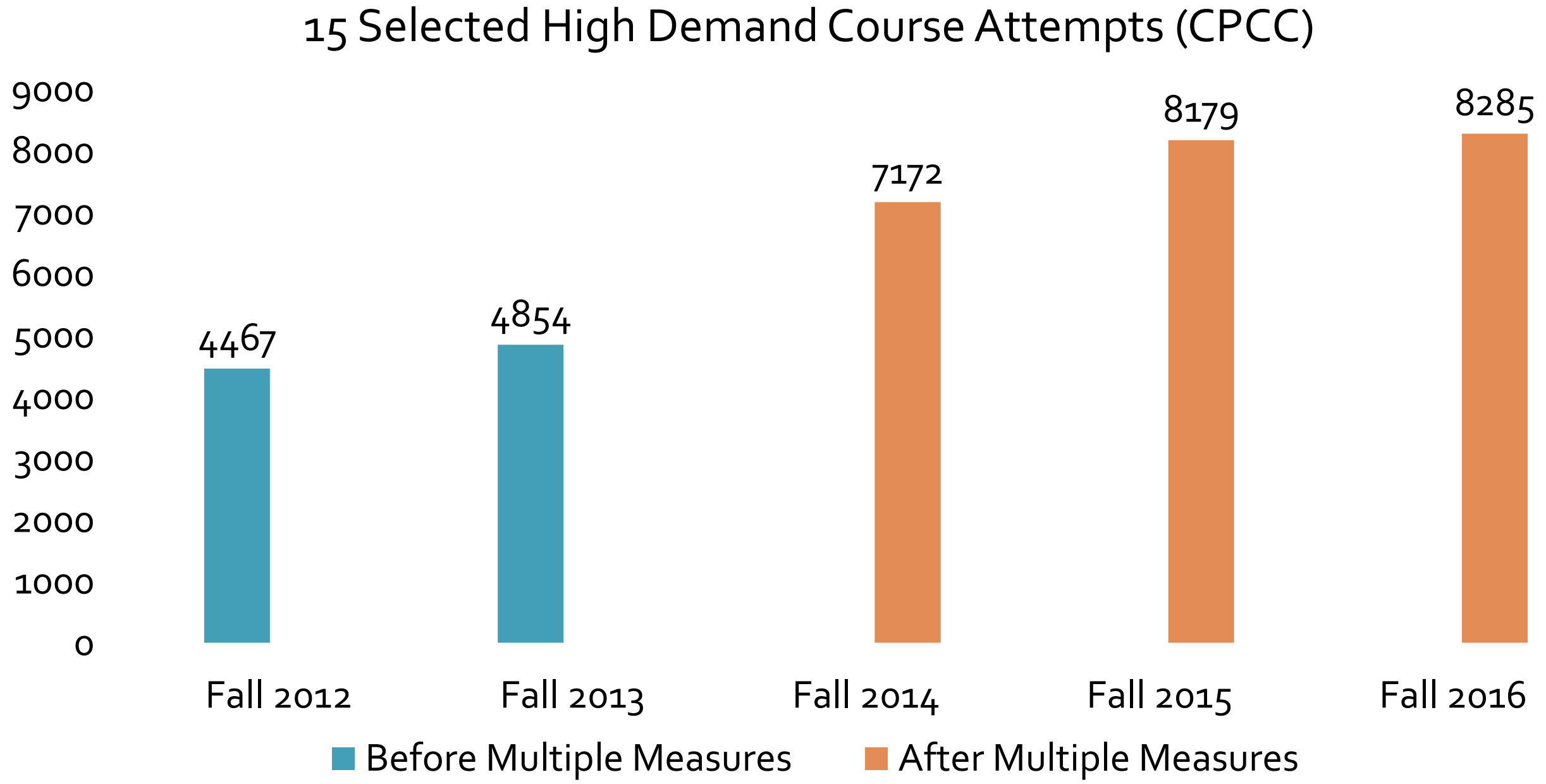
NCDAP scores are statistically significant predictors of 1st term college math grades. DMA test sections correlated between 2.6% and 9.1% of fall MAT grades



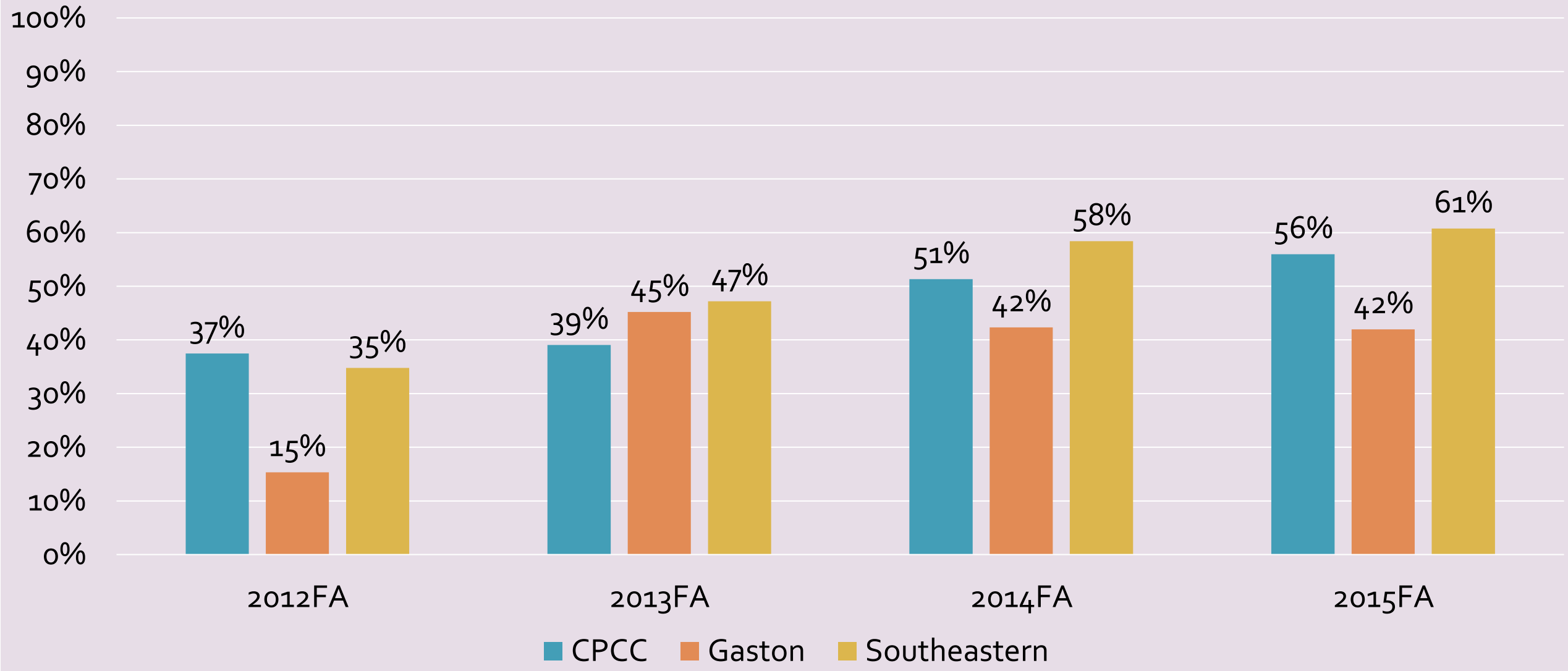
People often ask, why not use individual subject grades in English and math? The reason is that individual high school subject grades are nowhere near as predictive as overall GPA. The CCRC study showed a large difference in correlation, even for predicting math grades. GPA encompasses student skills, not just narrow content knowledge



