Georgia's Long Journey on Corequisite Learning Support

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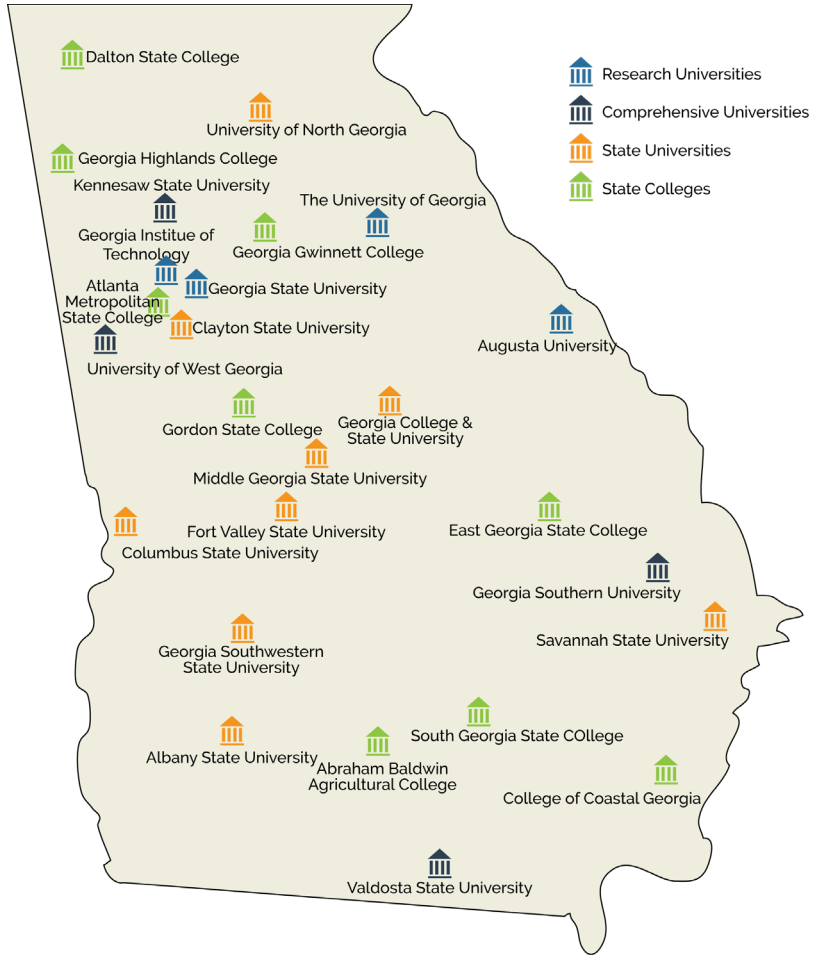
The University System of Georgia



- Single governing board
- 26 institutions (separate from Technical College System)
- Fall 2022 enrollment: 334,459 (262,489 undergraduates)
- Fully articulated Core Curriculum

