

Dual Enrollment: Let's talk!

Ted Coe, Ph.D.

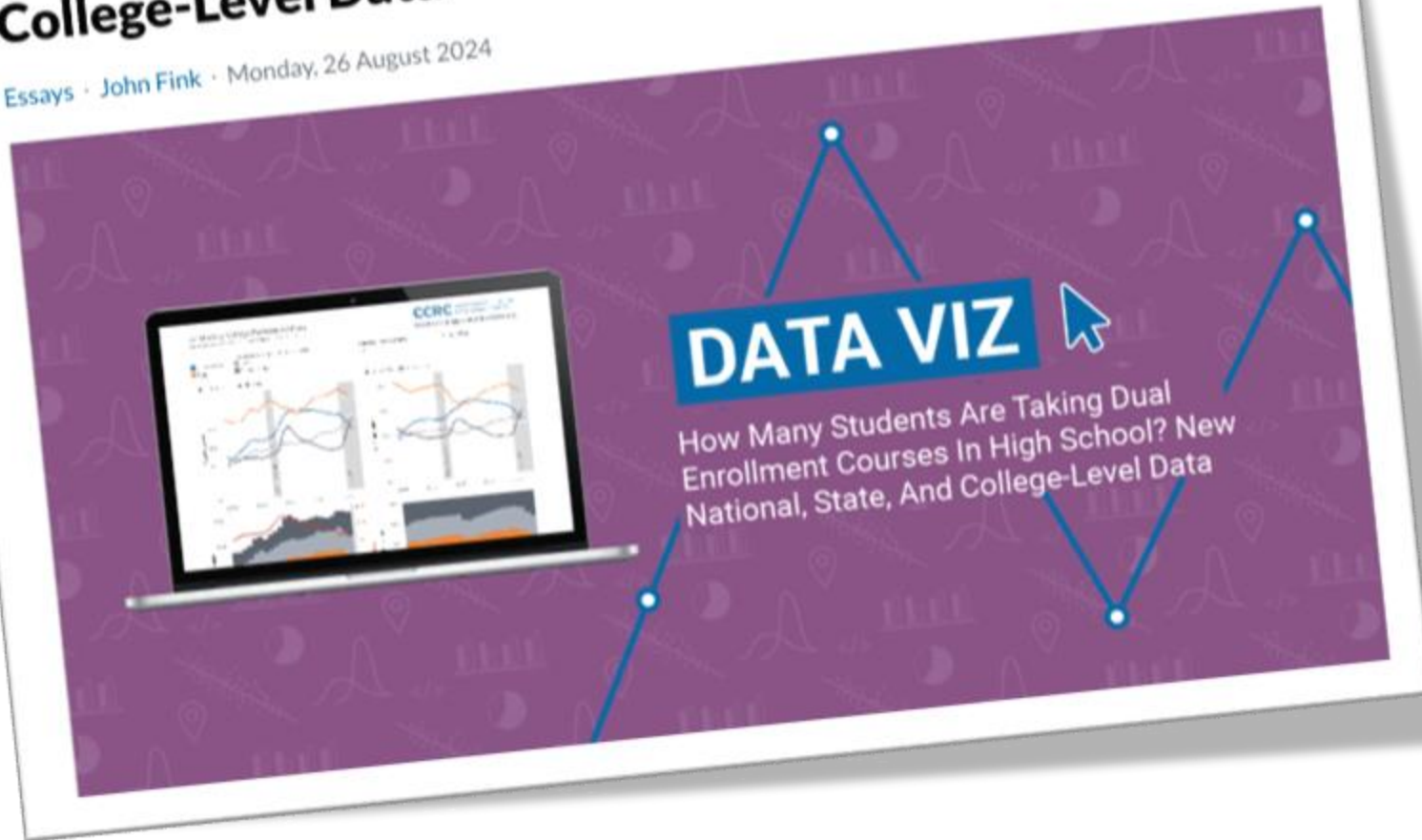
coequal
mathematics

Sept 26, 2024

My own experiences

How Many Students Are Taking Dual Enrollment Courses In High School? New National, State, and College-Level Data

