

# Are We There Yet?

## Placement and Developmental Education 5.0

**March 21, 10:30**

**[Brad.Bostian@cpcc.edu](mailto:Brad.Bostian@cpcc.edu)**





# Safety Moment

We are meeting at:  
1615 Miller St.

[AED Location:](#)

Please add AED  
location here

Who will fulfill each role in an emergency?



Call 6911  
or 911



Use AED/CPR



Meet Emergency  
Personnel



Evacuate  
Lead out/Last out

Evaluate your own response in these situations:



Active Shooter  
Run, Hide, Fight  
(Lock & Barricade)



Shelter  
in Place

EMERGENCIES: ext. 6911 or 704.330.6911  
NON-EMERGENCIES: ext. 6632 or 704.330.6632



# Agenda

- History
- Purpose
- Research Literature
- College Data
- Recommendations



Someone recently said we don't want to be back here in 5 years reworking the new developmental education system. Imagine the new courses are in place.

Yes or no: are we there yet?



Where have we been so far?



## Where We Started (1960's Central Piedmont)

“If students’ work was below college level, they were placed in remedial classes.”

- The college was criticized “for making it too easy for students to get into classes.”
- The college’s first president, Dr. Richard Hagemeyer, called the policy “unselective admissions but selective placement.”



# Here is where we started (1965 Central Piedmont)

ENG 031 Fundamentals of Composition	MS 031 Developmental Algebra
	MS 033 Developmental Geometry



# 1970 Central Piedmont

English 9000 Fundamentals of Grammar	Math 9000 Arithmetic	Reading 9000 Fundamentals of Reading	Chemistry 9000 Fundamentals of Chemistry
English 9001 Fundamentals of Writing	Math 9001 Algebra I		
	Math 9002 Developmental Algebra		





# 1972 Central Piedmont

ENG 9300 Fundamentals of Grammar	MAT 9300 Arithmetic	Reading 9210 Fundamentals of Reading	CHM 9200 Fundamentals of Chemistry
ENG 9310 Fundamentals of Writing	MAT 9301 Health Related Arithmetic	Reading 9211 Developmental Reading	
	MAT 9302 Algebra I		
	MAT 9303 Health Related Algebra		
	MAT 9310 Developmental Algebra		



# 1990 Central Piedmont

ENG 9500 Learning to Write	<b>MAT 9300 Math Anxiety Reduction</b>	RDN 9130 Basic Reading Skills
ENG 9505 Spelling and Vocabulary	MAT 9500 Arithmetic I	RDN 9312 Speed Reading
	MAT 9500 Arithmetic II	RDN 9502 Building Word Power
	MAT 9502 Developmental Algebra	RDN 9505 Reading Skills
	MAT 9510 Developmental Algebra II	RDN 9510 Reading Improvement
	MAT 9511 Modern Geometry	



## Sec. 108 Remediation Measures (1993)

- “(a) The State Board of Community Colleges shall study the different tests used by colleges to place students in developmental courses. This study shall determine appropriate tests and proficiency levels to be used in selecting and placing students in developmental courses.
- “(b) The State Board shall report its findings to the General Assembly by May 1, 1994.”



# Generation 2.0 Standardization (1997 NCCCS)

ENG 060 Speaking English Well	MAT 050 Basic Math Skills	RED 070 Essential Reading Skills
ENG 070 Basic Language Skills	MAT 060 Essential Mathematics	RED 080 Introduction to College Reading
ENG 075/A Reading and Language Essentials	MAT 070 Introductory Algebra	RED 090 Improved College Reading
ENG 080 Writing Foundations	MAT 080 Intermediate Algebra	
ENG 085/A Reading and Writing Foundations	MAT 090 Accelerated Algebra	
ENG 090/A Composition Strategies	MAT 095 Algebraic Concepts	
ENG 095/A Reading and Composition Strategies	MAT 075 Geometry (1999)	



# Fast Track Courses (2010 NCCCS)

ENG 081 Fast Track Writing Foundations	MAT 061 Fast Track Essential Math	RED 081 Fast Track Introductory College Reading
ENG 091 Fast Track Composition Strategies	MAT 071 Fast Track Introductory Algebra	RED 091 Fast Track Improved College Reading
	MAT 081 Fast Track Intermediate Algebra	



# Generation 3.0 DMA and DRE (2012/2013 NCCCS)

DMA 010 Operations With Integers	DRE 096 Integrated Reading and Writing
DMA 020 Fractions and Decimals	DRE 097 Integrated Reading and Writing II
DMA 030 Proportions/Ratios/Rates/Percentages	DRE 098 Integrated Reading and Writing III
DMA 040 Expressions/Linear Equations/Inequalities	
DMA 050 Graphs/Equations of Lines	
DMA 060 Polynomial/Quadratic Applications	
DMA 070 Rational Expressions/Equations	
DMA 080 Radical Expressions/Equations	



# GENERATION 4.0 RISE ENG and MAT (2018, NCCCS)

ENG 002 (or BSP 4002) Transition English	MAT 003 (or BSP 4003) Transition Math
ENG 011 Writing and Inquiry Support	MAT 010 Math Measurement & Literacy Support
	MAT 021 Algebra/Trigonometry I Support
	MAT 043 Quantitative Literacy Support
	MAT 052 Statistical Methods I Support
	MAT 071 Precalculus Algebra Support



# GENERATION 5.0 FYE and FYM (2025 NCCCS)

ENG 025 College English Skills	MAT 025 Concepts of Essential Math/Stat
ENG 045 English Skills Support	MAT 035 Concepts of Algebra
	MAT 045 Math Skills Support





# What Generation Is This?

- 1.0 Quarter System, no standard approach
- 2.0 Semester System, standard courses (ENG, MAT, RED)
- 3.0 Developmental Education Initiative (DMA's and DRE's)
- 4.0 R.I.S.E., (ENG and MAT prerequisite and corequisite courses)
- 5.0 Developmental Education Alignment Project (ENG and MAT courses)



What does the research literature show?



# What problem are we trying to solve?

According to the Center for the Analysis of Postsecondary Readiness ([CAPR, 2018](#)), “The goal of developmental education is to improve students’ skills and increase their chances of success in credit-bearing, college-level programs.”

More than two-thirds of community college students take at least one developmental course.

These students are less likely to complete a program and earn a degree or certificate.

Remediation as traditionally taught has had, at best, modest effects on improving outcomes for students who enter college with weak academic skills.



# How should we place students?

Based on [Kopko and Daniels \(2023\)](#):

- Colleges should expand access to college-level courses by giving students the highest placement possible.
- Colleges should use a form of MMA that is relatively easy to adopt and that mitigates the risk of lowering any student's placement.
- Colleges should consider coupling MMA with other reforms such as corequisite support courses to provide greater access to college-level coursework and improve longer term outcomes.

The benefits of MMA were likely driven primarily by increased access to college-level courses rather than by any improved accuracy from using MMA.



# What have we accomplished so far?

While we have not solved the greater problem of student development or non-completion, as Ran and Lin ([2022](#)) and others have shown, corequisite remediation and placement reforms have increased access to college level courses, increased gateway course completion rates, decreased demographic success gaps, and saved students significant time and money.



What is the purpose of developmental education?



# What are our working assumptions?

T or F: some students arrive to our colleges underprepared.

T or F: we can tell which students these are by their prior academic efforts, like grades and test scores.

T or F: assigning extra courses to underprepared students helps to prepare them.

T or F: The only preparatory courses worth requiring are English and math.



Historically speaking . . .

What was the first remedial course offered in the U.S.?





# What is our philosophy of course requisites?

- NCCCS: (I couldn't find one)

The closest we get is this from state board code:

“Developmental Education programs consist of courses and support services which include diagnostic assessment and placement, tutoring, advising, and writing assistance ... designed to address academic preparedness, workforce retraining, development of general and discipline-specific learning strategies, and affective barriers to learning.”



## What is California's philosophy of course prerequisites? CA state law says:

- (d) Prerequisites or corequisites may be established only for any of the following purposes:
- (2) "...the prerequisite will assure ... that a student who has not met the prerequisite is highly unlikely to receive a satisfactory grade in the course ..."