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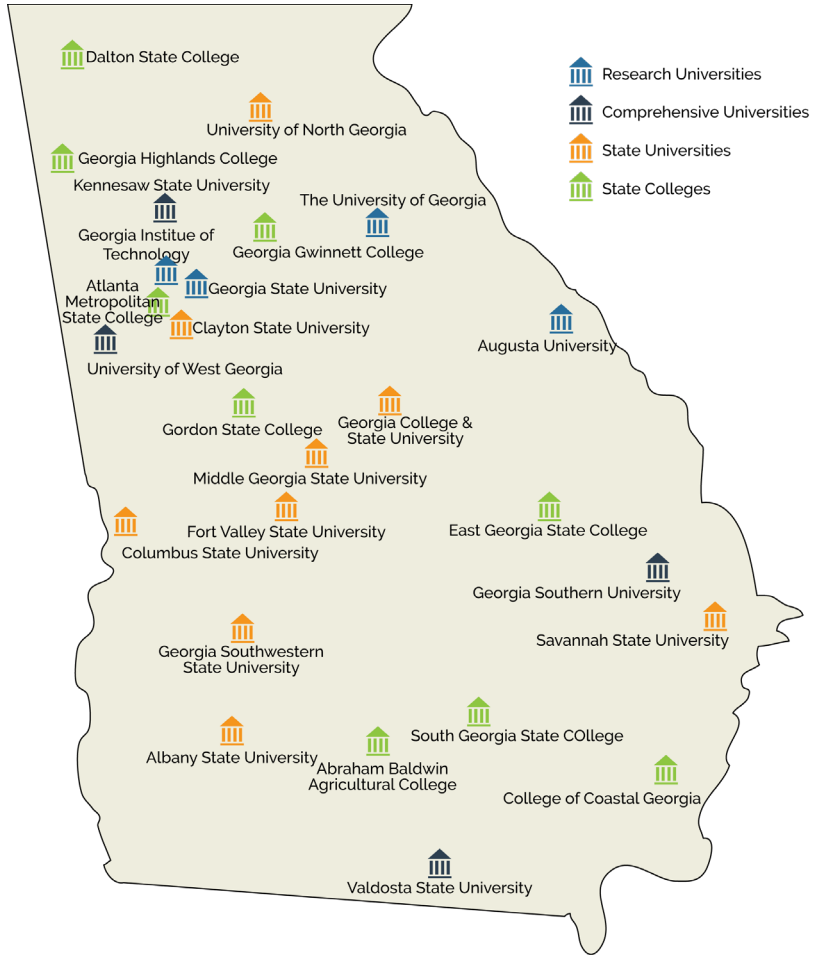
Learning Support in the USG



- Fully corequisite since 2018
- Two-tiered placement structure in Math
- In 2022, ~12K FTF with a Learning Support Requirement (~21% of all FTF)
- LS offered at 22 institutions
- 6 institutions with >60% FTF with LS Math requirements

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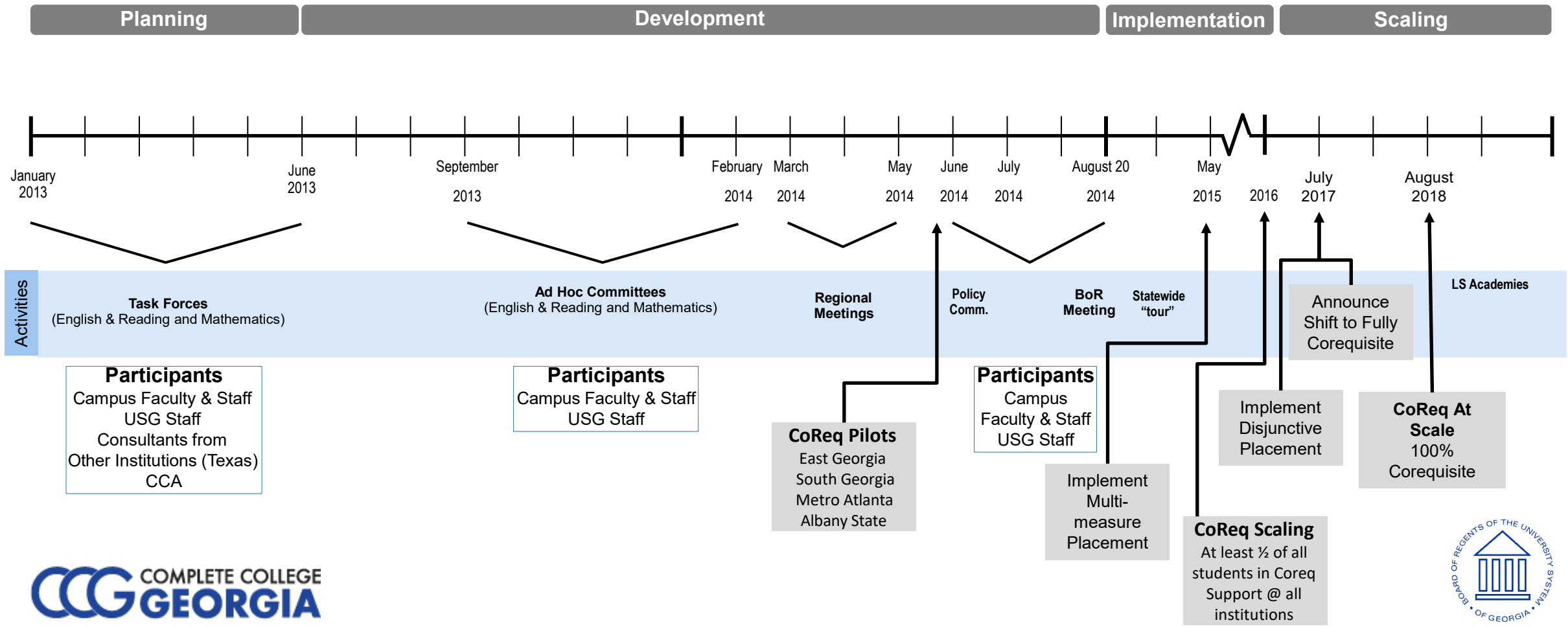
The Long Road