Multiple Measures Placement Reform NC: Gateway Enrollments

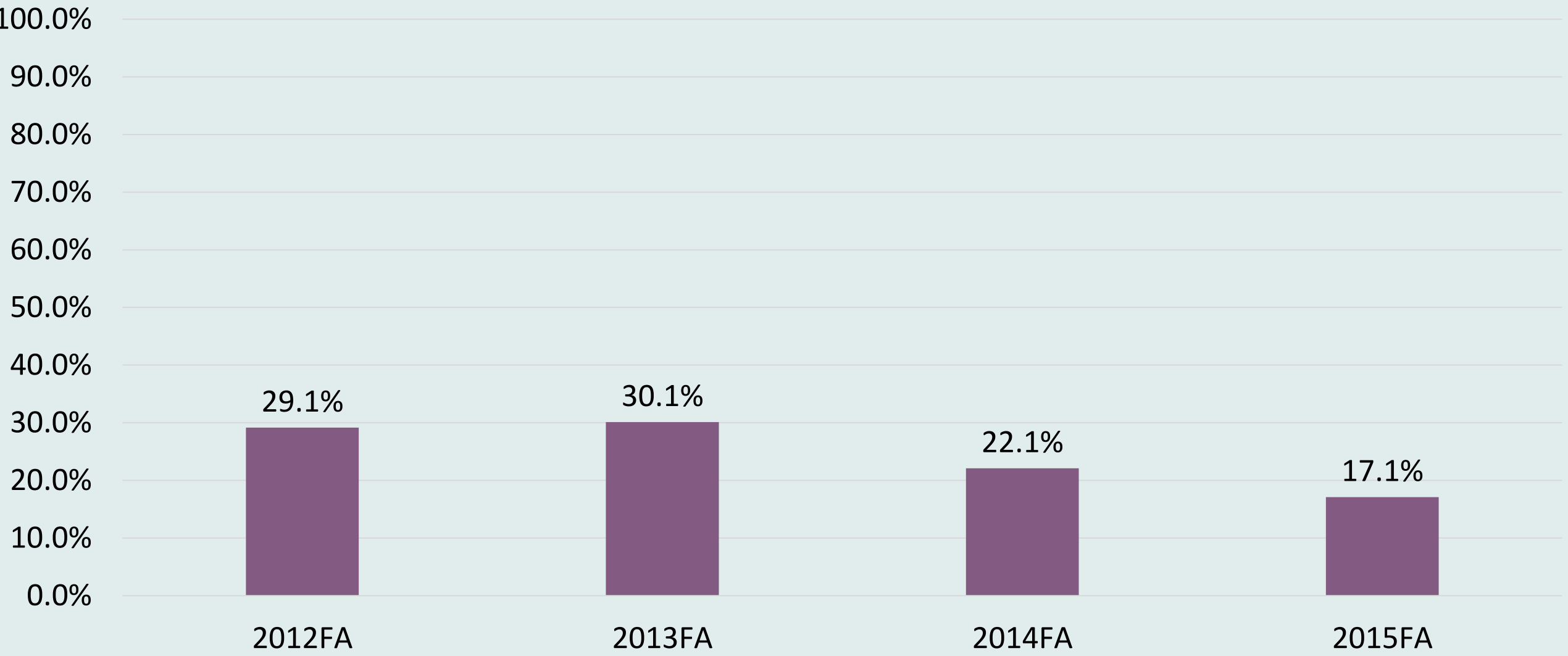


Percent Placed At College Level



The percentage of new curriculum students placed at college level has significantly increased

Percentage Of Placed Students With Remedial English And Math Placement (Below ENG 111 and MAT 171)



The percentage of students placing below ENG 111 ***and*** MAT 171 has fallen and continues to drop.

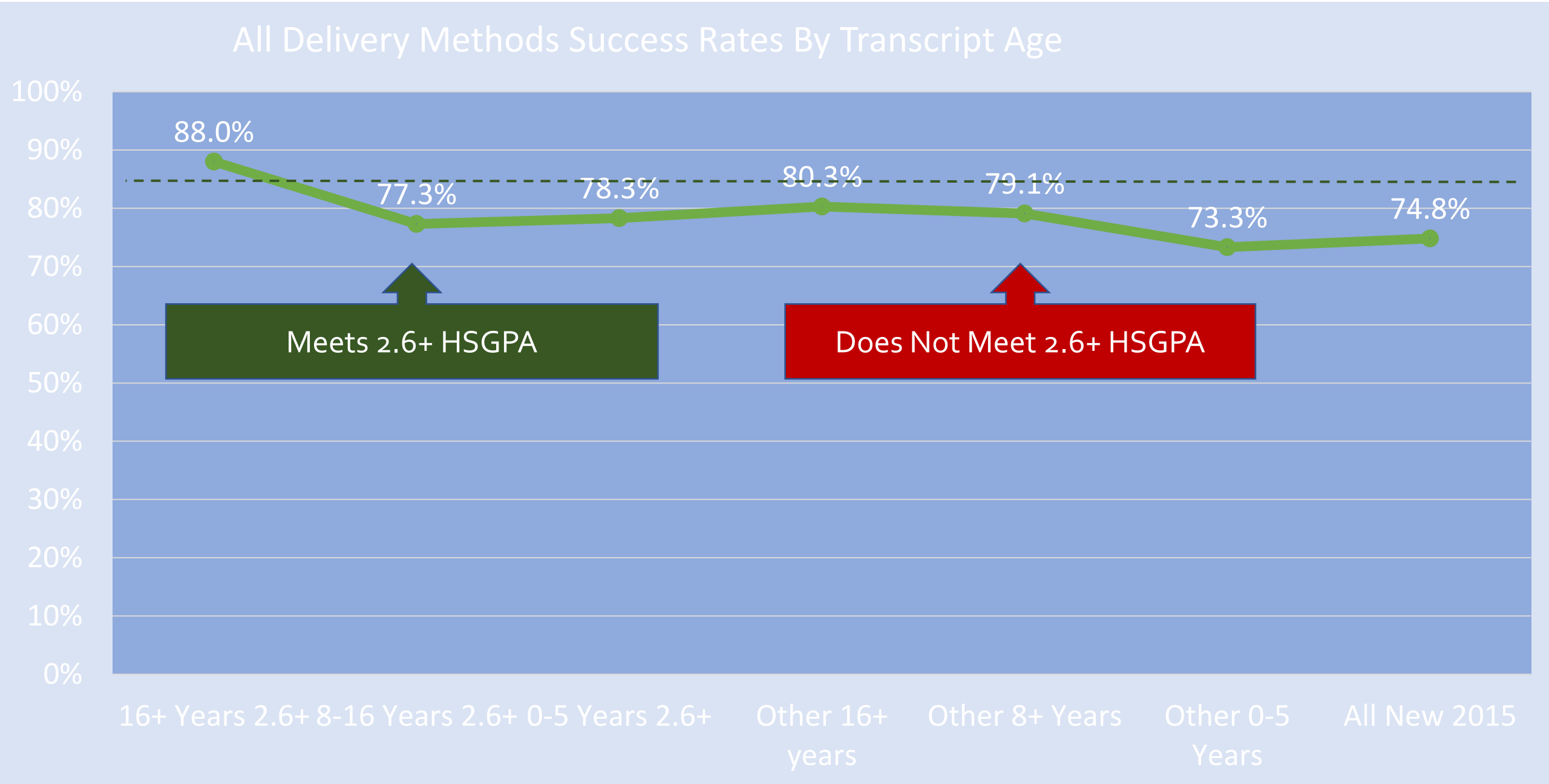
Should placement data expire?