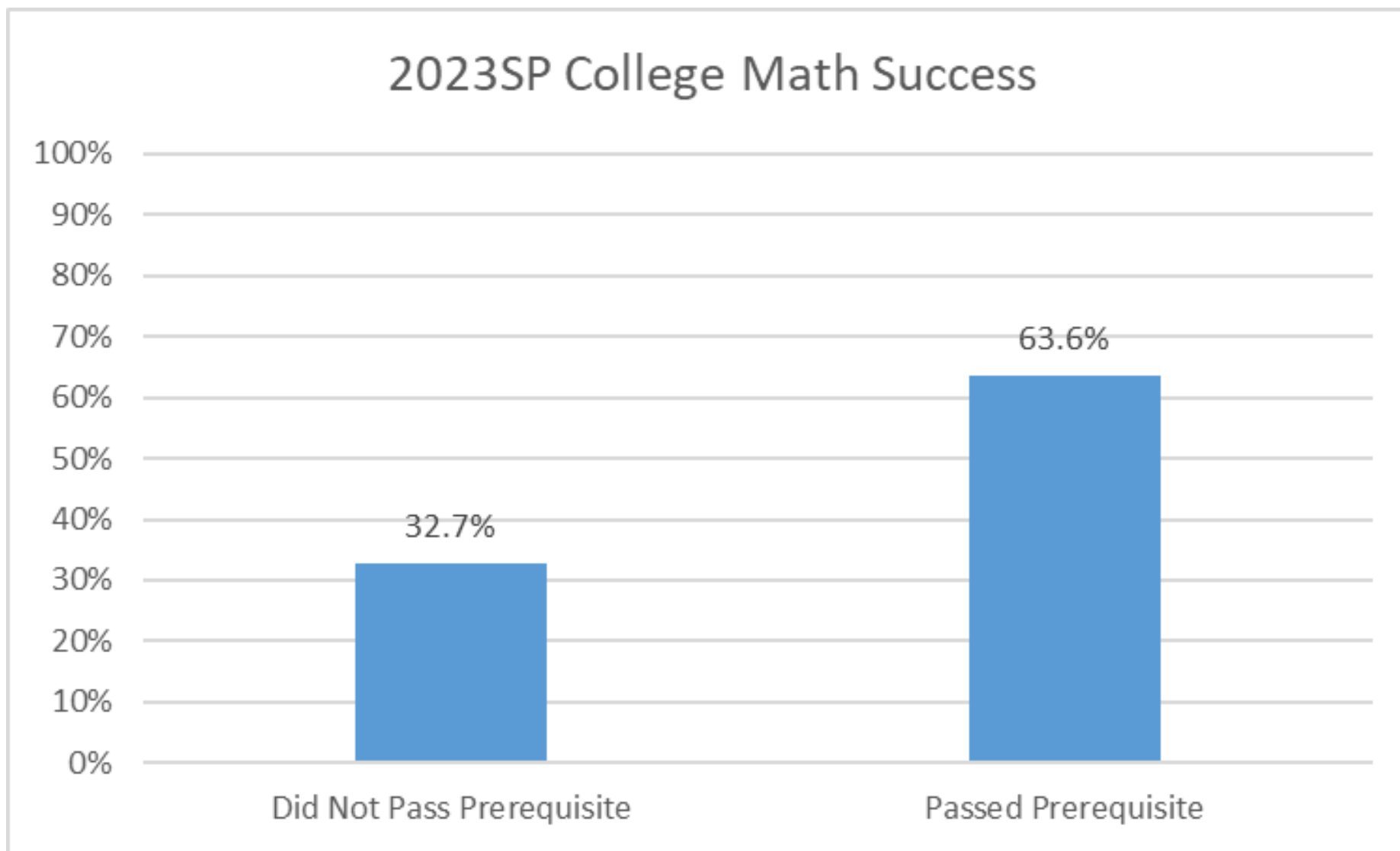
# What is California's philosophy of course prerequisites? CA state law says:

(d) Prerequisites or corequisites may be established only for any of the following purposes:

- (1) the prerequisite or corequisite is expressly required or expressly authorized by statute or regulation, or expressly required by institutions for which the college has transfer agreements; or
- (2) the prerequisite will assure, consistent with section 55002, that a student has the skills, concepts, and/or information that is presupposed in terms of the course or program for which it is being established, such that a student who has not met the prerequisite is highly unlikely to receive a satisfactory grade in the course (or at least one course within the program) for which the prerequisite is being established; or
- (3) the corequisite course will assure, consistent with section 55002, that a student acquires the necessary skills, concepts, and/or information, such that a student who has not enrolled in the corequisite is highly unlikely to receive a satisfactory grade in the course or program for which the corequisite is being established, and if the corequisite course is intended as additional support for students enrolling in transfer-level English or mathematics (or quantitative reasoning) courses, then it must be determined that the corequisite course increases the likelihood that the student will pass the transfer-level course; or
- (4) the prerequisite or corequisite is necessary to protect the health or safety of a student or the health or safety of others.

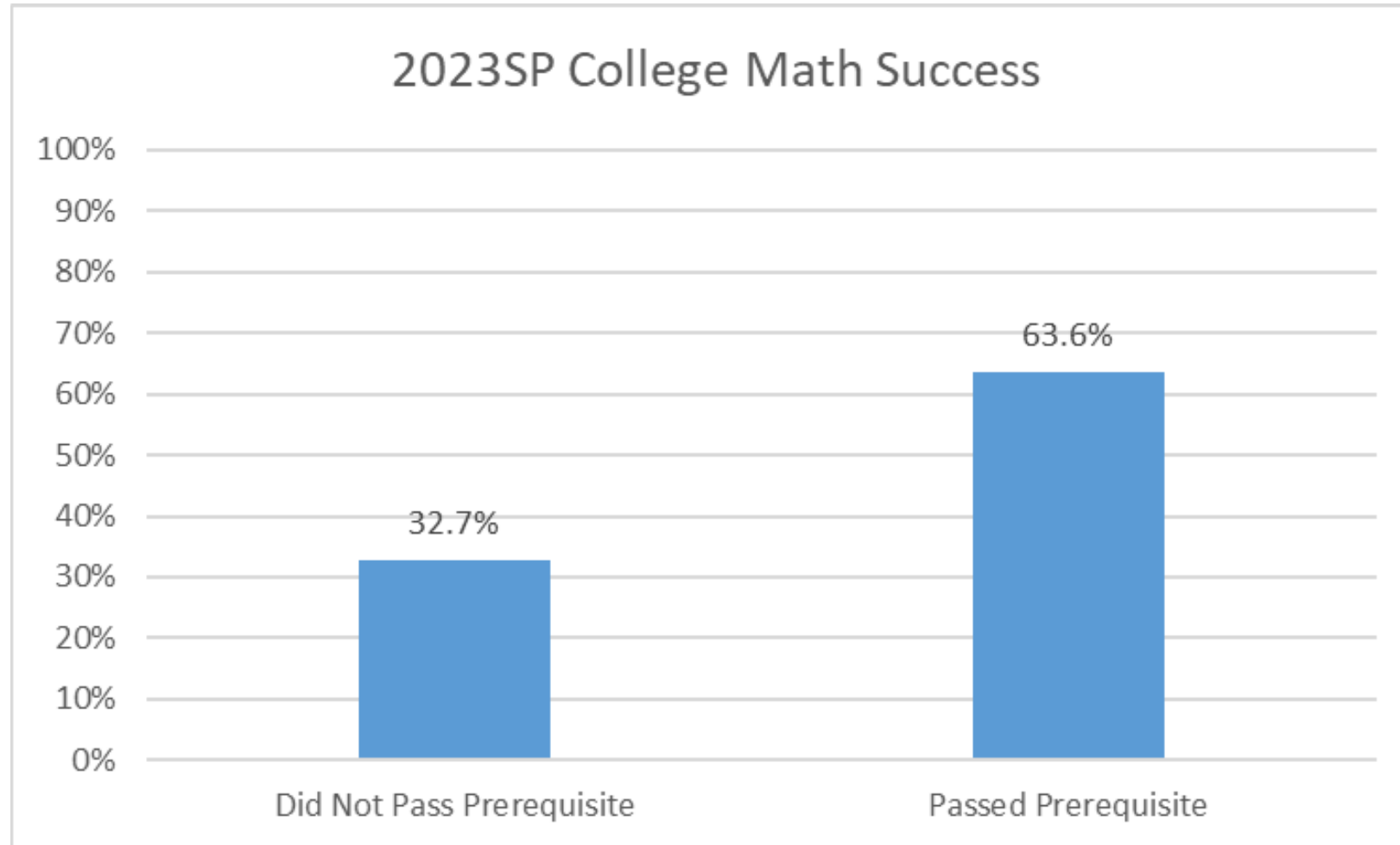


Consider this fall 2022 prerequisite course and its effect on new spring 2023 student college math success.