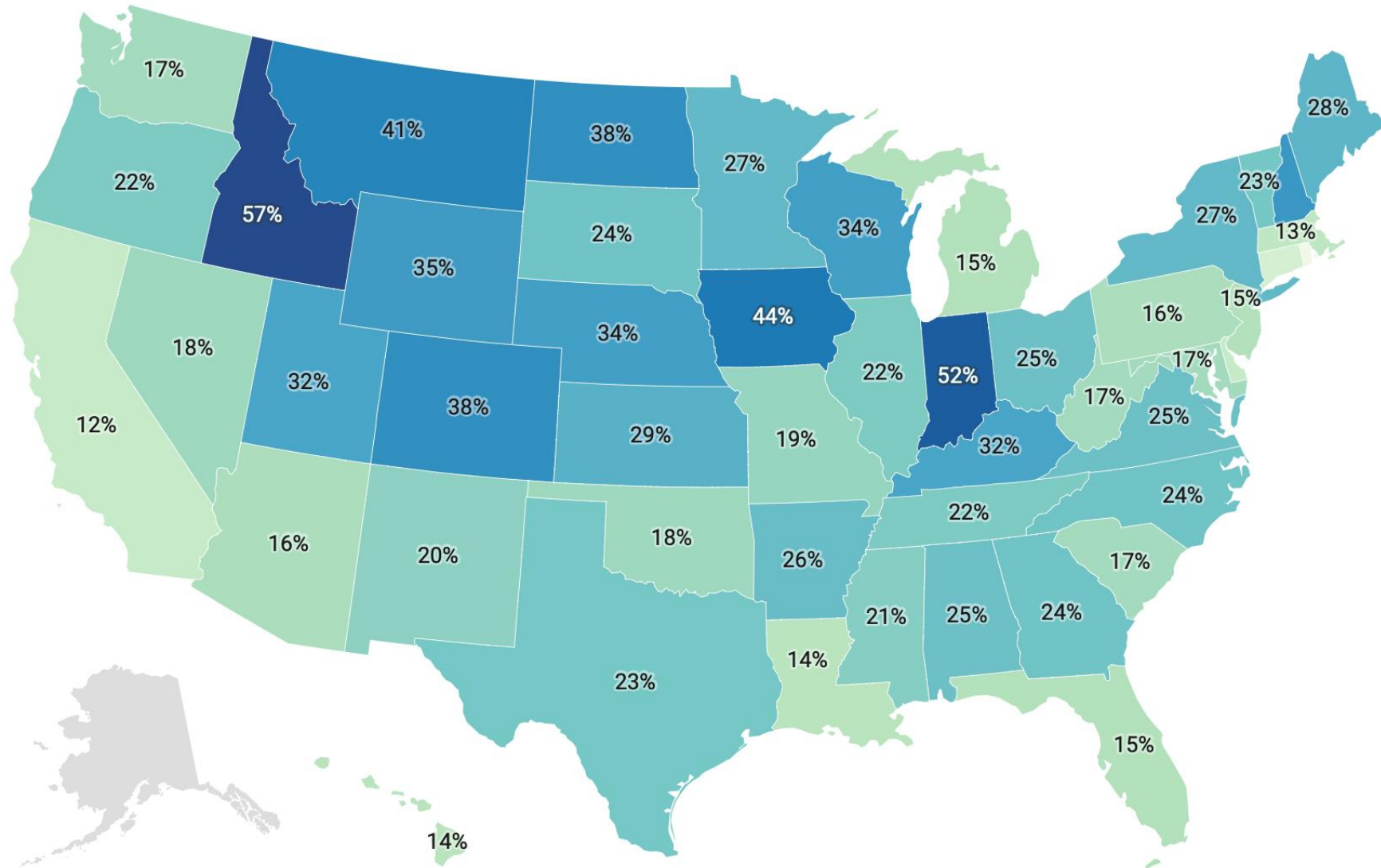
Essays · John Fink · Monday, 26 August 2024



<https://ccrc.tc.columbia.edu/easyblog/how-many-students-are-taking-dual-enrollment-courses-in-high-school-new-national-state-and-college-level-data.html>