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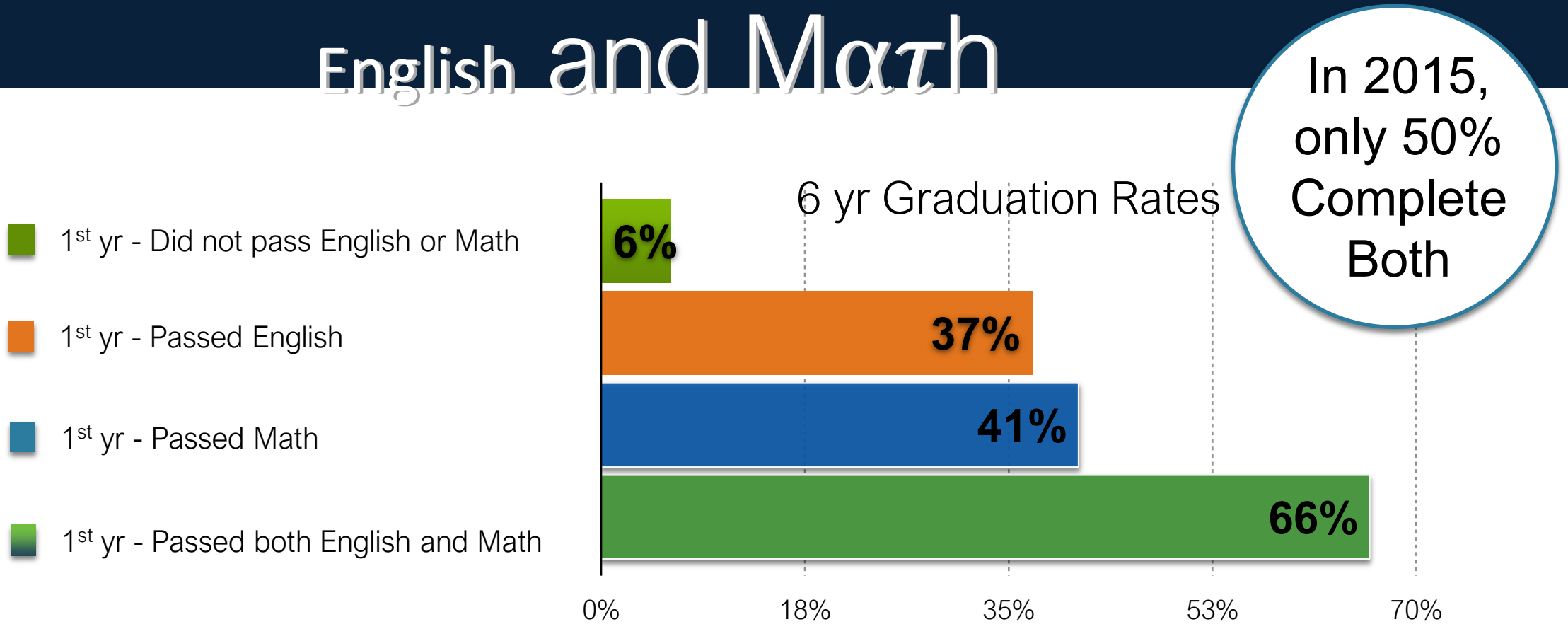
From Prototype to Pilot to Scale