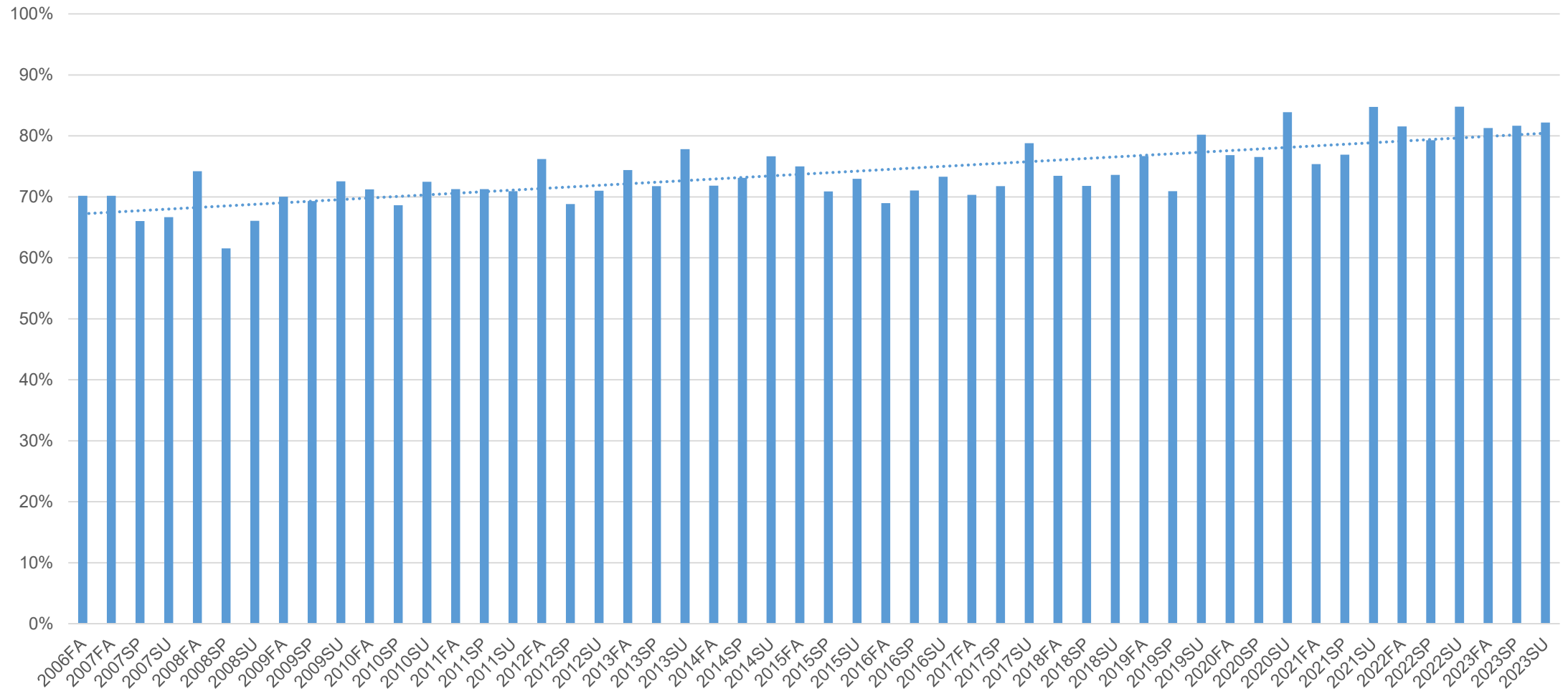
The prerequisite course is ART -111. Course completion predicts course completion, even for unrelated courses. This makes prerequisites look helpful even when they aren't.





Guess what year we **added** the English course prerequisite.

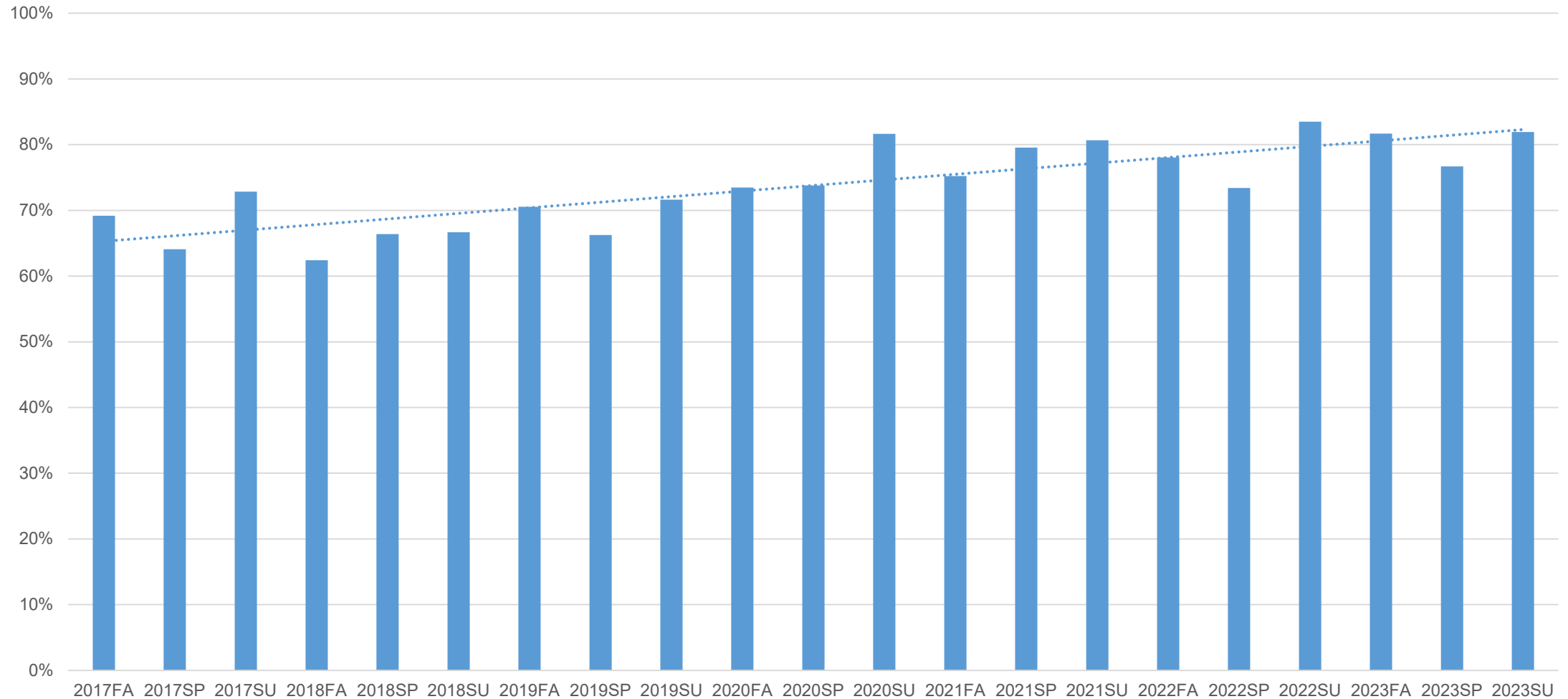
## PSY 150 Success Rates





Guess what year we **dropped** the English course prerequisite.

## BUS 110 Success Rates





What conclusion should we draw about course prerequisites?

- Useful?
- Not useful?
- Not sure?





What does college data  
show?