Percentage of Community College Students in High School in 2022-23

Dual enrollment as a percent of community college headcount

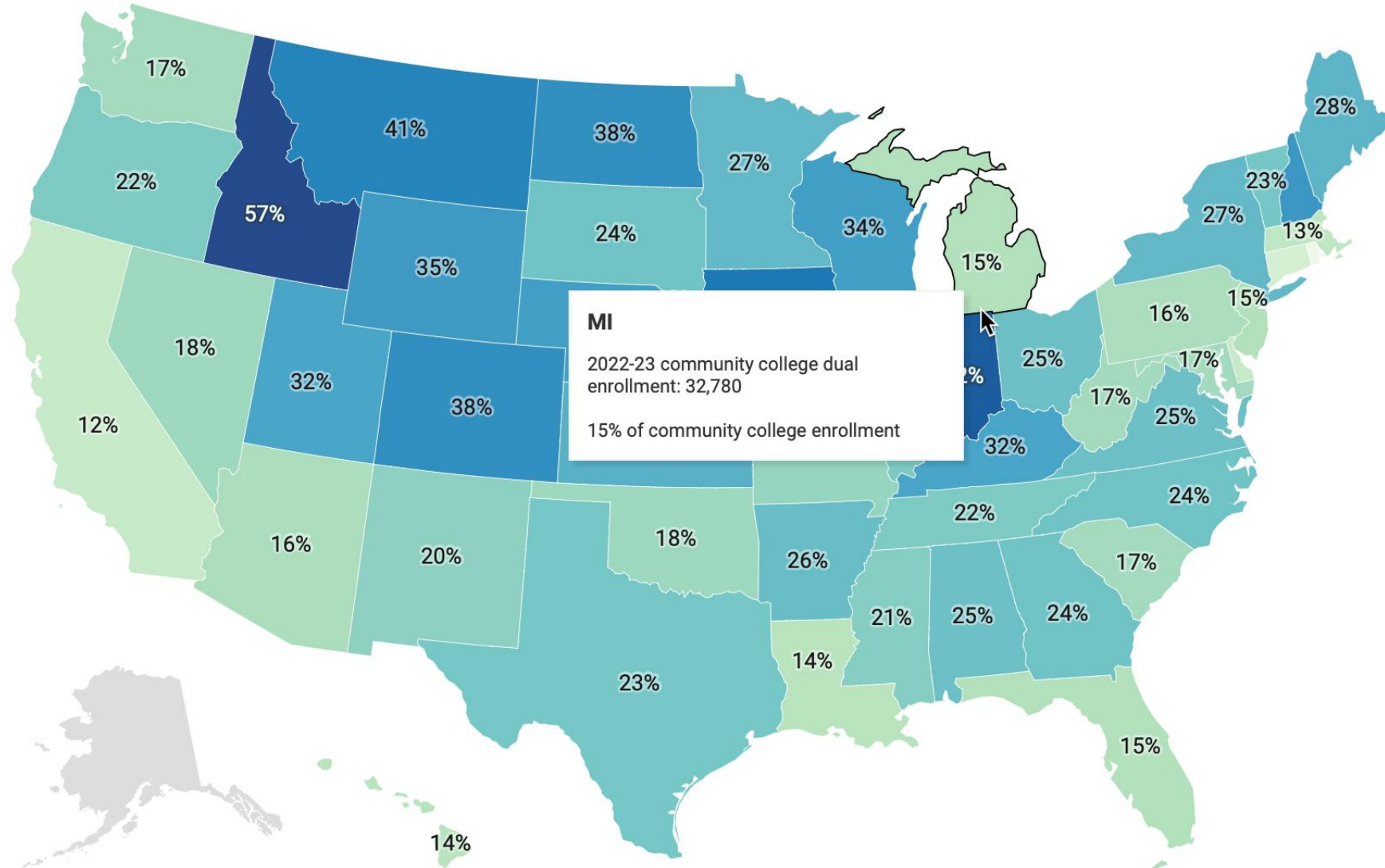


Get the data • Created with Datawrapper

<https://ccrc.tc.columbia.edu/easyblog/how-many-students-are-taking-dual-enrollment-courses-in-high-school-new-national-state-and-college-level-data.html>