- Early prototypes borrowed heavily from Complete College America and Accelerated Learning Project (English)
- Success in early pilots was unequivocal – but was this a fluke?
- At full implementation, results were consistent
- After 1 year, evidence was clear enough to support fully scaling
- When fully scaled, outcomes actually improved (with 100% of students in coreqs!)

Why Bother?

- In 2013, >20% of students starting in traditional Developmental Education in Math passed the Gateway; better in English (>45%)
- In 2014-15 with a revised pre-requisite course, pass rates went up to ~30%; English actually declined slightly.
- Pass rates in second courses were also weak; very low rates of retention and graduation for students with Dev Ed Placements

English and Math



In 2015, only 50% Complete Both

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Why CoRequisites?

Chained Attrition

For **Math** in 2016 in the USG…

An unknown number of students

depart without enrolling after getting a Developmental Education Placement

3,585 Students

Enroll in Foundations (Prerequisite) MATH courses aligned with their gateway

2,641 (74%) Students Pass

Of these, 1,797 students (68%) enroll in the next courser with support

1,062 students (59%) Pass

Out of 3,585 students who enroll in Prerequisite Math Support, 1,062 (30%) pass a Gateway Math course

74% x 68% x 59% = 30%

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Why CoRequisites?

Limited Exit Points

For **Math** in 2016 in the USG…

An unknown number of students

depart without enrolling after getting a Coreq Placement

3,490 Students

enroll in Coreq MATH Support and a Gateway Math

2,165 (62%) Students Pass

Out of 3,490 students who enroll in Prerequisite Math Support, 2,165 (62%) pass a Gateway Math course

62% = 62%

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Why CoRequisites?

Other factors

- Aligned resources and supports – “Just in time” support
- Relevance and application
- Momentum – no delay on credit-taking
- Reduce costs to students
- Student success in the Gateway course

Fundamental Features of Corequisite Learning Support in GA

- The “default placement” for all students will be in an entry-level collegiate course with Corequisite Learning Support UNLESS students meet exemption criteria
- Aligned Support course for each Gateway Math Course (Quantitative Reasoning, Math Modeling, Elementary Statistics & College Algebra)
- Must pass collegiate course to satisfy Learning Support requirement
- The college-level and Corequisite Learning Support sections must be carefully coordinated.
- Support course “counts” toward institutional GPA
- No limits on the number of “attempts” students may have to satisfy LS requirements
- Students who withdraw from either the collegiate or support course MUST withdraw from the other.