- What do you think?

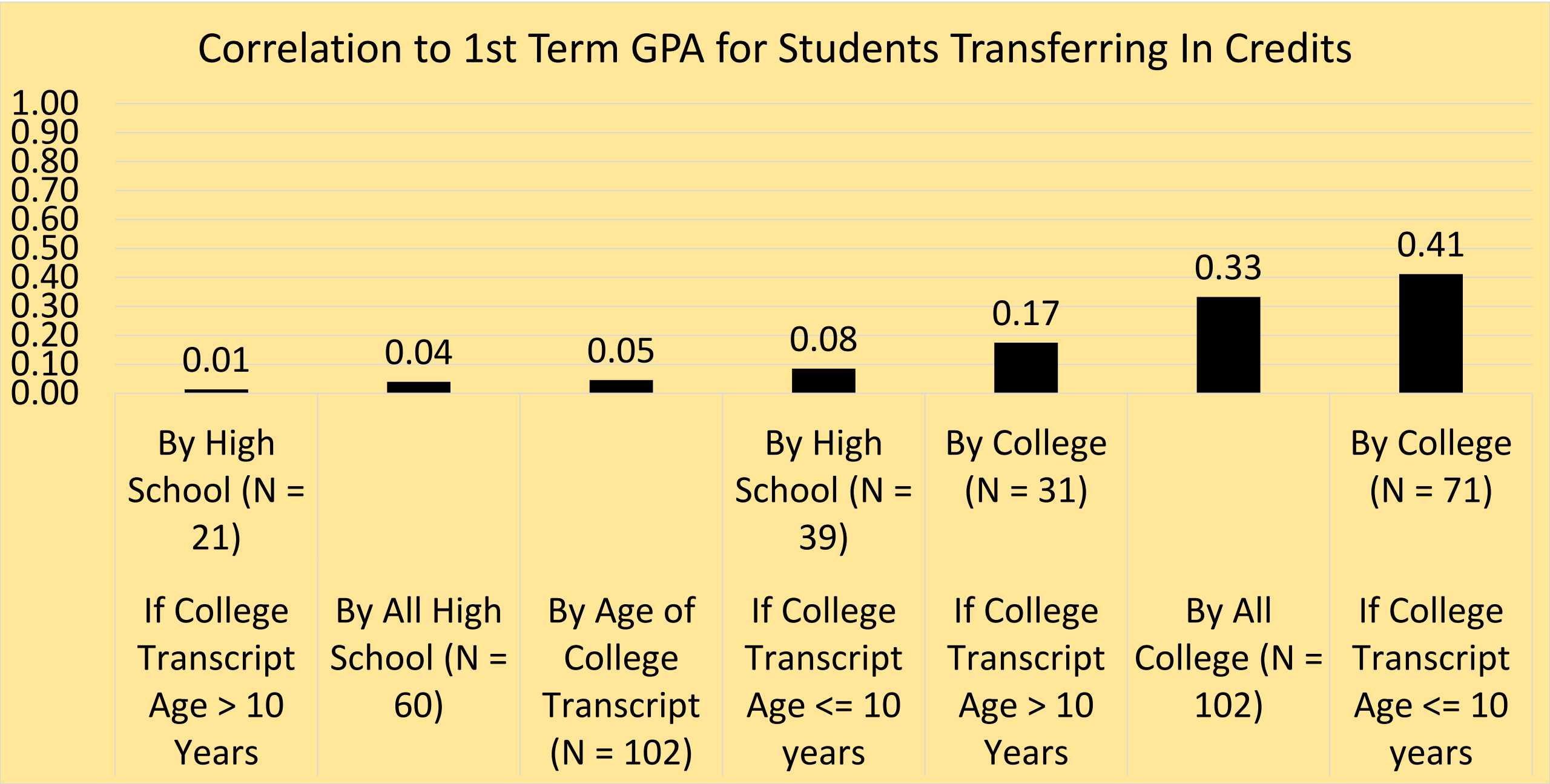
Expiration Dates Cost $

- Moving from a 5-year to a 10-year expiration date would save students $181,440 per fall term at my college
- Or $3,000,000 per year across all 58 NCCCS colleges
- An unlimited policy could save $4,250,000 per year across the 58 colleges
- And boost, not reduce, completion rates

It turns out, a student with a 16+-year-old HSGPA below 2.6 will succeed at a higher rate than a freshly-graduated student with a 2.6+ HSGPA



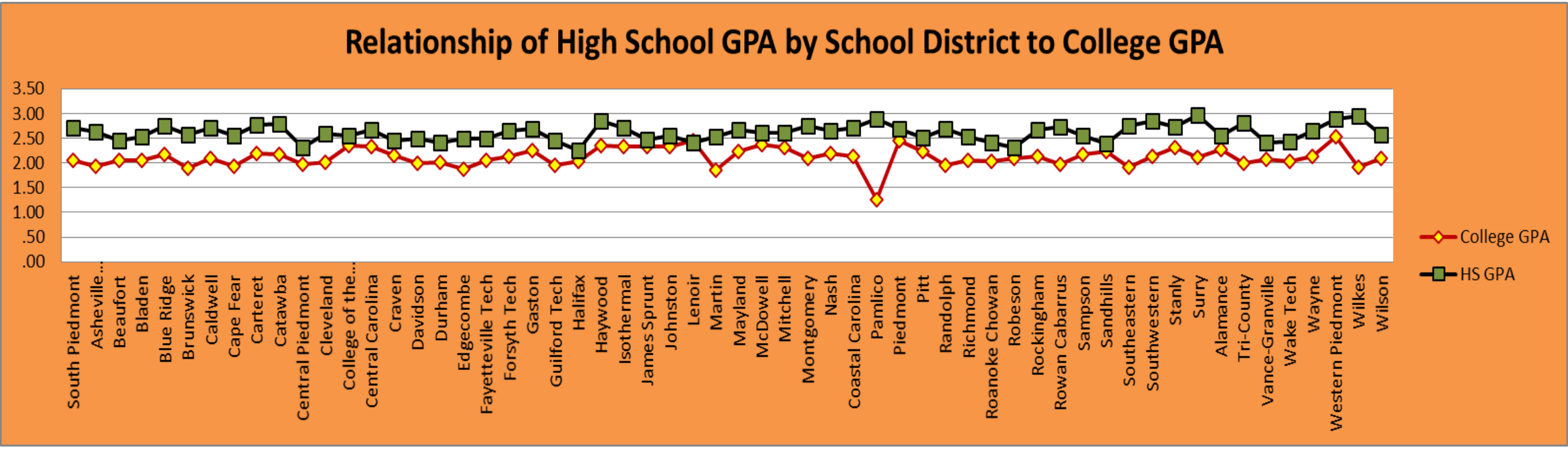
Fresher is more predictive though. Should we ignore CGPA? It beats HSGPA