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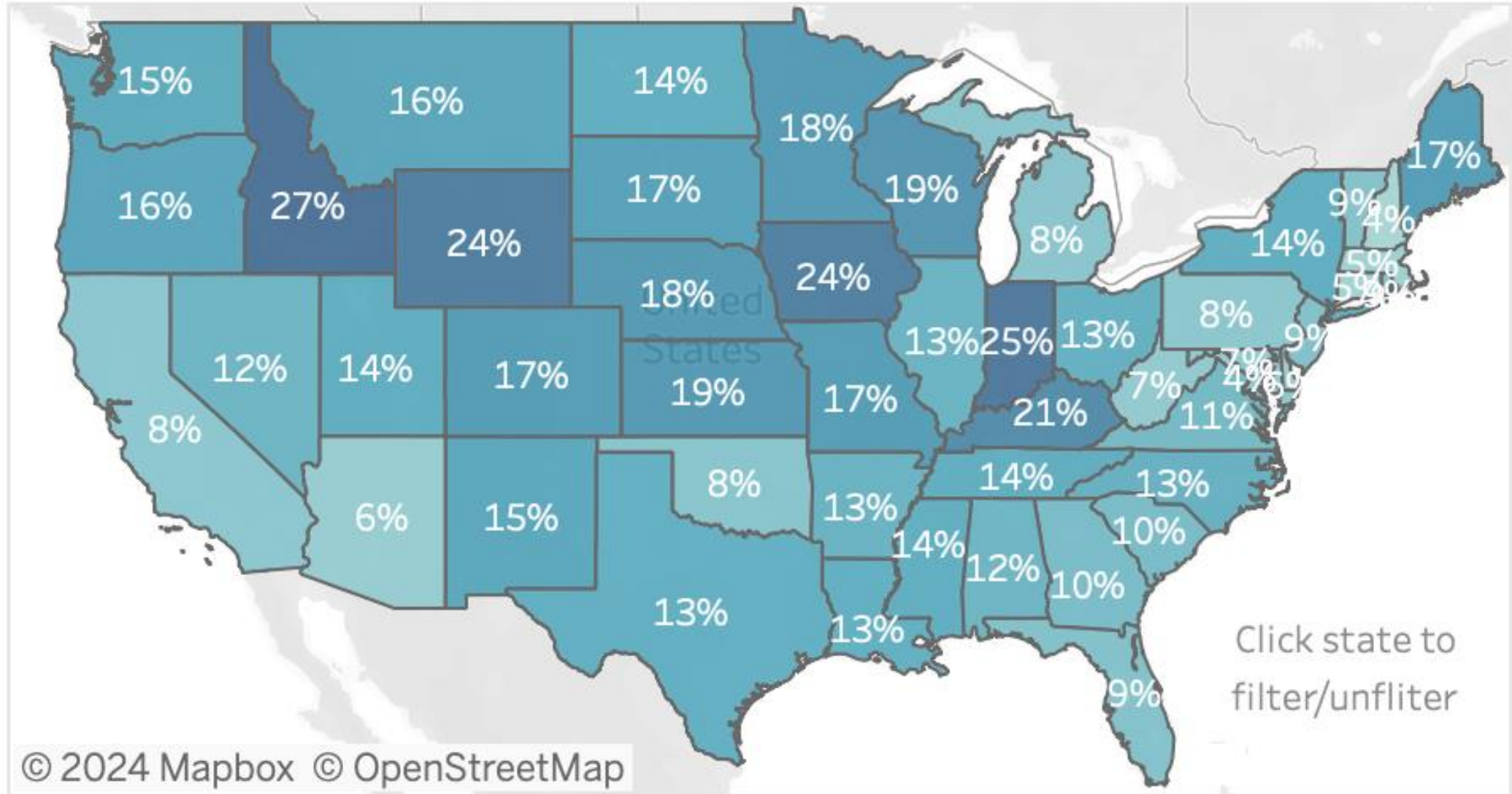


Dual Enrollment as a Percent of Undergraduate Enrollment

Sector (CCRC R)



(All)