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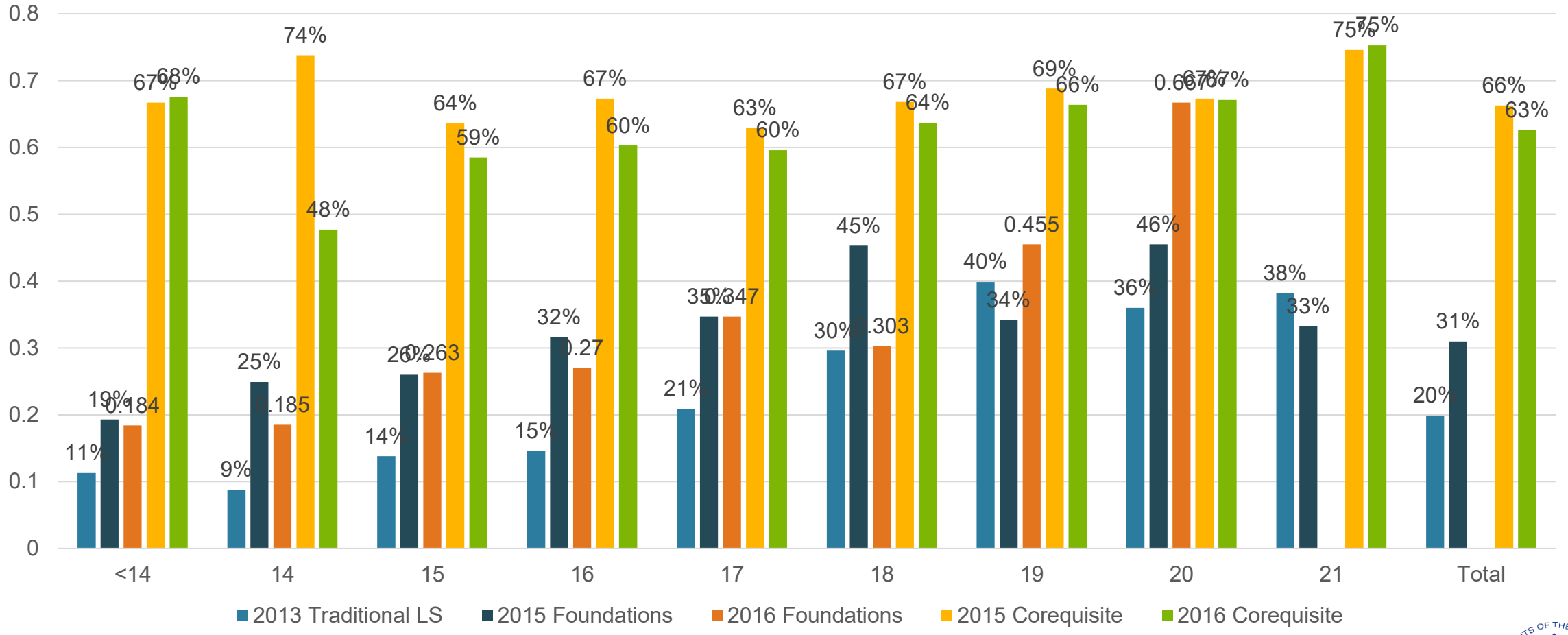
SYSTEM COMPARISON OF SUCCESS IN GATEWAY MATH CLASSES



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Corequisite Learning Support in Georgia

PLACEMENT

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LS Placement in Georgia

2014 Multi-measure placement pilot (English and Math Placement Indexes)

2015 All Institutions use EPI and MPI

2015 Compass replaced with Accuplacer

2016 Accuplacer replaced with Next Generation Accuplacer

2018 Moved single aggregate index to disjunctive placement model

2020 Test-optional admissions; recalibrated GPA cut scores

2022 Recalibrated GPA cut scores again

2023 Maintained test optional admissions (not a permanent change)

Multi-measure Placement in GA

Old (and traditional) Multi-measure placement: calculate a score

Student has:	EPI	MPI
SAT and HSGPA	(1603*HSGPA)+ SATV	(291*HSGPA)+ SATM
with Compass added	(1475*HSGPA)+ (0.3*SATV) + (5.1*(COMPASSR+eWrite))	(287*HSGPA)+ (0.5*SATM) + (5*COMPASSM)
ACT and HSGPA	(1553*HSGPA) + (34*ACTE)	(298*HSGPA) + (25*ACTM)
with Compass added	(1315*HSGPA) + (30*ACTE)+ (4.2*(COMPASSR+eWrite))	(250*HSGPA) + (27*ACTM)+ (2*COMPASSM)
HSGPA only	(794*HSGPA)+ (23.6*(COMPASSR+eWrite))	(323*HSGPA)+ (6*COMPASSM)
No info	51.6*(COMPASSR+eWrite)	(10*COMPASSM) + 795
SAT only	(6.3*SATV) + (17.1*(COMPASSR +eWrite))	(1.8*SATM) + (14*COMPASSM)
ACT only	(155.3*ACTE) + (13.8*(COMPASSR+ eWrite))	(63.2*ACTM) + (6*COMPASSM)