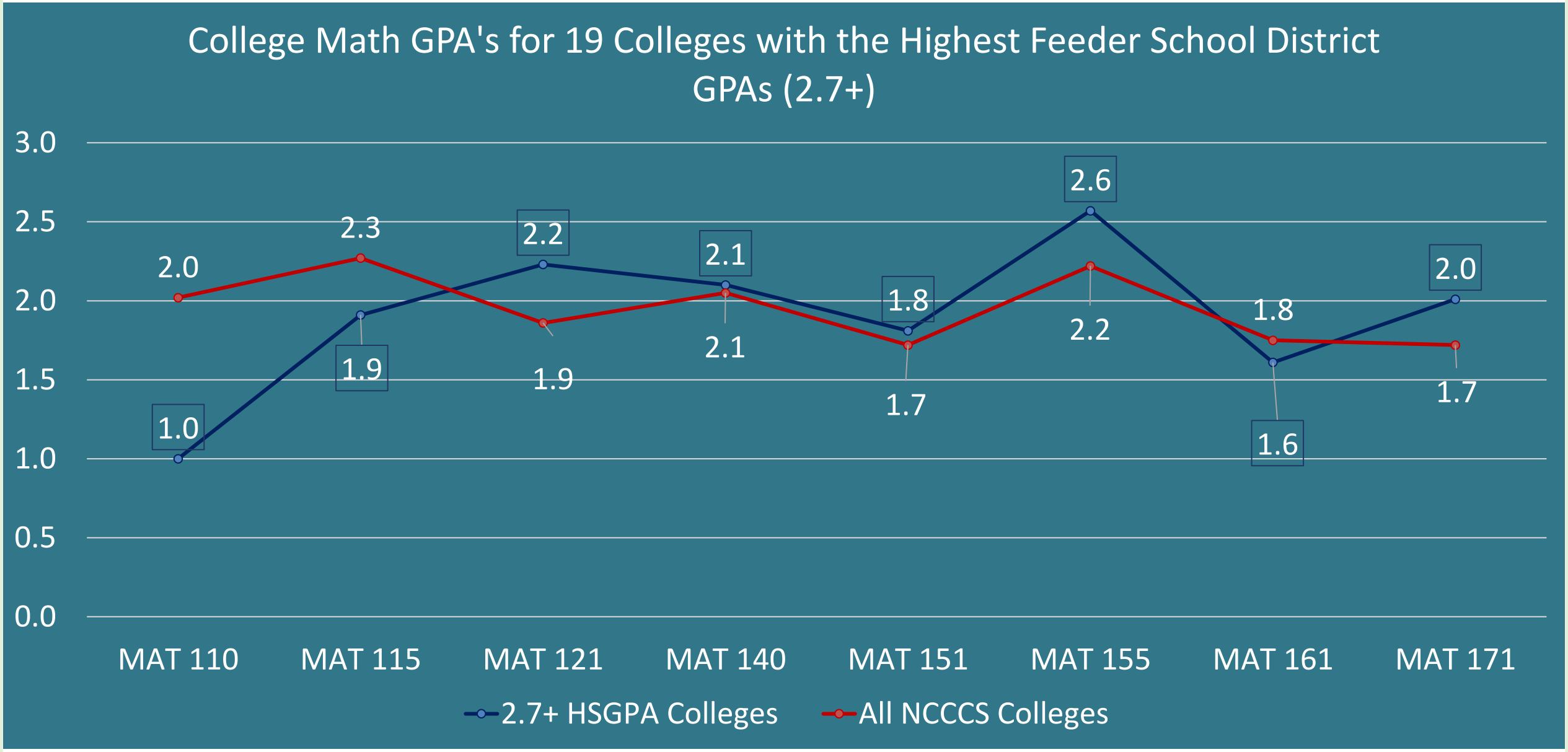
Are all high school GPAs equally valid?

- What do you think?

In fact, any grade inflation or deflation in high schools seems to predict equivalent grading differences in community colleges, as grades stayed parallel with feeder high school grades. With few exceptions, grades in our colleges followed grades in school districts. The odd Pamlico result represents only 24 students



In spite of any grade inflation, there isn't much difference in math grades between students from those grade-inflating school districts and the average across the state



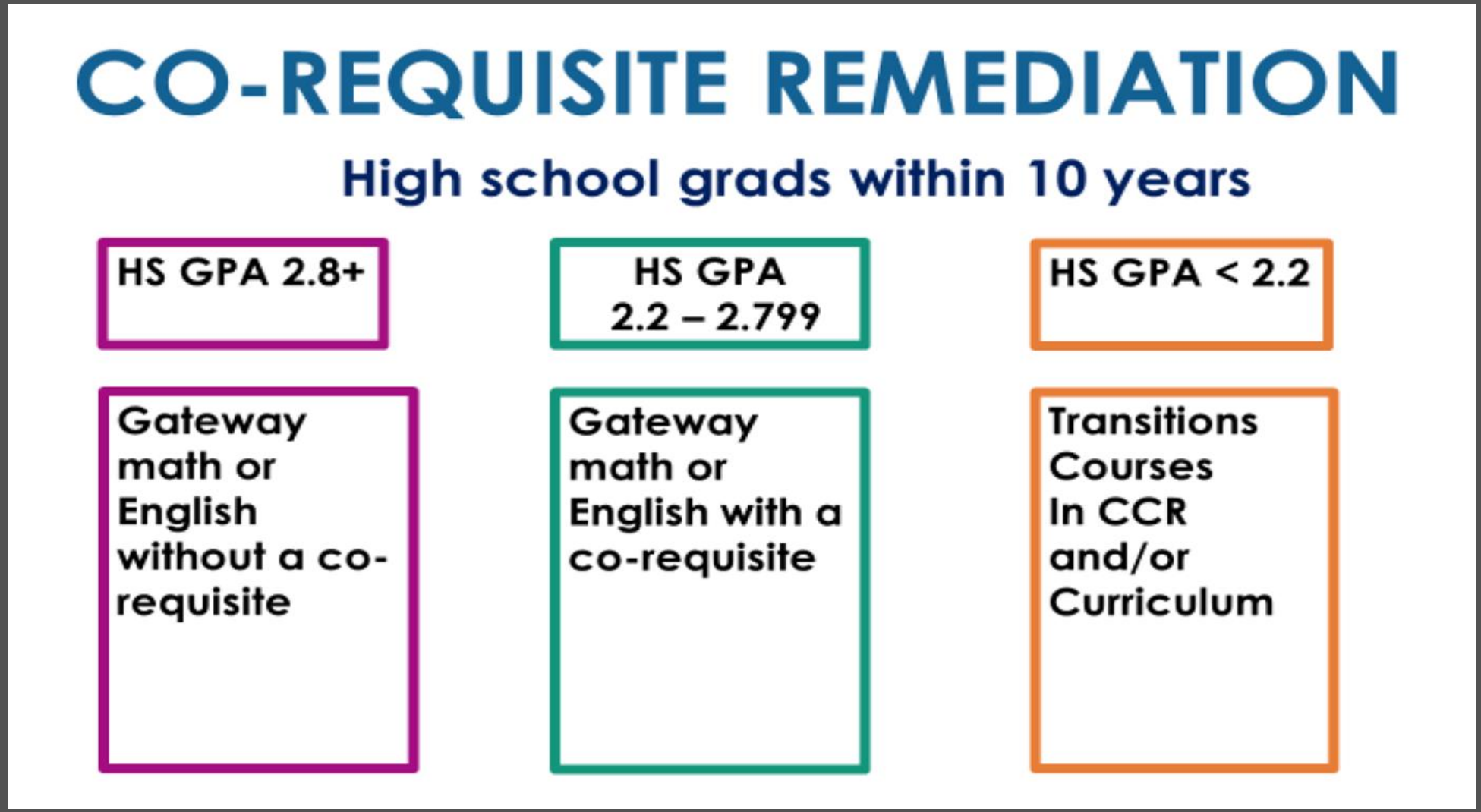
REMEDIAL, DEVELOPMENTAL, or Coreq?