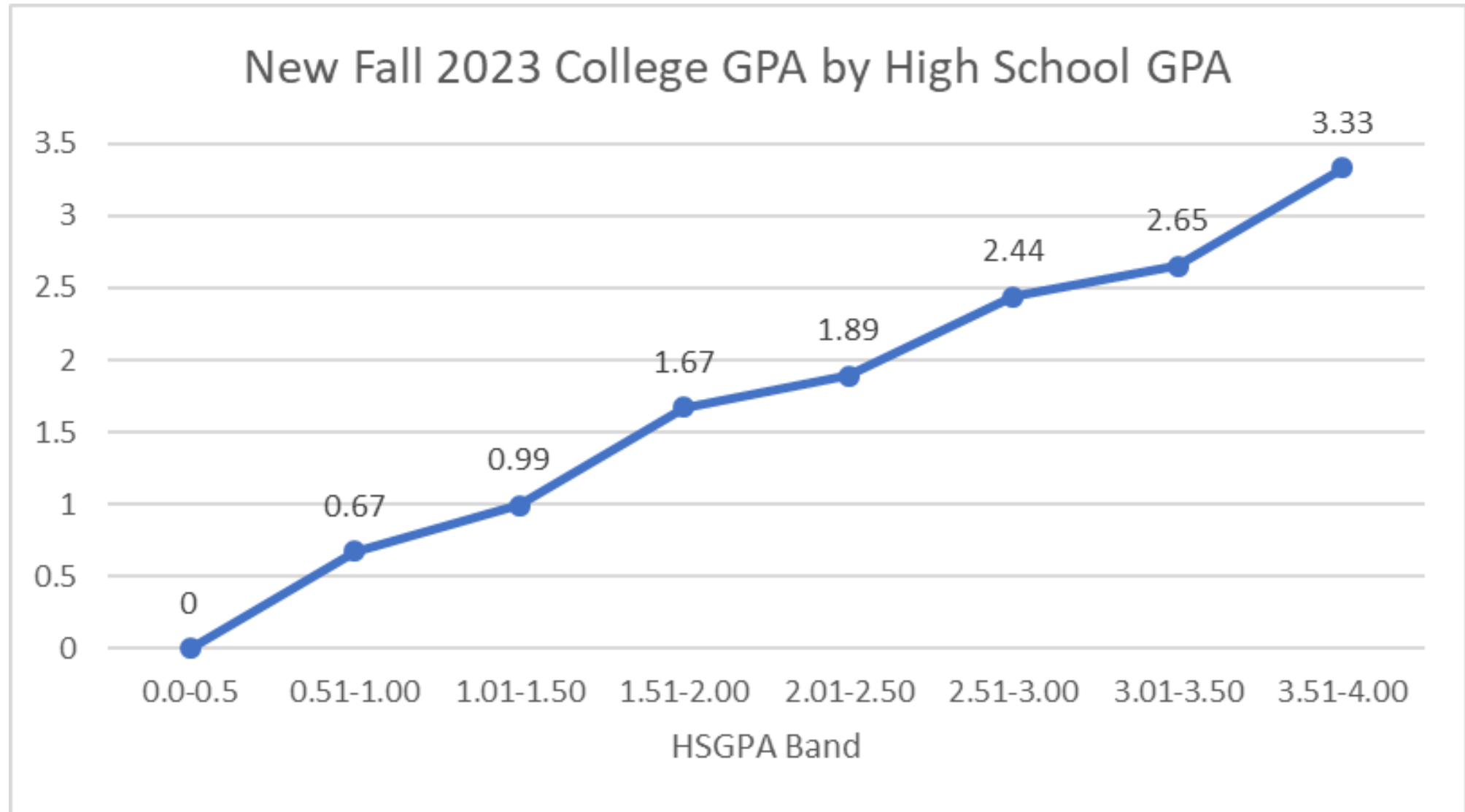


# Are we addressing academic preparedness?

- How relevant are our placement predictors?
- How relevant is how we teach and grade?



# How relevant are placement predictors?





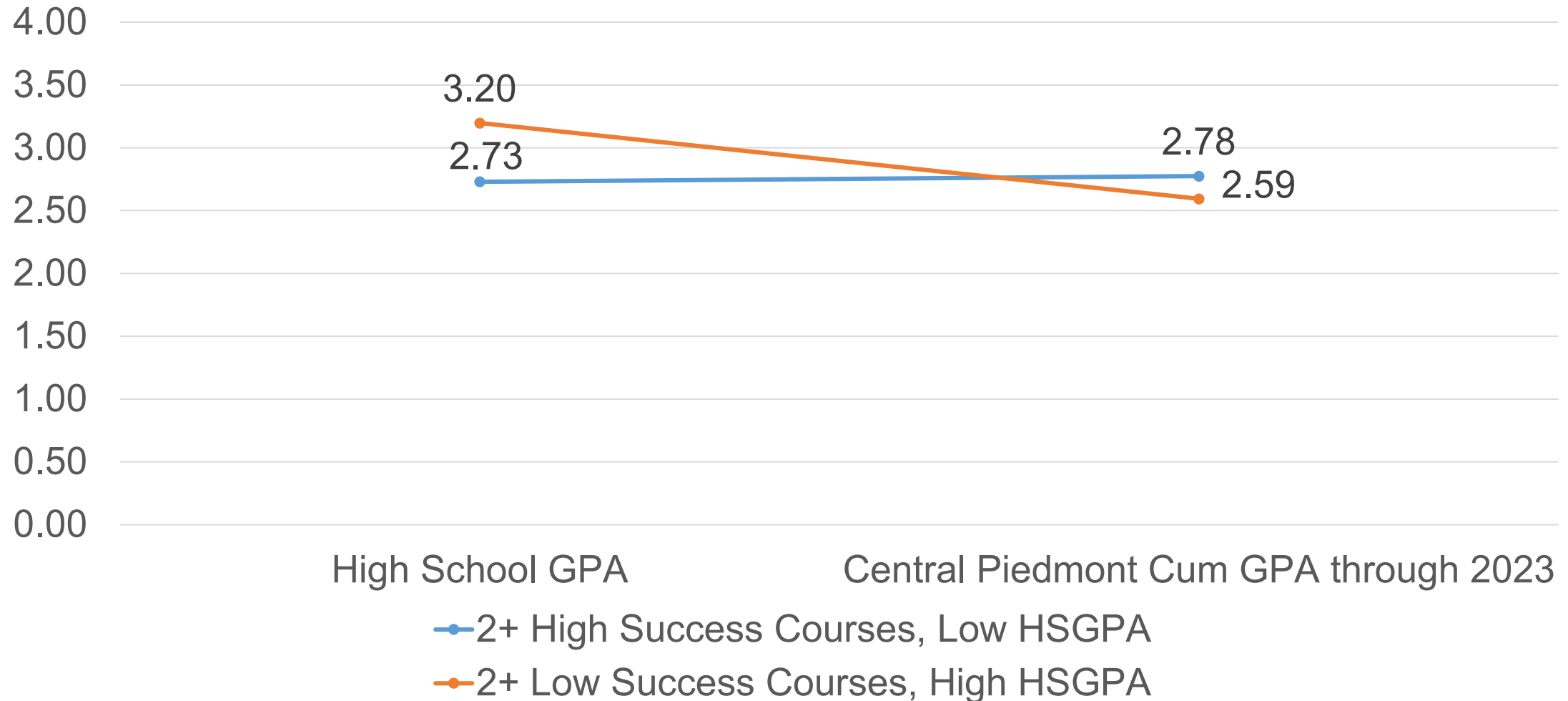
## Looks promising, right?

- Placement tests predict 0 % to 10 % of first term grade variation.
- High school GPA does better, usually predicting around 15 % of first term grade variation.
- What about the other 85 %?



# How relevant is how we teach and grade?

## GPA Impact of fall 2021 Low or High Success Rate Courses





# Which is more important?

- Low HSGPA students taking high success rate sections earn more credits, have higher GPA's, and graduate at a higher rate than high HSGPA students taking low success rate sections.
- These results hold true for all students, new students, online students, degree seeking students, students in different academic years, and students of the same incoming HSGPA.
- Results are mixed for retention.
- How we teach and grade is more important to student progression than placement factors.



## Do developmental courses help student progression?

Of 671 new fall 2022 students placed by the end of August into the prerequisite level, just 14 (2%) passed ENG-111 in their first term

Of 735 new fall 2022 students placed by the end of August into the prerequisite level, just 17 (2%) passed any college level math course in their first term.

Direct college level placement into college level classes couldn't help but raise these percentages dramatically.



## Do developmental courses help student progression?

Comparing first year success and completion rates shows that if every student took the gateway course in the first term, that would raise completion rates for English and math.

	Placed in ENG 002	Placed in ENG 011	Placed in ENG 111
ENG 111 Success First Year	58.6%	62.1%	79.3%
ENG 111 Completion First Year	21.3%	51.4%	45.4%
	Placed in MAT 003	Placed in MAT 010 to 152	Placed in MAT 171
College MAT Success First Year	29.9%	38.5%	64.9%
College MAT Completion First Year	7.6%	23.3%	34.7%