Challenges

- Complex
- Somewhat unpredictable (Accuplacer became a ”risk multiplier”)
- Unstable (COMPASS -> AccuPlacer -> NextGeneration Accuplacer)

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Multi-measure Placement in GA

Disjunctive Placement

Criteria for exemption from Corequisite Learning Support for **MATH 1001, MATH 1101 and MATH/STAT 1401** and
Minimum requirements for **MATH 1111 with Corequisite Learning Support**

Student must meet one of the following:

MPI>=**1165**
HSPGA>=**3.1** and **RHSC Math** complete
ACT Mathematics>=**17**
SAT (old)-Mathematics>=**400**
SAT (new)-Math Section>=**440**
Classic Accuplacer Elementary Algebra>=**67**
Next-Generation Accuplacer QAS>= **258**

Benefits

- Transparent
- Resilient to change
- Reframes Learning Support (all students benefit, rather than some students get diverted)

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Multi-measure Placement in GA

- System established minimum thresholds
- Institutions can set higher thresholds based on their contexts
- Thresholds are set at a roughly 60% probability of success in the collegiate course.

LEARNING SUPPORT CHANGES

Placement

Students are placed by default into Learning Support unless they meet exemption criteria

- HSGPA
- ACT
- SAT (old and new)
- EPI/MPI (until December)
- Accuplacer/Next Gen Accuplacer

Gateway Math

Placement into a Gateway Math course is based on the same exemption criteria.

Students who do not exempt learning support for Math Modeling or Quantitative Reasoning are ineligible for direct placement in College Algebra.

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Corequisite Learning Support in Georgia

LESSONS LEARNED

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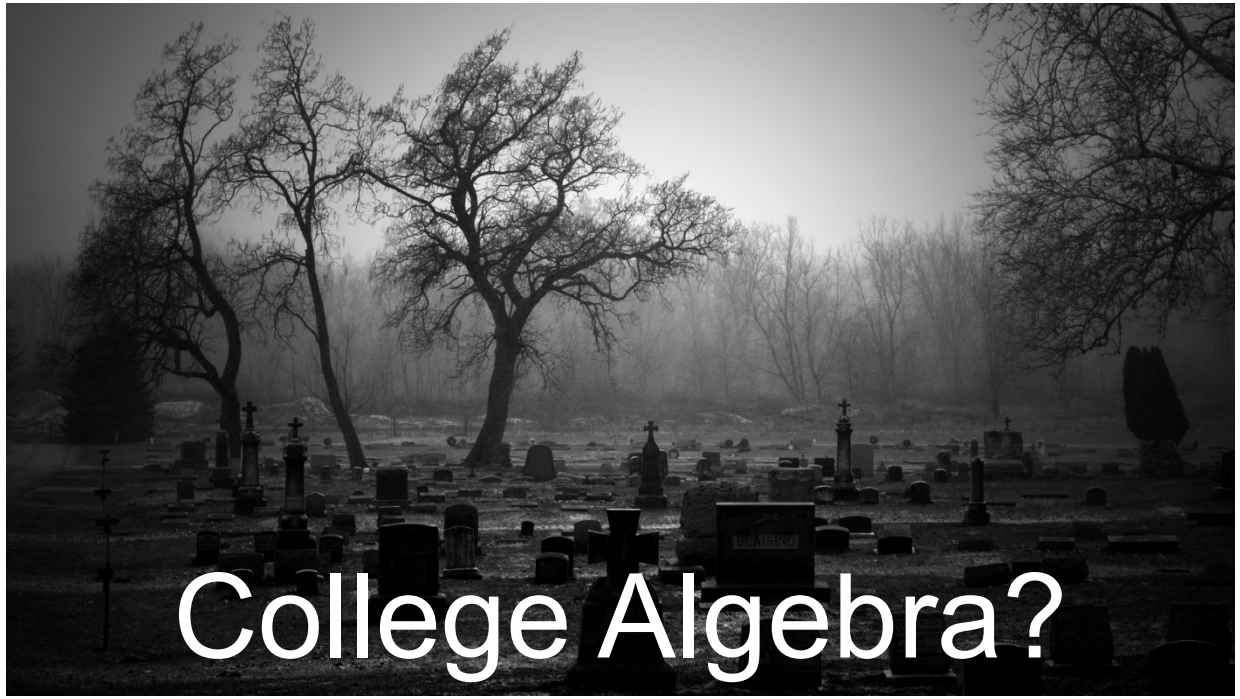
Structure vs Context

