

Everything Counts: A Holistic Approach to Addressing Challenges in Math

Dr. Barbara Buchanan, Vice President, Instruction/Chief Academic Officer

Dr. David Townsend, Dean, University Transfer and General Education

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Session Objectives



- 1. Identify challenges and common problems associated with community college gateway math courses.**
- 2. Outline different strategies Piedmont Community College is implementing to promote retention and student success in math.**
- 3. Facilitate a dialogue where we explore best practices used across the state to promote student success in community college math courses.**

Activity #1: Padlet

To start off our conversation, please go to the following link:

<https://tinyurl.com/mathmarch23>

What are the biggest challenges facing our students when they enter their community college math classes?



System Office Data



Success Rate in College-Level Math (PM3) - Institutional Outcomes

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Student Success Rate in College-Level Math

Percentage of first-time associate degree-seeking and transfer pathway students passing a credit-bearing Math course with a "C" or better within three years of their first fall term of enrollment



Filters in red font will carry through to the other tabs of the dashboard. Filters in black font apply to the current page only.

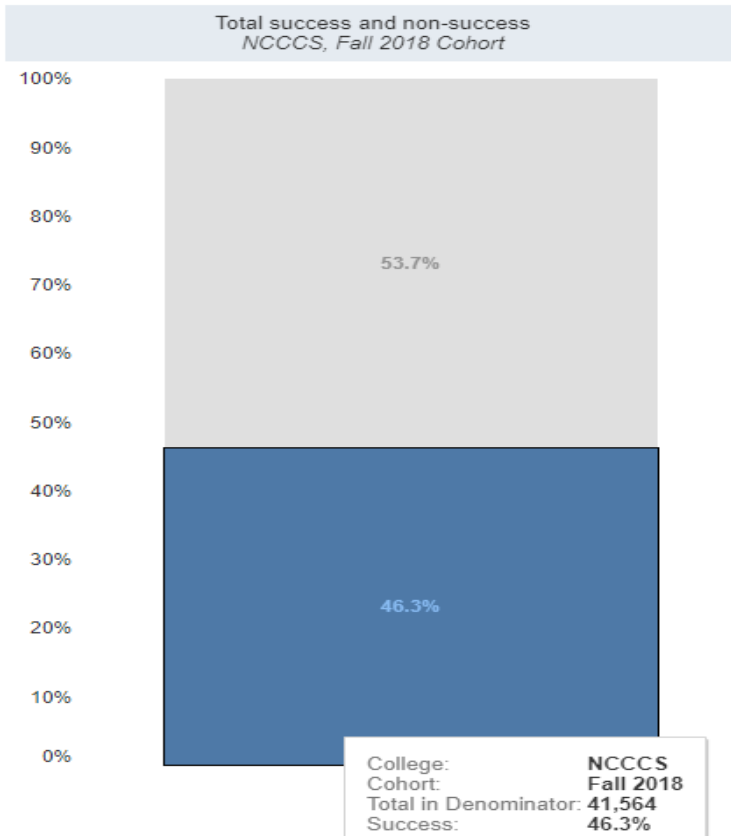
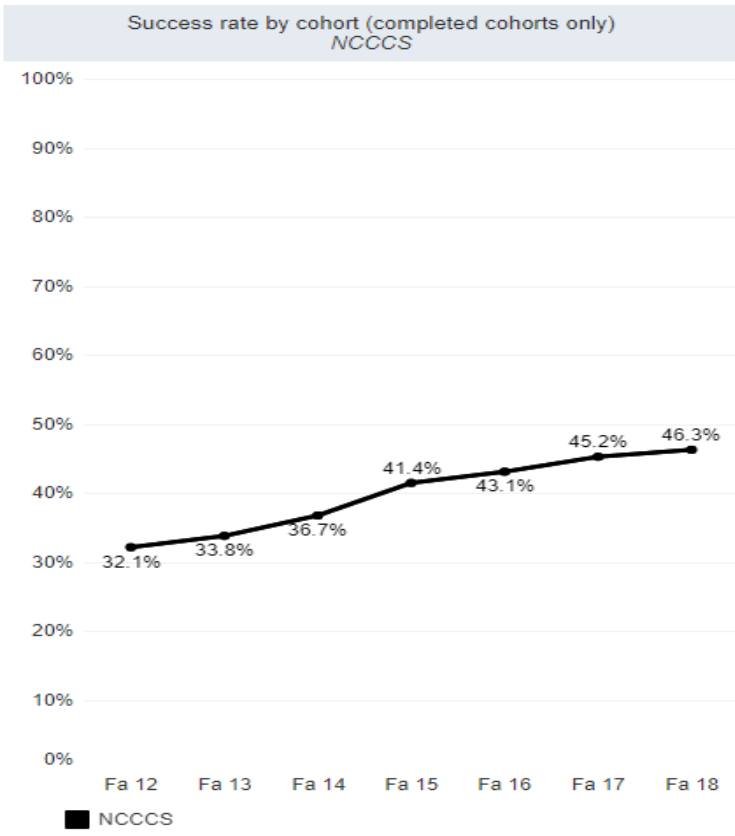
Select College:

Cohort Fall Term:

Show Graph By:

Non-Success
 Success

[Click here for Peer Comparison Dashboard](#)



College: NCCCS
 Cohort: Fall 2018
 Total in Denominator: 41,564
 Success: 46.3%

* fewer than 20 in denominator

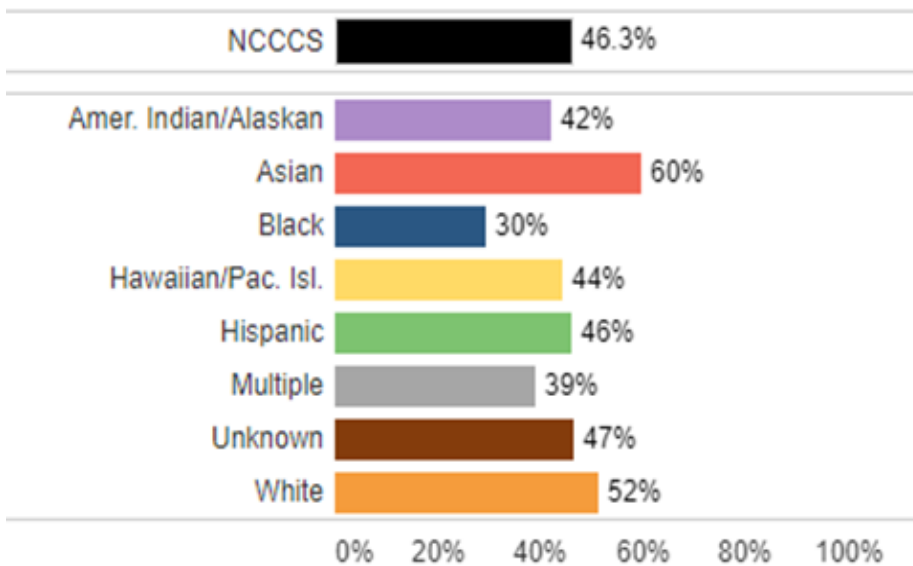
Sources: CCSR & NSC

System Office Data

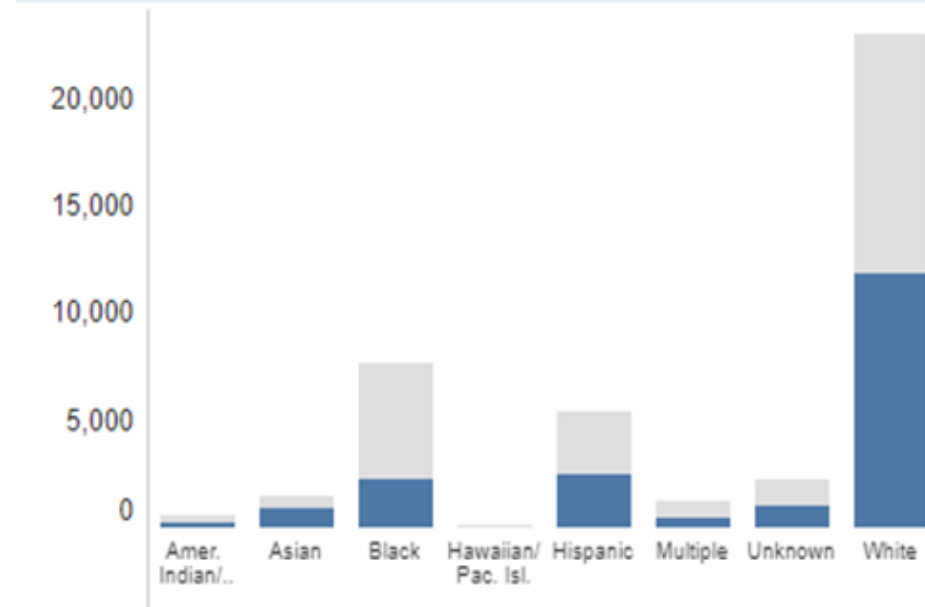