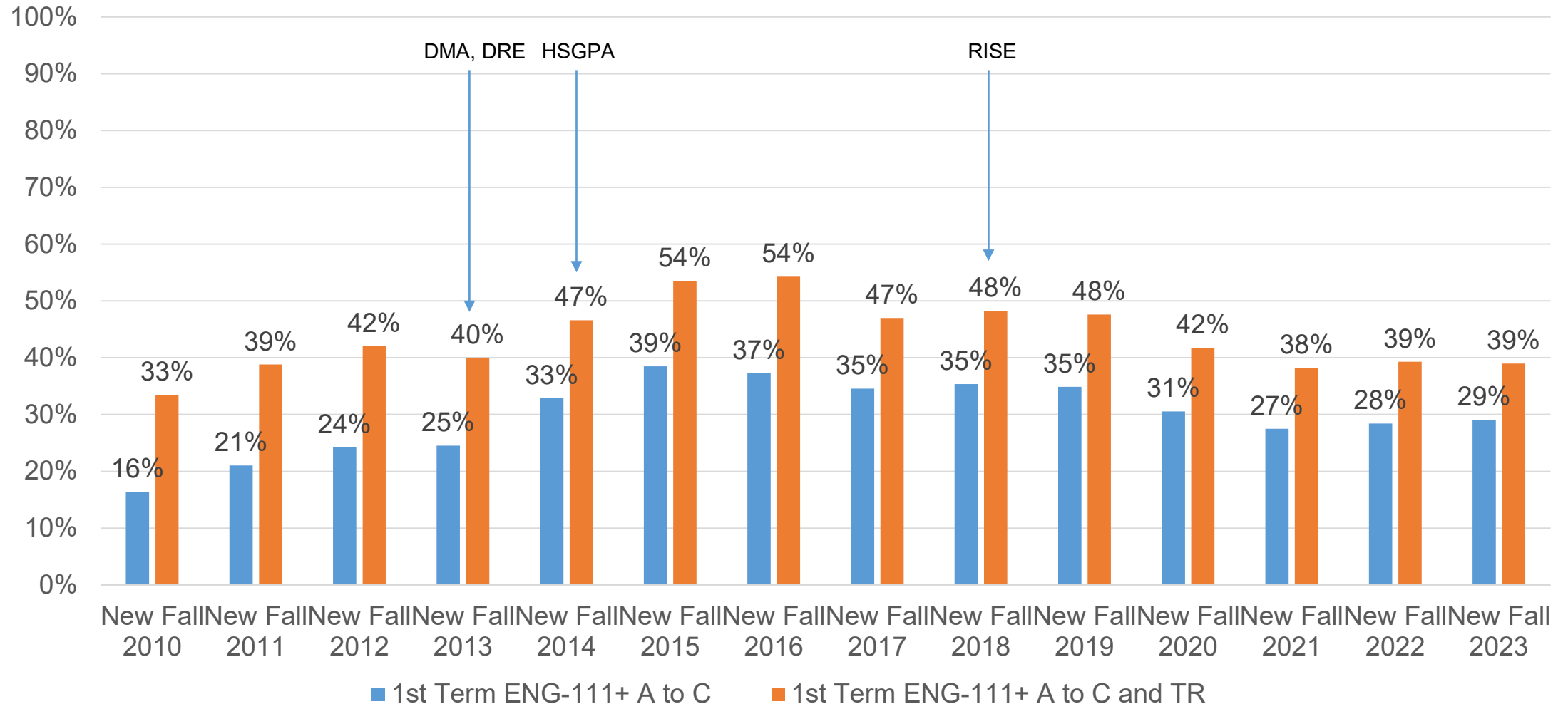
## What have our developmental systems accomplished?

- How have ENG-111 completion rates changed?
- How have college MAT completion rates changed?



# How have we done with 1<sup>st</sup> Term ENG-111+ completions?

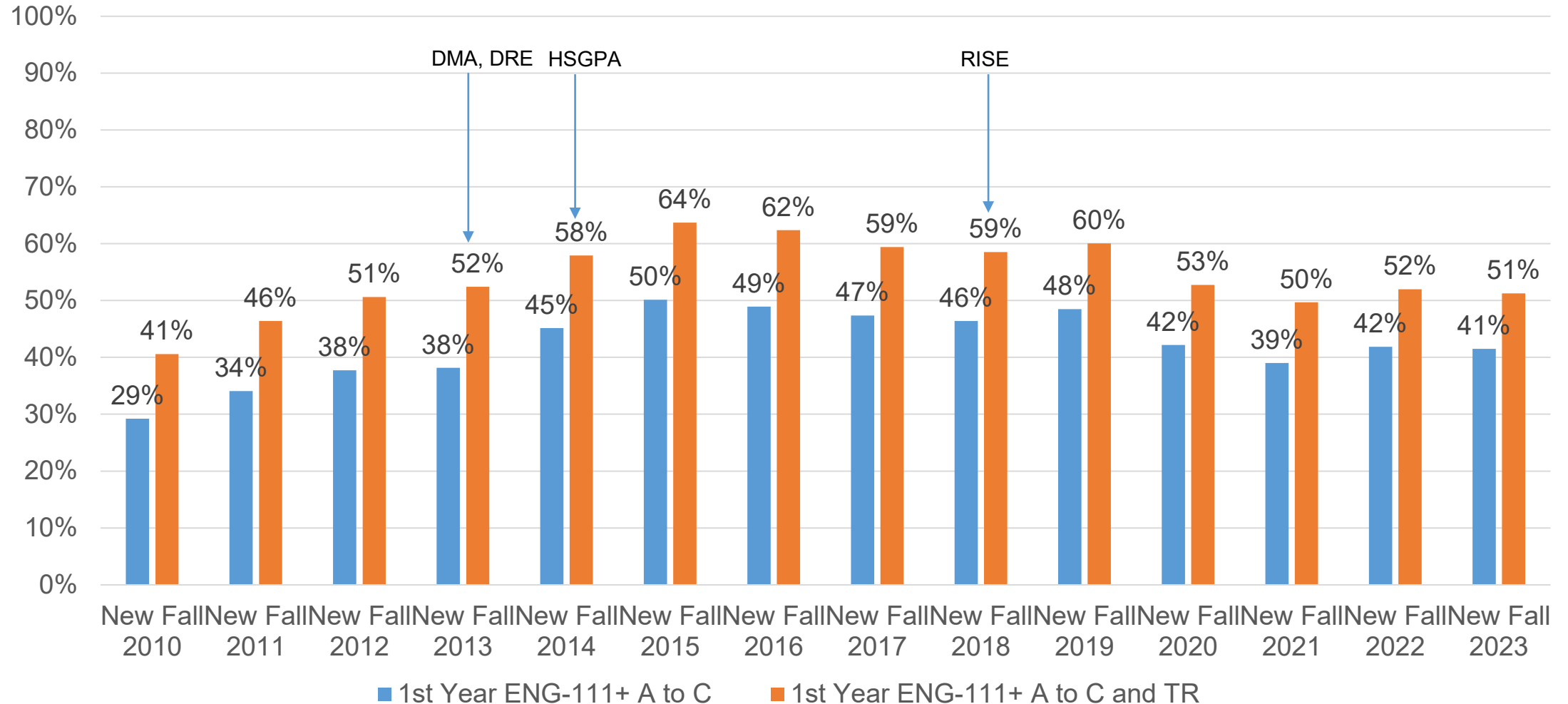
## New Fall First Term ENG-111+ Completion By Year





# How have we done with 1<sup>st</sup> Year ENG-111+ completions?

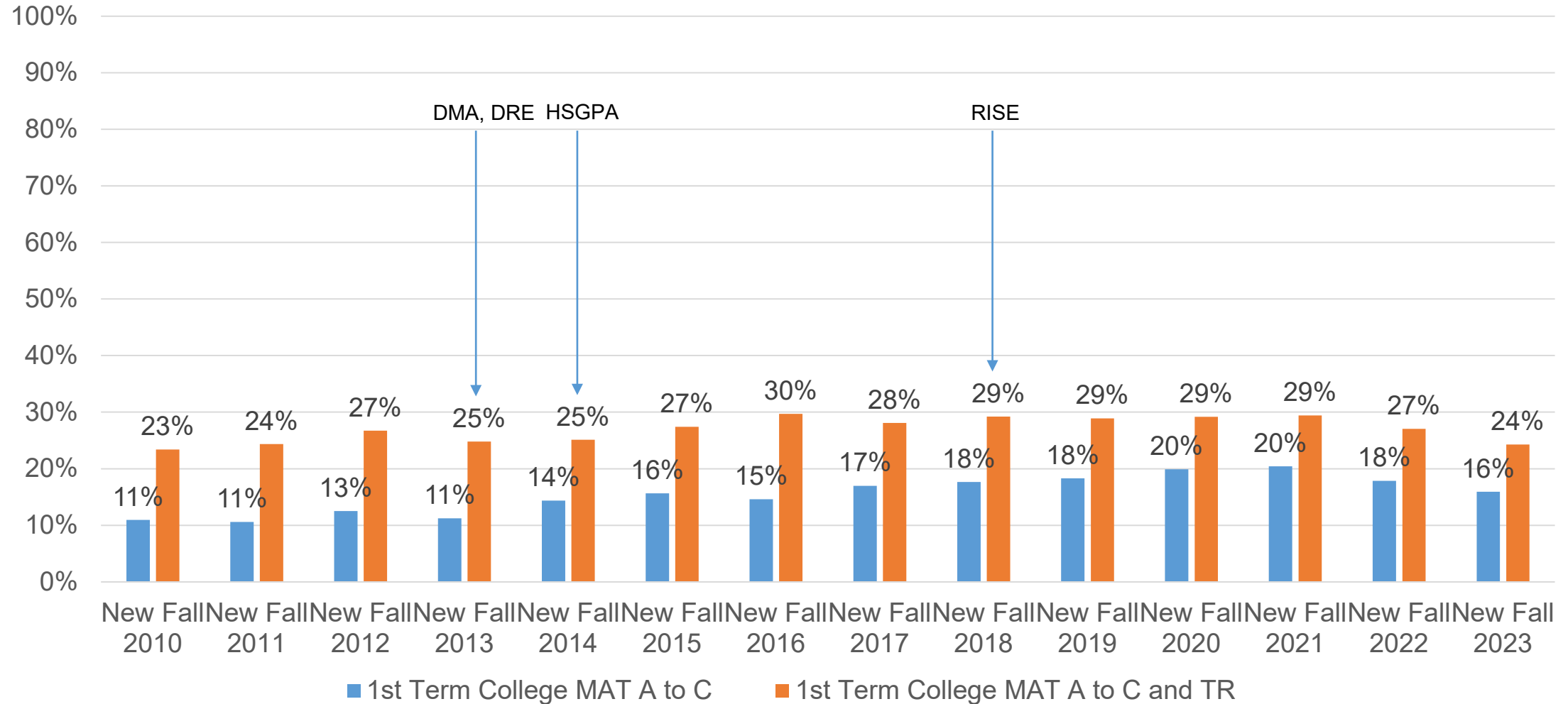
## New Fall First Year ENG-111+ Completion By Year