- Most of the early gains from Corequisite LS come the structural removal of exit points
- Additional structural approaches can have impact – faculty alignment, credit hours, timing, sequencing, and cohorting.

- Final gains come from changing the context – the student experience – through pedagogical and technological approaches
  - Success Pedagogies
  - Curricular redesign
  - Adaptive learning
  - Metacognition and Mindset

The Power of Math Pathways

- The First math course in college is often the last math course students will ever take
- Statistics as a first math may be the most flexible course for students (works across a wide range of majors)
- LS Placement can help to drive/incentivize alignment of math and programs



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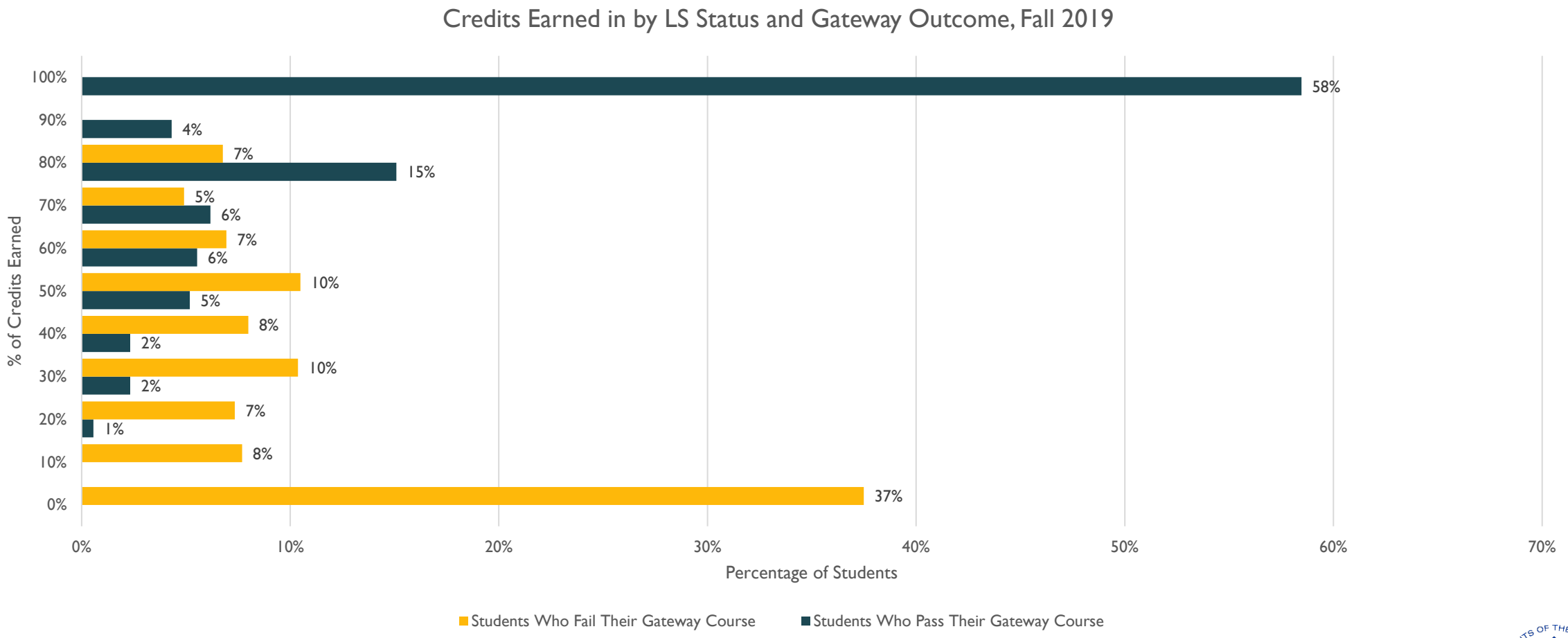
Corequisite Outcomes and Overall Success



