Georgia’s 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
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
The Long Road

Planning

Task Forces
(English & Reading and Mathematics)

Ad Hoc Committees
(English & Reading and Mathematics)

Regional Meetings

Policy Comm.

BoR Meeting

Statewide “tour”

Development

Participants
Campus Faculty & Staff
USG Staff
Consultants from Other Institutions (Texas)
CCA

Participants
Campus Faculty & Staff
USG Staff

CoReq Pilots
East Georgia
South Georgia
Metro Atlanta
Albany State

Activities

January 2013
June 2013
September 2013
February 2014
March 2014
May 2014
June 2014
July 2014
August 20 2014
May 2015
2016
July 2017
August 2018

Implementation

Scaling

Implementation

CoReq At Scale
100% Corequisite

LS Academies

CoReq Scaling
At least ½ of all students in Coreq Support @ all institutions

Scaling

Announce Shift to Fully Corequisite

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Activities
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
In 2015, only 50% Complete Both

- 1st yr - Did not pass English or Math: 6%
- 1st yr - Passed English: 37%
- 1st yr - Passed Math: 41%
- 1st yr - Passed both English and Math: 66%
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.

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

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

1,062 students (59%) Pass.

74% x 68% x 59% = 30%
Why CoRequisites?

Limited Exit Points

For Math in 2016 in the USG...

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

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

62% = 62%
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.
SYSTEM COMPARISON OF SUCCESS IN GATEWAY MATH CLASSES
Corequisite Learning Support in Georgia

PLACEMENT
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 Testoptional 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

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

Challenges

- Complex
- Somewhat unpredictable (Accuplacer became a "risk multiplier")
- Unstable (COMPASS -> AccuPlacer -> NextGeneration Accuplacer)
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 $\geq 1165$
- HSPGA $\geq 3.1$ and RHSC Math complete
- ACT Mathematics $\geq 17$
- SAT (old)-Mathematics $\geq 400$
- SAT (new)-Math Section $\geq 440$
- Classic Accuplacer Elementary Algebra $\geq 67$
- Next-Generation Accuplacer QAS $\geq 258$

**Benefits**

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

LESSONS LEARNED
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.

College Algebra?
Corequisite Outcomes and Overall Success

Credits Earned in by LS Status and Gateway Outcome, Fall 2019

- Students Who Fail Their Gateway Course
- Students Who Pass Their Gateway Course

Percentage of Students

% of Credits Earned

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
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
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 $h$. 
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
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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