# How have we done with 1<sup>st</sup> Term college MAT completions?

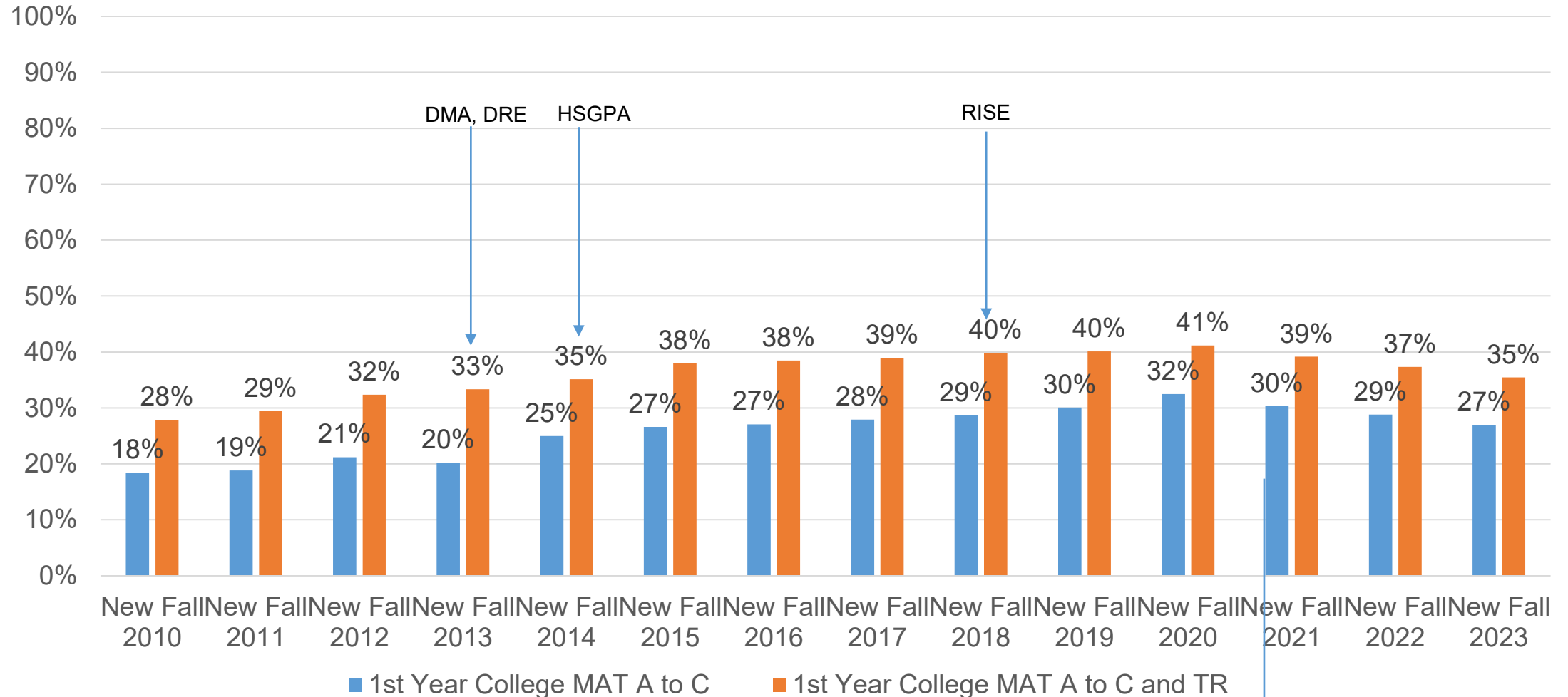
## New Fall First Term College MAT Completion By Year





# How have we done with 1<sup>st</sup> Year college MAT completions?

## New Fall First Year College MAT Completion By Year



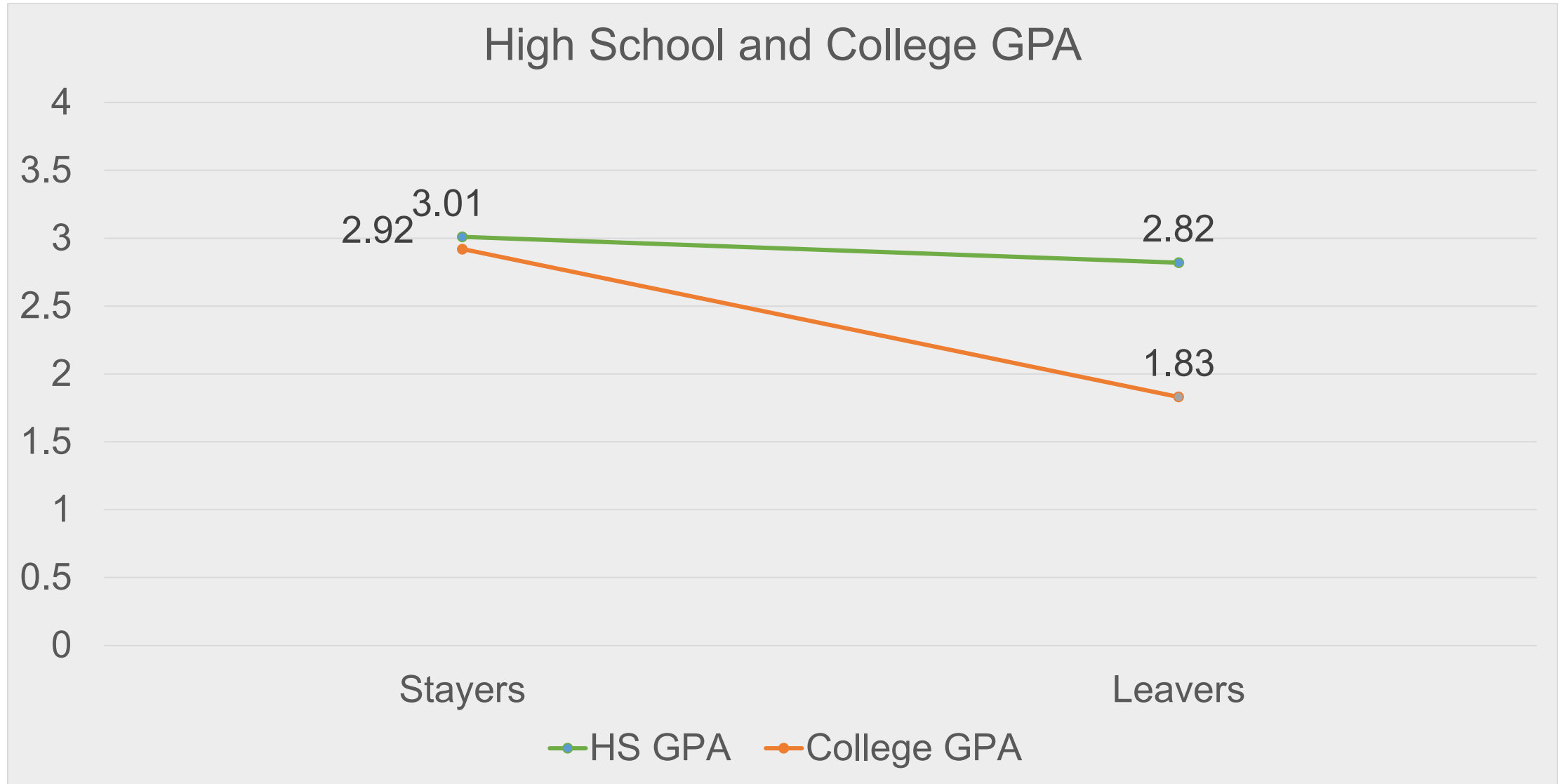


Opinion: first year academic success matters most.