Student Success Rate in College-Level Math by Race/Ethnicity

Success rate by race/ethnicity
NCCCS, Fall 2018 Cohort



Total success and non-success by race/ethnicity
NCCCS, Fall 2018 Cohort

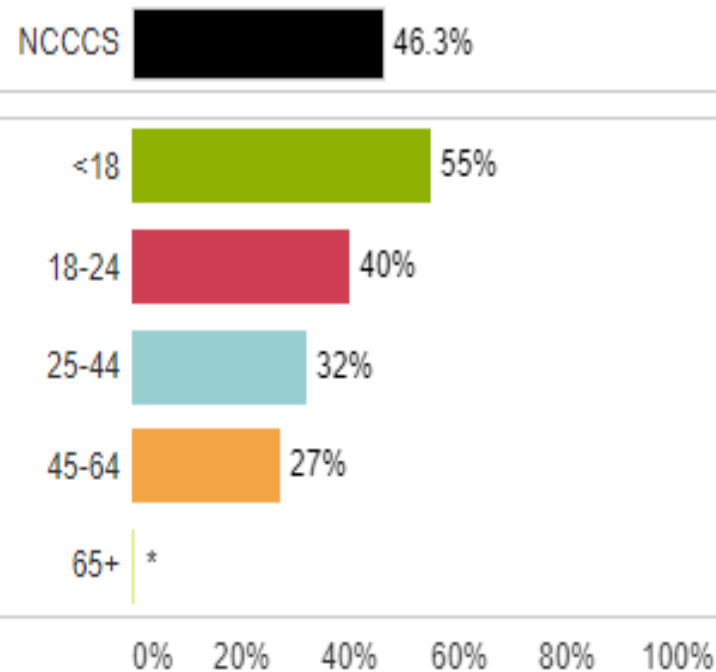


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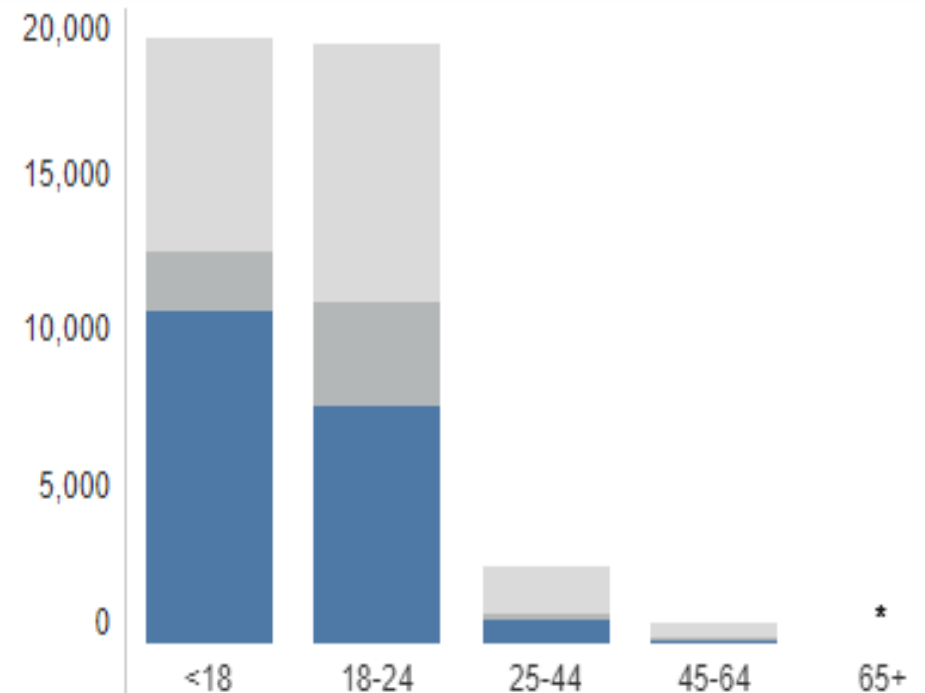