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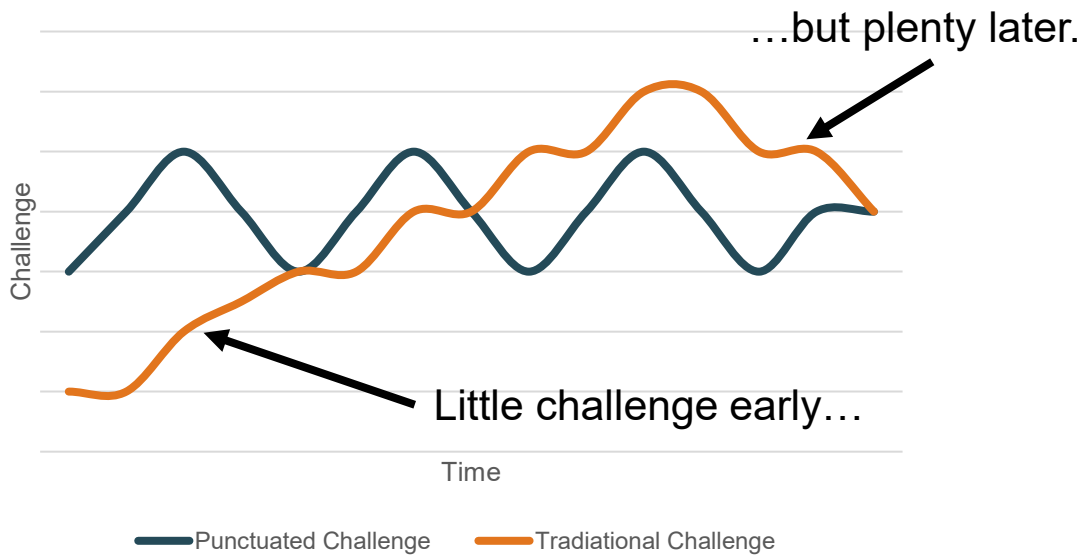
Course and Curricular Design

Course Progression

Traditional Challenge Curve vs Punctuated Challenge Design



Impact of Early Setbacks & Challenges

- Request to retest
- Weighting of exams
- Homework and revision
- Varieties of assessment modes

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Alignment & Focus

Complete Alignment of ALL Collegiate and Support Courses

- Same Syllabus
- Same Sequence of Topics
- Same Schedule
- Same Assessments
- Aligned supports, tutoring, resources and activities.

- Essential to have a Learning Support Coordinator on each campus

Learning Support is Just-in-Time

Function f is a function with inverse f^{-1}. Function h is defined by h(x) = A*f(x - h) + k where A, k and h are constants. Express the inverse function of h in terms of f^{-1}, A, k and h.

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Other Considerations

✓Cohort vs Comingled?

- USG data indicates Cohort has slightly stronger outcomes
- Comingled has higher drop off

✓ Same Instructor vs. Different Instructor

- USG data indicates same instructor for Math
  (interestingly, not so much for English)

✓ Number of Credit Hours

- USG data indicate 2-3 hours
- Some evidence for variable hours (more time for less prepared students
- No evidence of effectiveness for 1 credit hour

✓ Letter grades in the Support Course

- Not pass/fail

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Other Considerations

Preview vs Review?

- Both models are present
- Primarily **preview** allows students to gain confidence in the collegiate course.
- Primarily **preview** helps faculty understand what may be harder for all students
- Primary **review** helps students to “catch up” and fill in gaps.

Mindset and Metacognition

- Using the Support Course to support Growth Mindset and Belonging.
- Help students understand how to learn, and why to learn things they may not really want to learn.

That's a lot of me talking…

Questions?

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