“For both minority and nonminority students, first-year college GPA exerted the largest direct effect on whether a student was retained”  
(Allen, 1999).



# Leavers failed to maintain their GPA from high school.





Opinion: the ability to pay for college also matters.

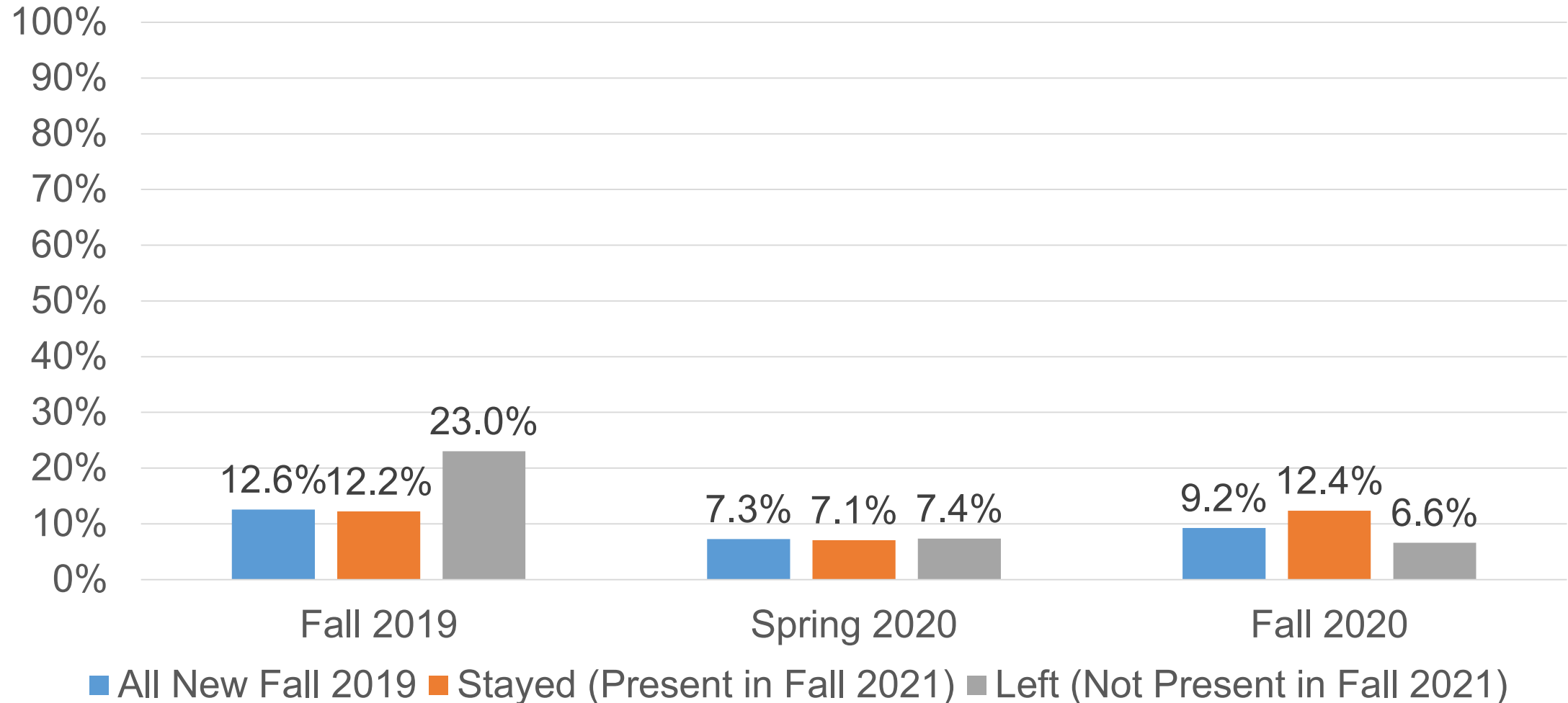
Consider some college data.





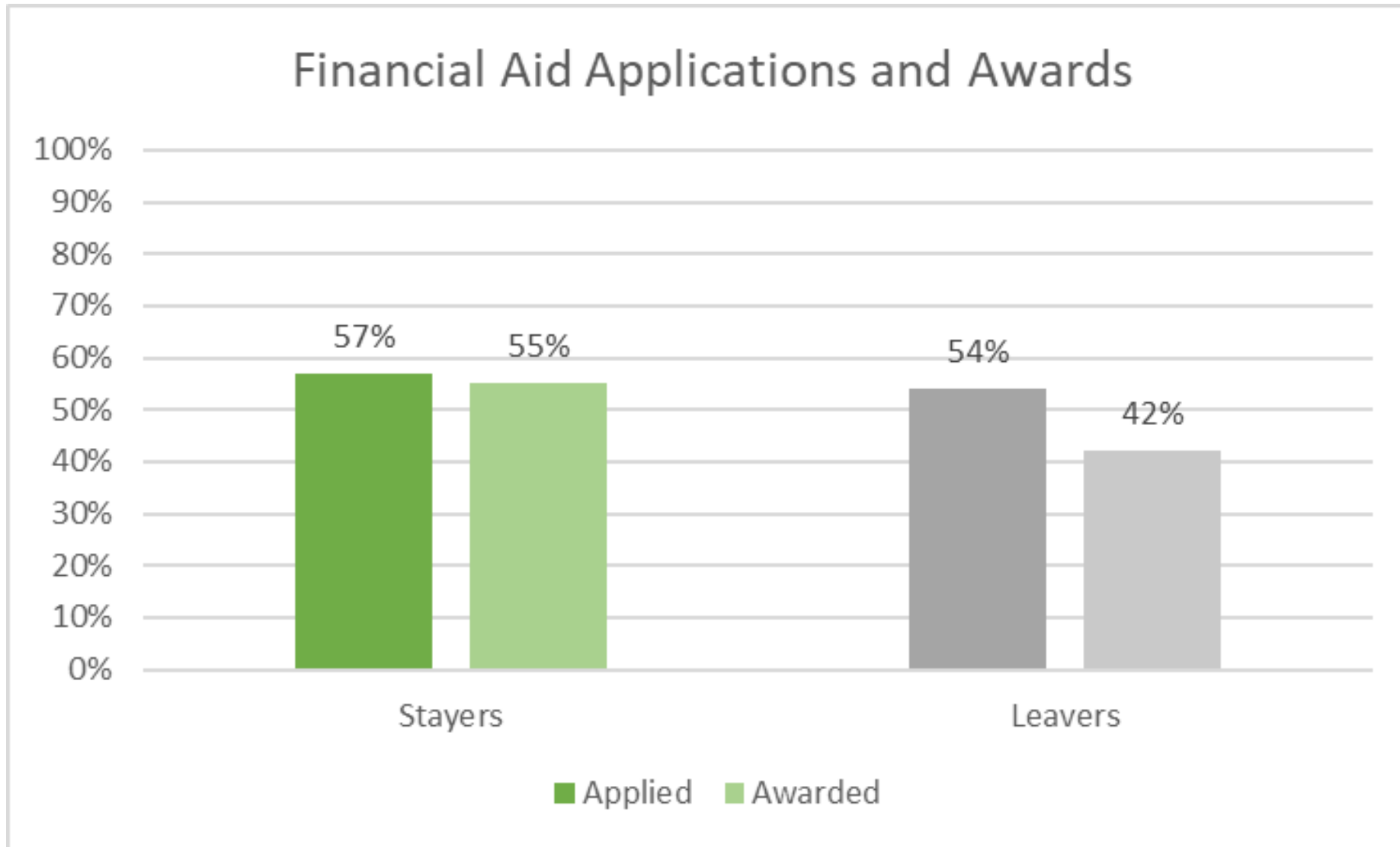
# Leavers had nearly twice as many non-payment drops.

## Comparison of New Student Non-Payment Drops





Another clue comes from FAFSA rates and award rates.





Opinion: the research literature also supports this opinion.

Research into free community college programs shows that for every \$1000 in tuition assistance, enrollment goes up 3.5% to 5%.



What should we do?