Student Success Rate in College-Level Math by Age Range

Success rate by age range
NCCCS, Fall 2018 Cohort



Total success and non-success by age range
NCCCS, Fall 2018 Cohort

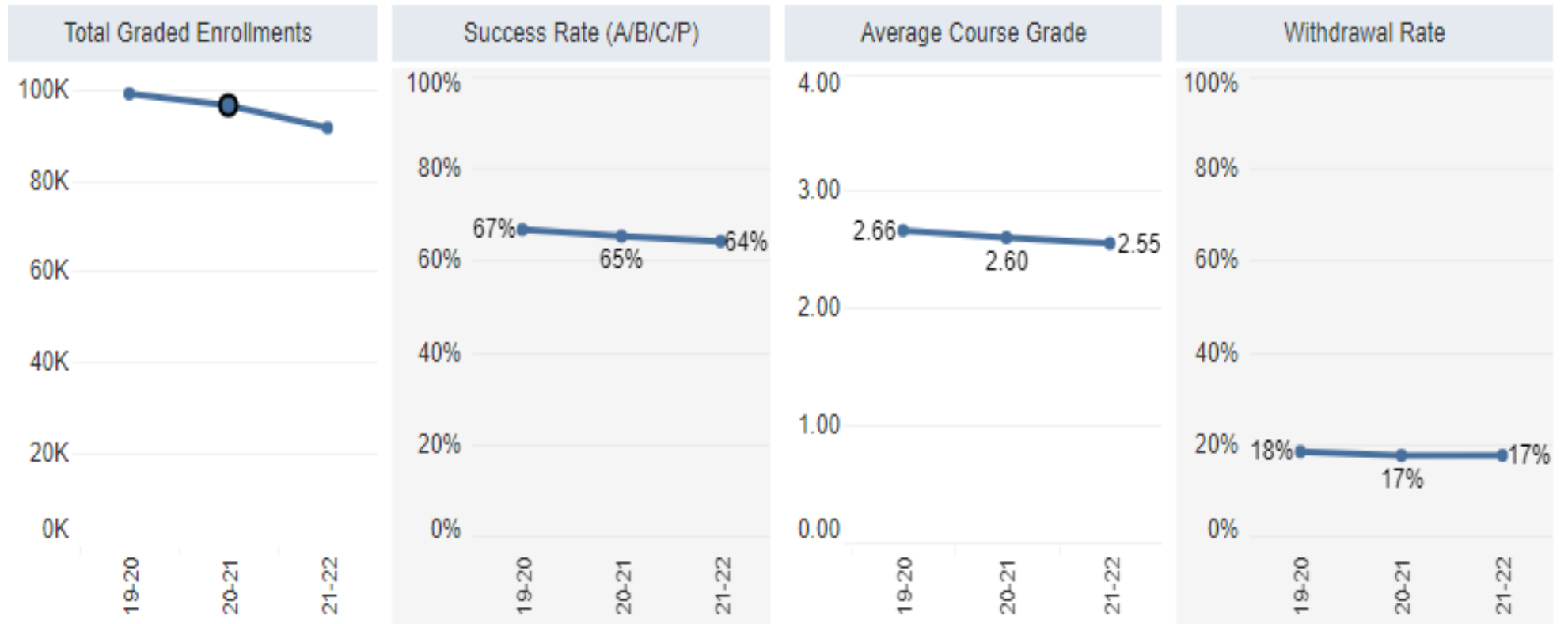