- Predictive validity seemed to work
- Until the accountability movement caused us to consider the consequences
- Students weren’t getting through

WHY COREQUISITES?

- They help to expand avoidance of dev ed
- They give access to the gatekeeper courses
- The intention is not to be reductive or remedial but simply to support the student so they can pass the college level course
- Guided practice is a good model, as opposed to creating an additional curriculum

RISE: Reinforced Instruction for Student Excellence



What are the official rise goals?

- More students will complete gateway math and English within two years of enrollment
- Disaggregated data will indicate that RISE positively impacts traditionally underserved populations
- Students will complete gateway level math and English courses on their first attempt
- Students will expend fewer dollars on courses outside their program of study

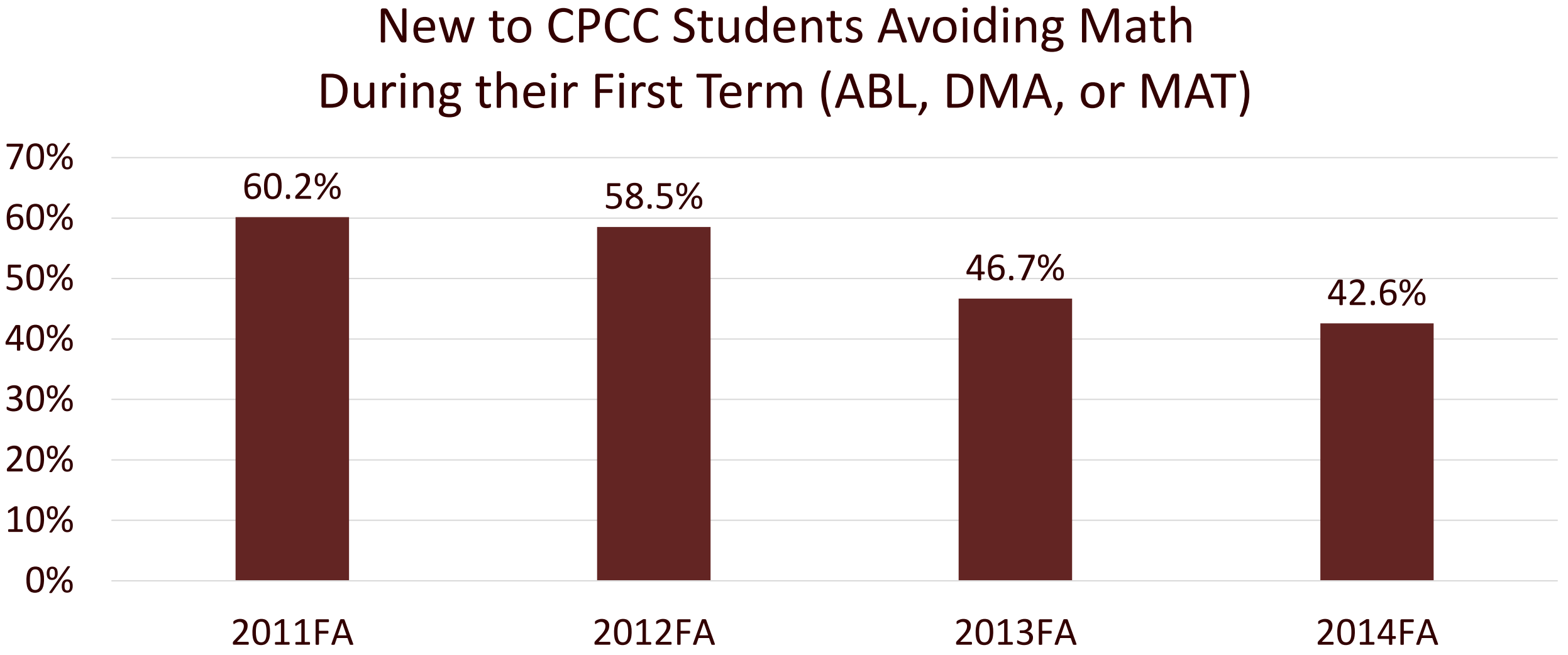
What does RISE placement look like? It is an expansion of the multiple measures hierarchy

- Associate Degree or higher
- College Credit in English and math C- or better, AP, IB
- Course Prerequisite Overrides
- U.S. High School Transcript (GPA 2.2, 2.8)
- ACT (18 Writing or 22 Reading; 22 Math)
- SAT (480 RW; 530 Math)
- GED (165)
- HiSET (All Parts 15; Essay 4)
- Career & College Ready Graduates (A, B)
- Transition Course or Older Developmental Courses
- Developmental Non-Course Credits
- RISE Placement Test or Older Placement Tests

Is this it then? Probably not

- Corequisite models often still involve some prerequisite remediation, and the lower the placement, the higher the stakes
- Corequisites are expensive and time-consuming
- And our placement systems only account for 15% of first-term college grade variation
- We’re still using a cleaver not a scalpel

At CPCC, math avoidance has fallen due to the DMAs, but it still high. Ivy Tech, the community college in Indiana, has used co-enrollment strategies to boost the gatekeeper math completion rate from 9% to nearly 60%.



But This Fall . . .

2020FA		
Math		
Transition	306	6%
Corequisite	271	6%
College Level Math	1218	25%
All Math	1524	31%
All	4913	100%
2020FA		
English		
Transition	289	6%
Corequisite	315	6%
College Level English	1482	30%
All English	1766	36%
All	4913	100%

When should we intervene?

- MALDEF settlement (Romero-Frias et al. v. Mertes et al., 1988) stipulated that we should require prerequisites only when a student without the prerequisite is “highly unlikely to receive a satisfactory grade”
- According to Fass-Holmes and Vaughan (2015), we should target “the specific students with demonstrable academic struggles rather than all incoming international undergraduates who are not native English speakers”