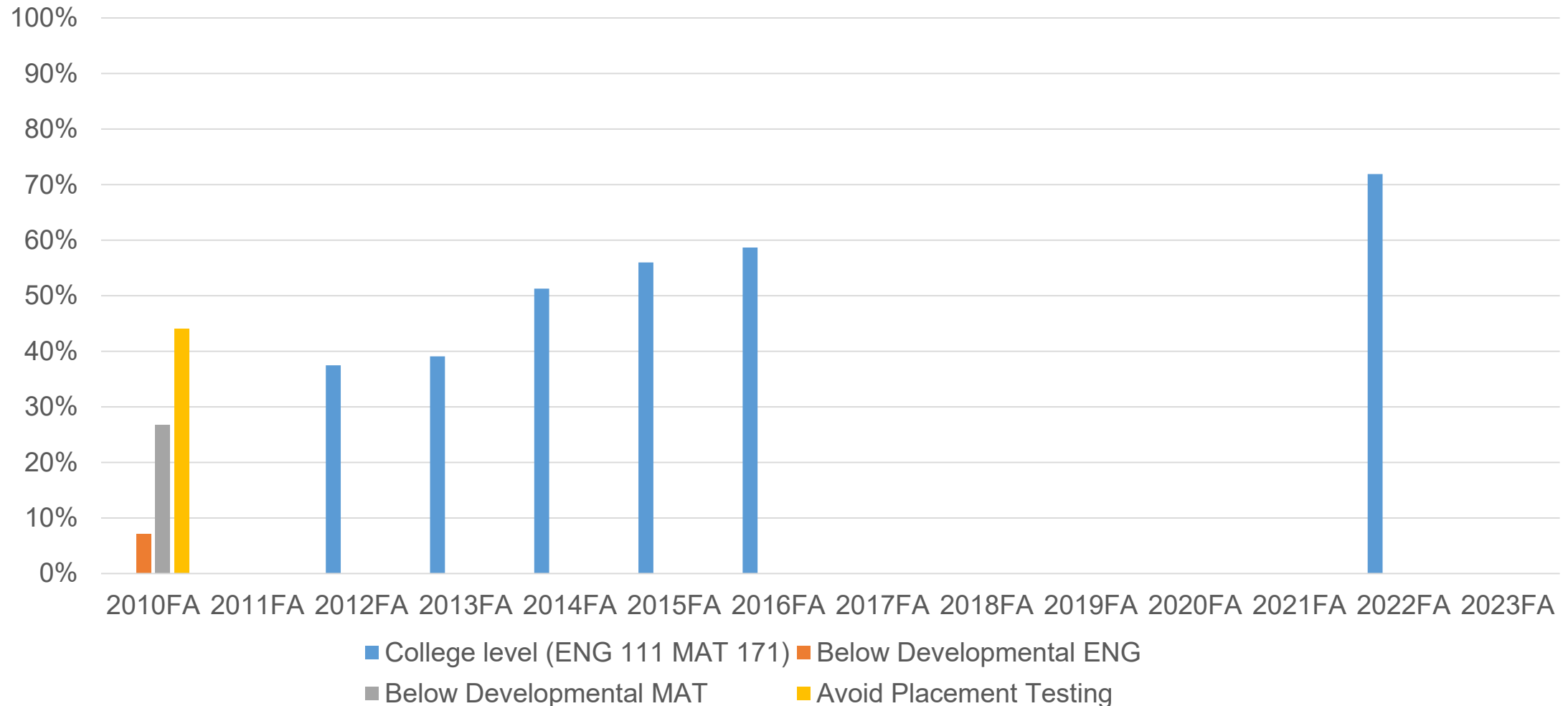
## Five Principles for Reforming Developmental Education: A Review of the Evidence (CCRC)

1. Grant students access to college -level math and English courses.
2. Provide targeted and tiered supports to address students' academic and nonacademic needs.
3. Employ contextualized curriculum and student -centered pedagogy.
4. Use equity -minded approaches for design and implementation.
5. Implement developmental education reforms alongside comprehensive, sustained supports to improve long -term outcomes.



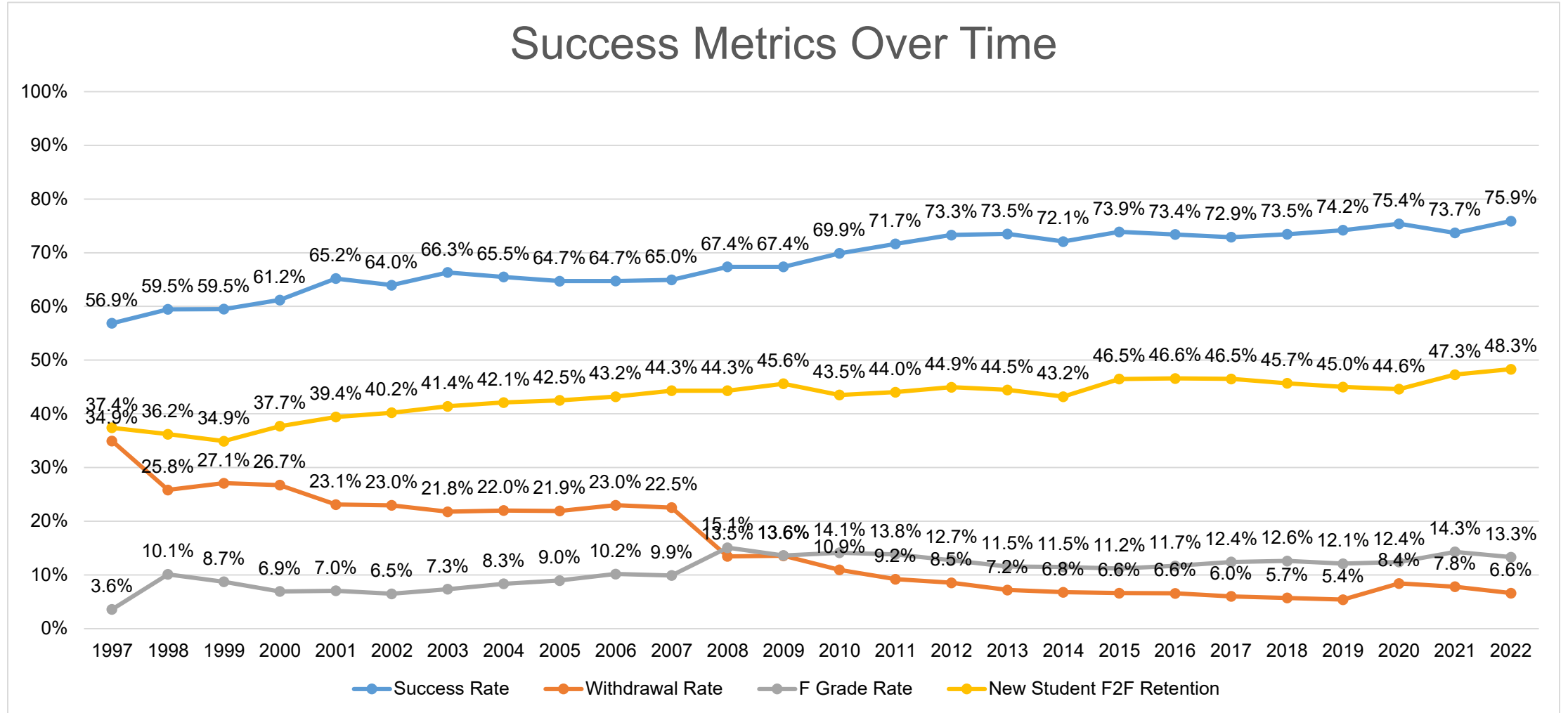
# Access has increased over time.

## College Level (and other) Placements Over Time





# Has greater access to college level classes hurt students?





## Placement Measures Used At Central Piedmont (with no time limits)

Associate degree or higher (U.S. or International)

College level math and English (C- or better grade), or other transfer credits for courses with statewide prerequisites

2.6 or higher unweighted GPA from any high school or college, U.S. or international, with high school math through math 2; or 6+ transferable college credits; (2.2 for corequisite placement)

ACT or SAT, GED or HiSET, AP, Cambridge, CCRG, or IB (ACT, CCRG, GED, or HiSET for corequisite placement)

ACCUPLACER Next Gen Reading and Writing and Quantitative Reasoning, Algebra & Statistics

Past placement criteria met, including through older courses or placement tests, past prerequisite overrides given, non-course credits, etc.





# Here are my recommendations

1. Place all students into college level courses.

This is necessary but not sufficient.



# Here are my recommendations

2. “Provide targeted and tiered supports to address students’ **academic** and nonacademic needs.”

Figure out what this means and provide it without requiring more courses. Act in realtime to get students what they demonstrate that they need, rather than poorly predicting who needs what.

This is also necessary but not sufficient.



## 2. Provide targeted and tiered supports (continued).

Do developmental courses develop general student skills?

Social and emotional readiness?

Financial readiness?

Do they address outside obligations?

English language learner status?

Health and wellness?

Student integration?

Self-efficacy?



# Here are my recommendations

3. Make sure that success rates for all courses average 75% or higher and work with courses and instructors who consistently have lower rates.

This is also necessary but not sufficient.



## Don't forget gateway course avoidance.

4. Make sure that students are taking gateway courses in their first term.

If we did all four of these things and gave students sufficient financial support, our graduation rates would soar.

So, with D.E.A.P.

**Are we there  
yet?**

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