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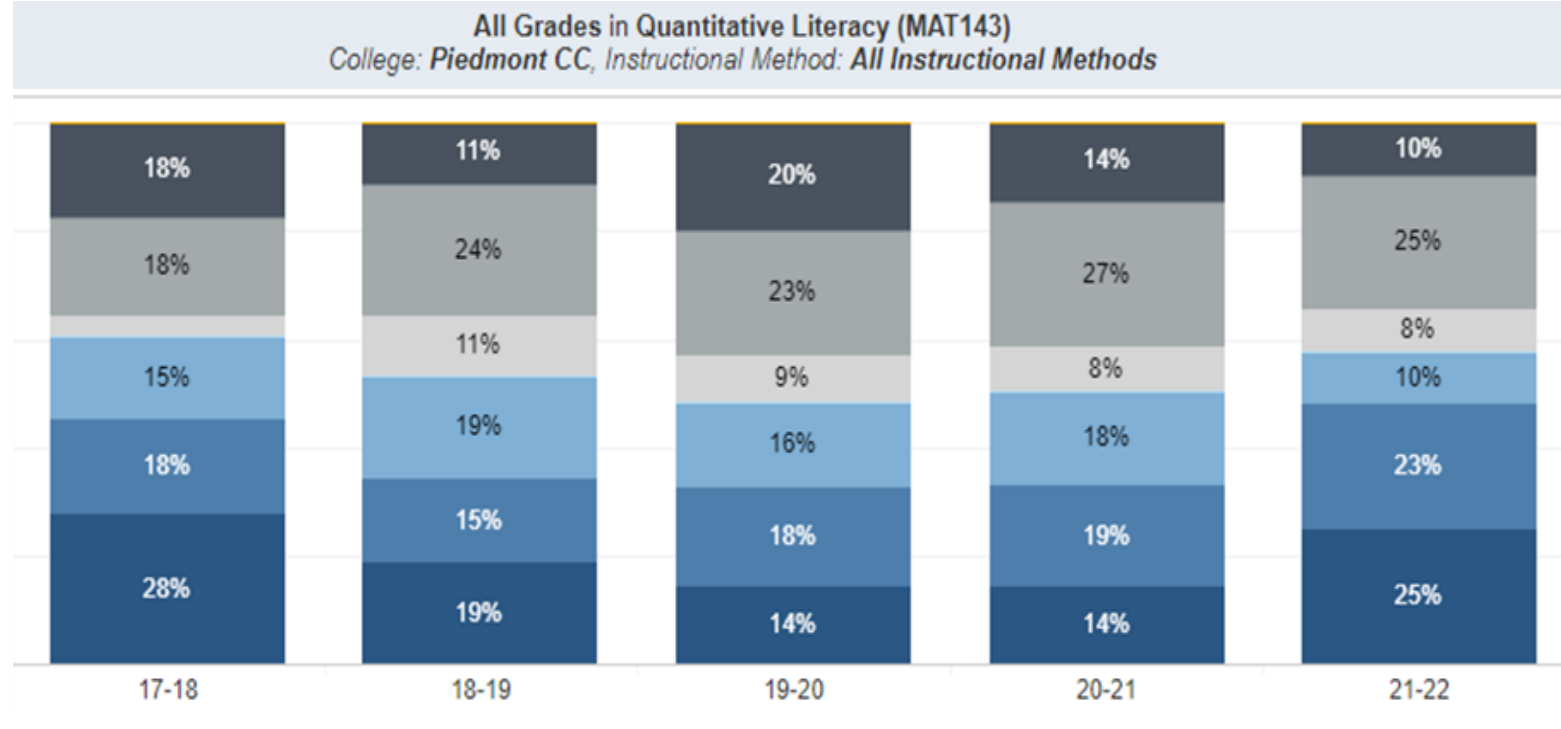


Curriculum Course Outcomes Over Time by Subject

NCCCS Trends in Mathematics (Credit Level) (MAT ≥100)



PCC Data



Success Rates:

AY 17-18: 61%

AY 18-19: 53%

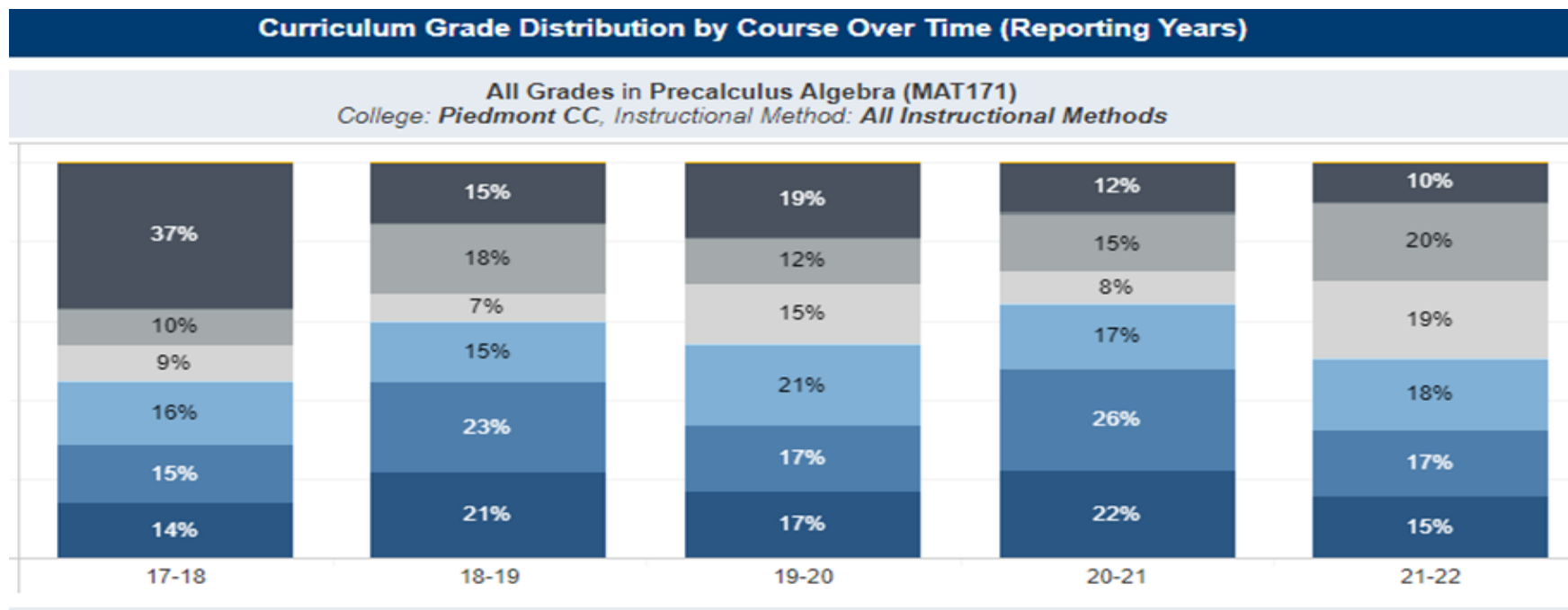
AY 19-20: 48%

AY 20-21: 51%

AY 21-22: 58%



PCC Data



Success Rates:

AY 17-18: 45%

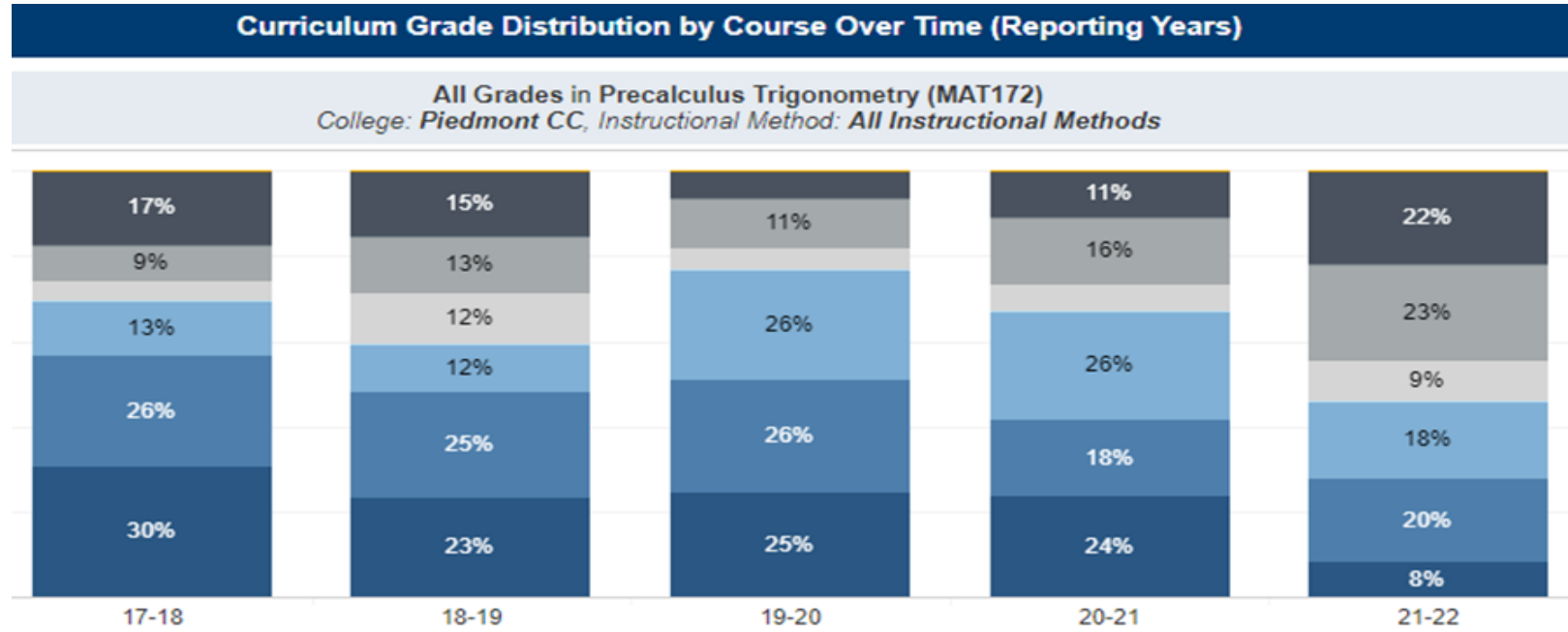
AY 18-19: 59%

AY 19-20: 55%

AY 20-21: 65%

AY 21-22: 50%

PCC Data



Success Rates:

AY 17-18: 69%

AY 18-19: 60%

AY 19-20: 77%

AY 20-21: 68%

AY 21-22: 46%

AY 22-23: 18%

Mechanisms Already in Place



- Midterm Grades
- AVISO Outreach
- Communications with CCP Liaisons
- Tutoring Services
- Instructor Office Hours

PCC Math Action Plan



Established Fall 2022

- Community College Mission—Meeting Students Where They Are
- Critical Examination of Practices and Policies
- Call for Action
- Math Faculty, Campus Leaders, Relevant Stakeholders Involved

PCC Math Action Plan



Prerequisite Skills

- MAT 171: Entire module devoted to prerequisite skills
 - ~2 weeks of content
- MAT 143: Prerequisite skills embedded
 - Throughout course

PCC Math Action Plan



Communications

- Increased communications with CCP liaisons and relevant stakeholders
- Meetings with local high school principals, counselors
- Parent meeting
- Planned Math Summit

PCC Math Action Plan



Tutoring Services

- Expanded tutoring services (face-to-face, online, individual, small group)
- Tutoring services at the local high school
- Easy as Pi Tutoring Sessions (MWF, MTh)
- Peer Tutors
- Expanded Instructor Office Hours

PCC Math Action Plan



Course Assessments/Expectations

- Tutoring Services from Day 1
- Standardized Course Weights and Assessments
- Retaking One Assessment (MAT 171)
- Dropping Lowest Grade
- Embedding More Formative Assessments

PCC Math Action Plan



Proactive Institutional Measures

- Frequent Communications Among Math Faculty
- CCP Students Required to Get "C" (70+) or Required Tutoring
- Support Class Offered through PHS
- Diagnostic Assessments
- Analyzing Longitudinal Data
- Benchmarking Best Practices

PCC Math Action Plan



Professional Learning Community (PLC)

- Spring 2023: Launched a PLC (meeting every 2-3 weeks)

Math Summit

- Stakeholders across both counties (all high schools, math faculty, curriculum facilitators, etc.) in the service area
- Scheduled for April 5

PCC Math Action Plan



Other Efforts

- Summer Math Boot Camps
- Minimizing Instructor Overloads
- Networking with Other Faculty/Colleges
- Simulating the Student Experience

Progress Report- MAT 171



MAT 171 Test Grades

Test 1	Test 2	Test 3
55 (22Fa) / 68 (23Sp)	59 (22Fa) / 72 (23Sp)	63 (22Fa) / 78 (23Sp)
+13	+13	+15

On the Horizon



Math Summit (April 5)

- Person and Caswell counties
- Principals, guidance counselors, math teachers, PCC math faculty, PCC staff

Math Boot Camps (2023 Summer)

- 4 camps
- 2 per county (one in June, one in July)

Strategies at Your College



Let's take a few minutes to learn from each other.

There are four posters across the room. On a post-it note, respond to the following four prompts:

1. **Interventions** (What interventions are you utilizing to support students while they are taking math?)
2. **Proactive Measures** (What institutional efforts are taking place prior to students enrolling in the course?)
3. **Noteworthy Successes** (What specific initiatives/strategies have you enacted that have produced positive results for student success?)
4. **Questions/Challenges** (What questions and/or challenges do you have that you would like to share ask your colleagues across the state?)

Contact Information



Dr. Barbara Buchanan

Vice President, Instruction/Chief Academic Officer

Email: barbara.buchanan@piedmontcc.edu

Phone: (336)- 322-2106



Dr. David Townsend

Dean, University Transfer and General Education

Email: david.townsend@piedmontcc.edu

Phone: (336) 322-2190