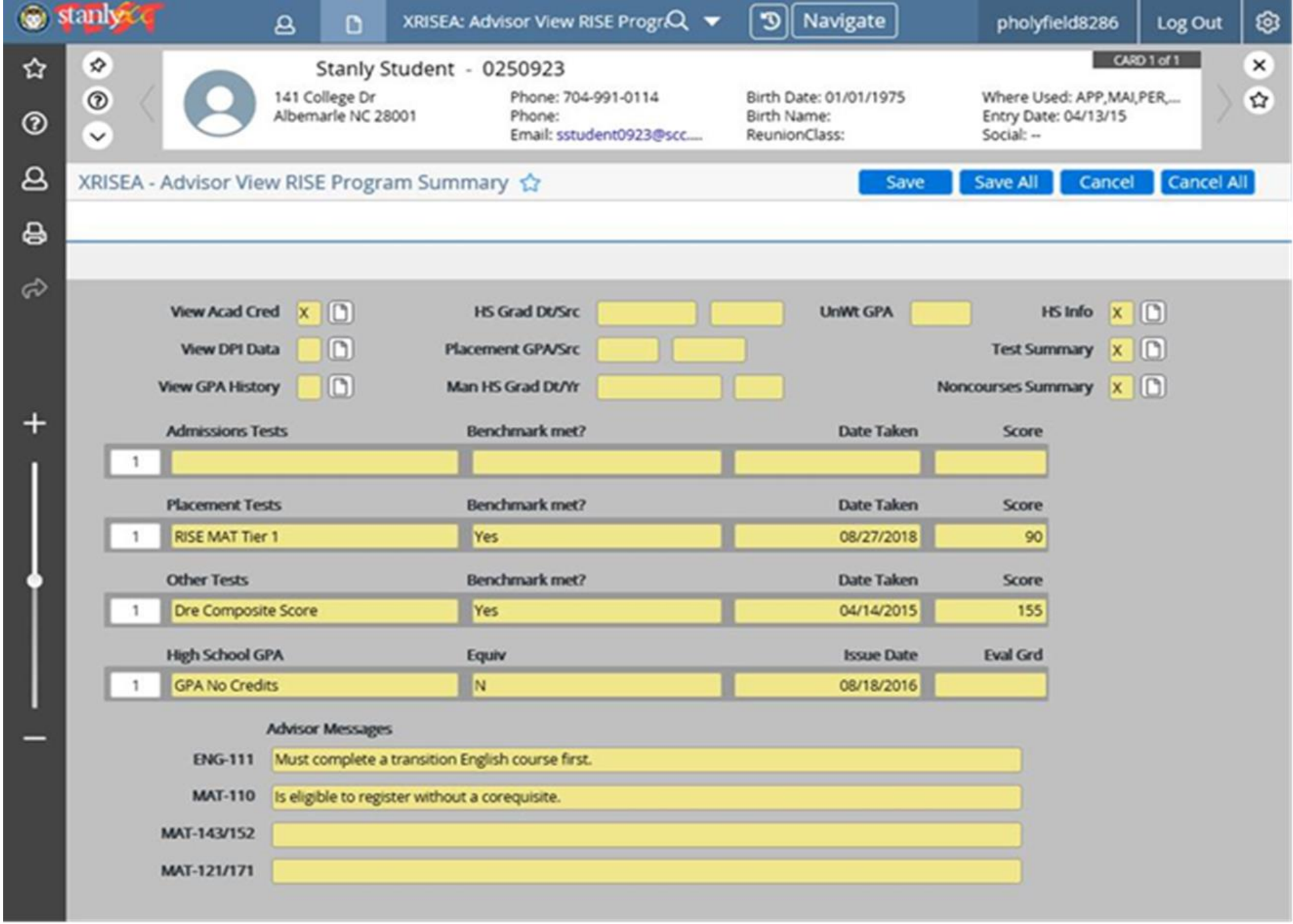
IS THIS A FAD?

- How does it fit with Guided Pathways?
- It doesn’t do much good to give student access if they still avoid the gateway courses
- Remember that in the dev ed days, more students failed by not enrolling in the next class than by failing the last one

Is the system simple?

- Does it assign an actual placement? Or just add more data for advisors to puzzle over?
- Can you describe the treatment philosophy in a single sentence? If not, it’s probably too complex
- Are the cut scores, if any, reasonable? What are the consequences of the current or proposed scores?

The current XRISE screen



Welcome to course eligibility

course eligibility to see your eligibility to take courses with English and math prerequisites

Course Eligibility	
ENG 111	Is eligible to register without a corequisite
MAT 171, 121	Must complete a transition math course first (MAT 003)
MAT 152, 143	May register with the corequisite math course (MAT 052 or 043)
MAT 110	Is eligible to register without a corequisite

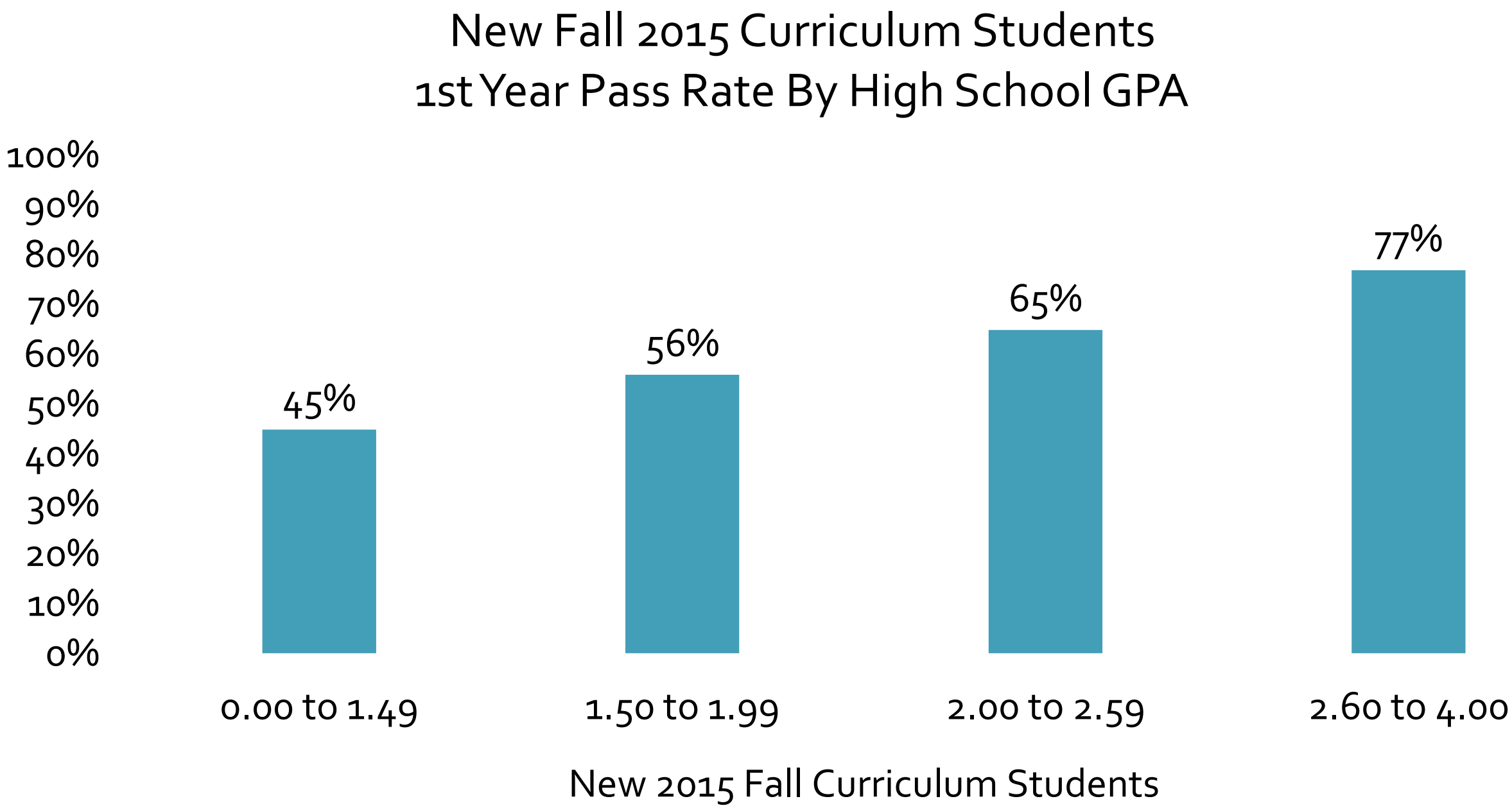
Contact Advising

Why is this my course eligibility? See your placement information such as college degrees, admissions and placement tests, and high school GPA

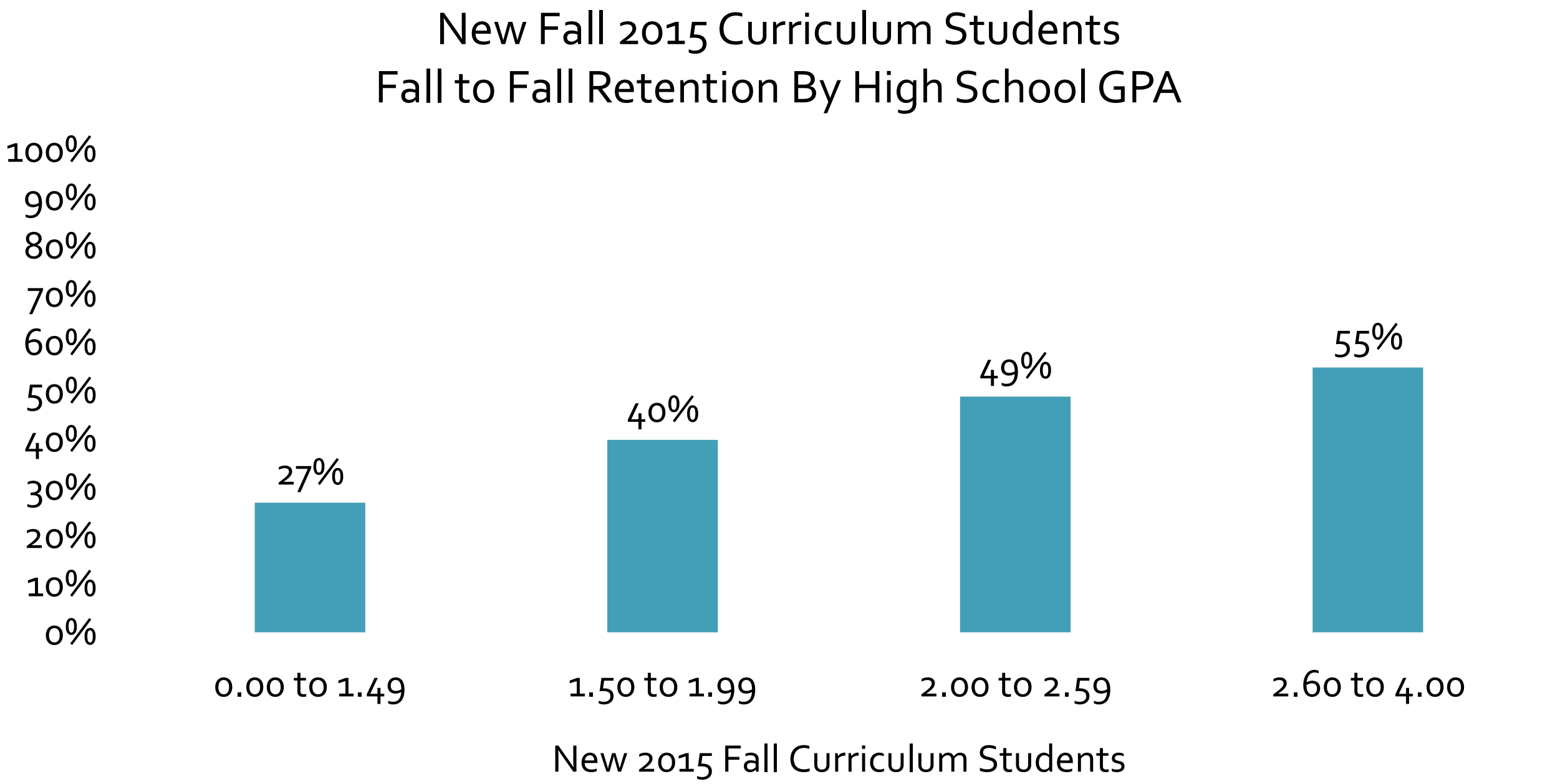
Students could drill down
for more information

The Self Service screen could look like the above

This is what course pass rates look like by HSGPA



This is what fall-to-fall retention looks like by HSGPA



What is the ideal model?

- Give every student access to college level courses and support them as needed, just in time
- That could still mean pre-arranging support for students with cognitive disabilities or other extremely high-risk factors

Is this student college ready?

- I do like the painting because I am so enjoy with imagine. I don’t like the art with essay because I don’t interesting and not my thing too

It turns out she was a good student. Just profoundly deaf. English was not her first language. Sign language was.

- I do like the painting because I am so enjoy with imagine. I don’t like the art with essay because I don’t interesting and not my thing too

What is the ideal curriculum?

- Does it reflect how students actually learn?
- Aristotle told us that all people like to learn. This is hard wired and chemical. We seek out the new and are rewarded for finding it, but not for long, so the cycle starts again
- Packing a curriculum full and leaving no room for seeking and exploring may leave a student uninterested

What is the ideal curriculum?

- Is the curriculum too fat?
- Years ago I asked what book our Reading students were reading these days. The instructor looked downcast and said, we'd love to read a book, but there's just too much material to cover
- It seems like we pack more and more into the curriculum every year. This can prevent learning

Some Transition Advice From Instructors

- Self-pacing may not lend itself to completion or online learning
- Don’t make the prereq harder than the college level course, such as writing 4 full essays to get to the coreq, 8 to avoid the coreq
- Do these students have good computer skills?
- How do we track non-completers’ progress term to term?

Some Corequisite Advice From Instructors

- Create the curriculum in an open, collaborative committee
- Build the corequisite curriculum around the gateway course
- Follow the Peter Adams 1-to-1 model, not the tripod (2 curriculum to 1 coreq)
- Training is key

English 011 Writing and Inquiry Support

- Take a look at this curriculum. It's excellent. But are these simply the college-level course skills to be supported by the corequisite?
- Or does this represent a whole separate curriculum that could interfere with the college level course?
- The devil is always in the details

English 011 Writing and Inquiry Support

- This course is designed to support students in the development of skills necessary for success in ENG 111 by complementing, supporting, and reinforcing ENG 111 Student Learning Outcomes. Emphasis is placed on developing a growth mindset, expanding skills for use in active reading and writing processes, recognizing organizational relationships within texts from a variety of genres and formats, and employing appropriate technology when reading and composing texts. Upon completion, students should be able to apply active reading strategies to college-level texts and produce unified, well-developed writing using standard written English.

1. Demonstrate the growth mindset by using academic habits and learning strategies that will enhance success in ENG 111 coursework

- Note taking methods
- Study habits
- Metacognitive strategies
- Test taking skills
- Academic support sources
- Time management methods

2. Practice and reflect on reading and writing as recursive processes

- Prewriting, drafting, revising, and editing
- Thesis development
- Pre-during-post reading
- Inference in reading
- Fact and Opinion
- Figurative Language
- Metacognition

3. Demonstrate active reading strategies

- Vocabulary
- Reading strategies (KWL, T-Chart, annotation, etc.)
- Main Idea and Supporting Details
- Preview (skim, activate schema, question), Integrate Knowledge (predict, monitor, annotate), Recall (reflect, relate, and react)

4. Recognize the organizational relationships within texts from a variety of genres and formats

- Vocabulary development
- Organizational and rhetorical mode recognition (essays, textbook chapters, websites, etc.)

5. Create unified, well-developed texts

- Introductions
- Conclusions
- Body paragraphs
- Quoting and paraphrasing

6. Apply the conventions of standard written English

- Run-ons
- Fragments
- Commas
- Parallelism
- Subject-verb agreement
- Pronoun reference

7. Employ appropriate technology when reading and composing texts

- Use of appropriate word processing program
- Formatting, saving, sending, uploading to LMS, reading electronic feedback
- Use of electronic medium when reading various texts

Recommendations

- Beware standardization. Treat students as individuals
- When using tests, require preparation
- Treat as a group only when students in that group are highly unlikely to succeed
- Develop all students, but remediate just in time based on actual failing behaviors

Recommendations

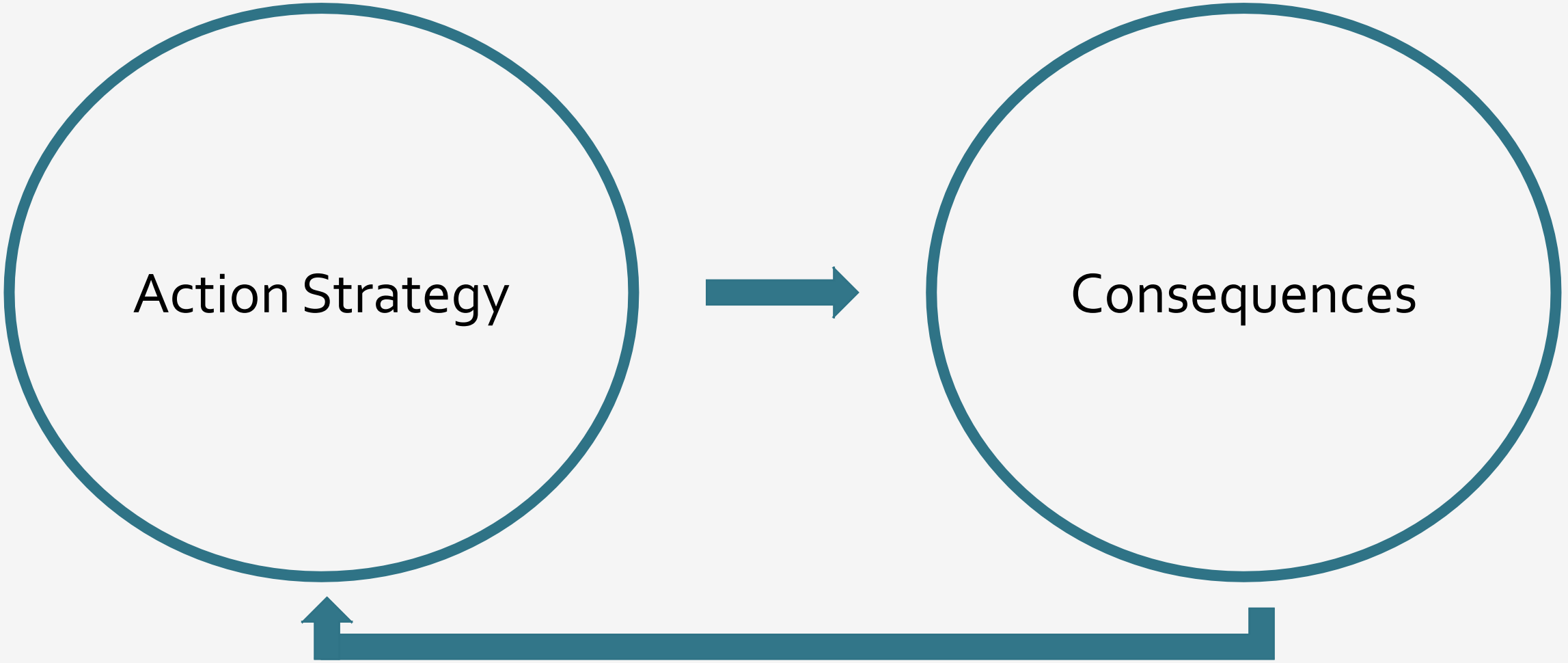
- Validate placement methods by consequences: make sure it moved the needle
- Simplify and support rather than adding curriculum
- Use multiple measures or universal placement to increase access
- Teach all students. Succeed with at least 80% of the students in all classes

Will this move the needle when so many things don't?

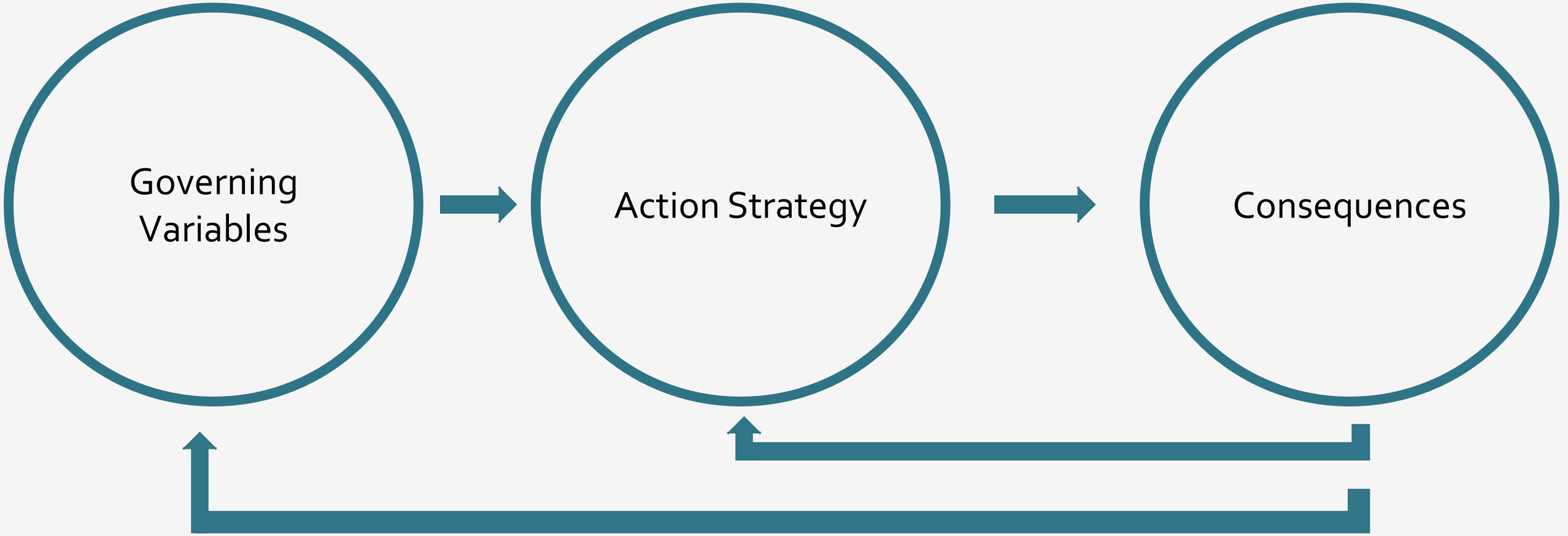
A study of 101 four year institutions showed no correlation between high impact practices and graduation rates (Johnson & Stage, 2018)

- First-year seminars and experiences
- Common intellectual experiences
- Learning communities
- Writing-intensive first-year seminars
- Collaborative assignments and projects
- Undergraduate research
- Diversity/global learning
- Service learning, community-based learning
- Internships
- Capstone courses and projects

Do, learn, adjust, repeat. The four-step recipe for greatness?



These problems are often of our own making. We have not questioned our own assumptions



Recommendations

- Find and challenge our basic assumptions
- Measure reforms by how well they move the needle
- And prepare for the changes in terms of resources and staffing

Multiple measures placement shifted 739 students—or 13% — to college level courses, which saved the students an estimated $573,206 in unnecessary developmental courses.

And left us scrambling

August 12, 2020

The Brightening Path

Placement Strategies, Readiness, and Corequisite Support

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