© 2024 Mapbox © OpenStreetMap

Dual Enrollment as a Percent of Undergraduate Enrollment

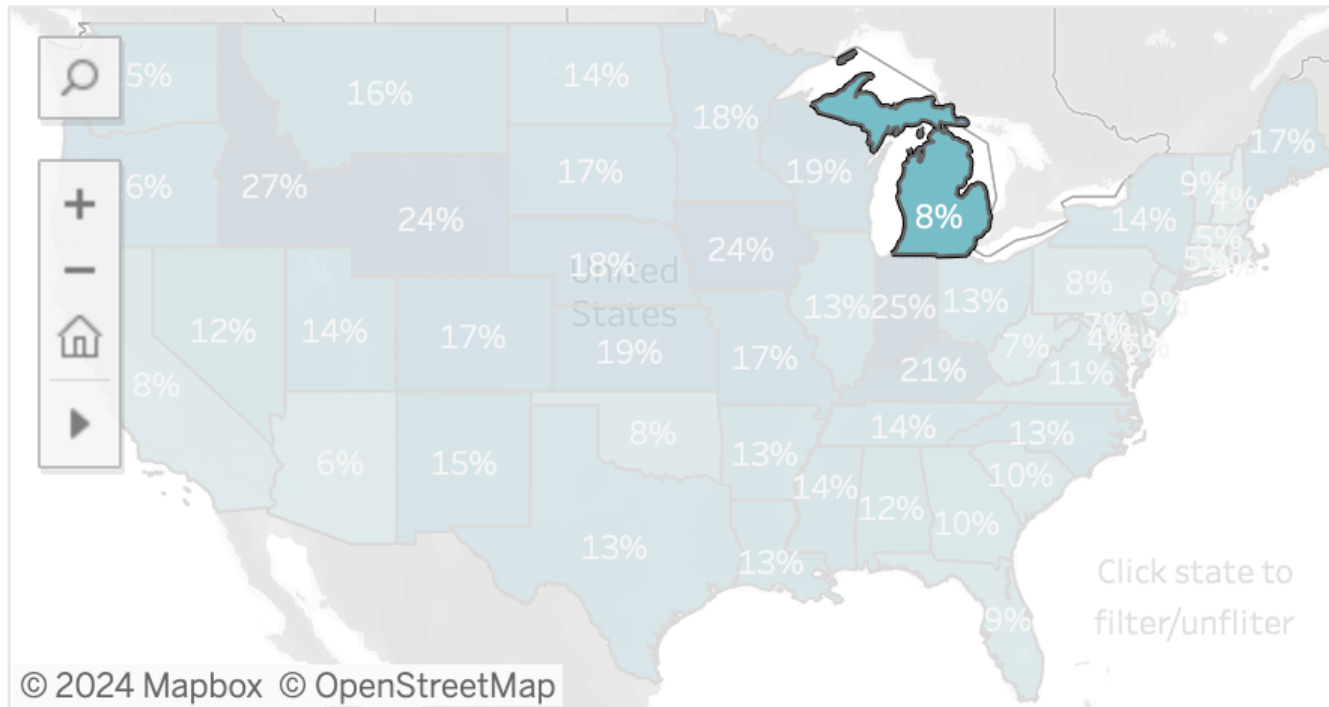
Sector (CCRC Recode)

Gender



(All)

All genders



Race/Ethnicity (click to highlight)

- American Indian or Alaska Native
- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian or Other Pacific Islander
- Race/ethnicity unknown
- Two or more races
- U.S. Nonresident
- White

Show by Gender

Back to Summary

	Dual Enrollment Total	DE by Race/Ethnicity	% of Dual Enrollment
U.S. Overall	2,489,859		
Michigan	41,421		

Michigan

Public

37,119

Dual Enrollment (DE) Students in Michigan (Sector: Community colleges, Public four-years, Other public two-years, less-than-two-years)

8%

of Undergraduate (UG) Enrollment in Michigan (Sector: Community colleges, Public four-

Private

4,302

Dual Enrollment (DE) Students in Michigan (Sector: Private not-for-profit four-years, Private for-profits, Other private not-for-profits)

6%

of Undergraduate (UG) Enrollment in Michigan (Sector: Private not-for-profit four-years, Private

Idaho

Public

41,309

Dual Enrollment (DE) Students in Idaho
(Sector: Community colleges, Public four-years, Other public two-years, less-than-two-years)

41%

of Undergraduate (UG)
Enrollment in Idaho
(Sector: Community colleges, Public four-

Private

3,782

Dual Enrollment (DE) Students in Idaho
(Sector: Private not-for-profit four-years, Private for-profits, Other private not-for-profits)

6%

of Undergraduate (UG)
Enrollment in Idaho
(Sector: Private not-for-profit four-years, Private

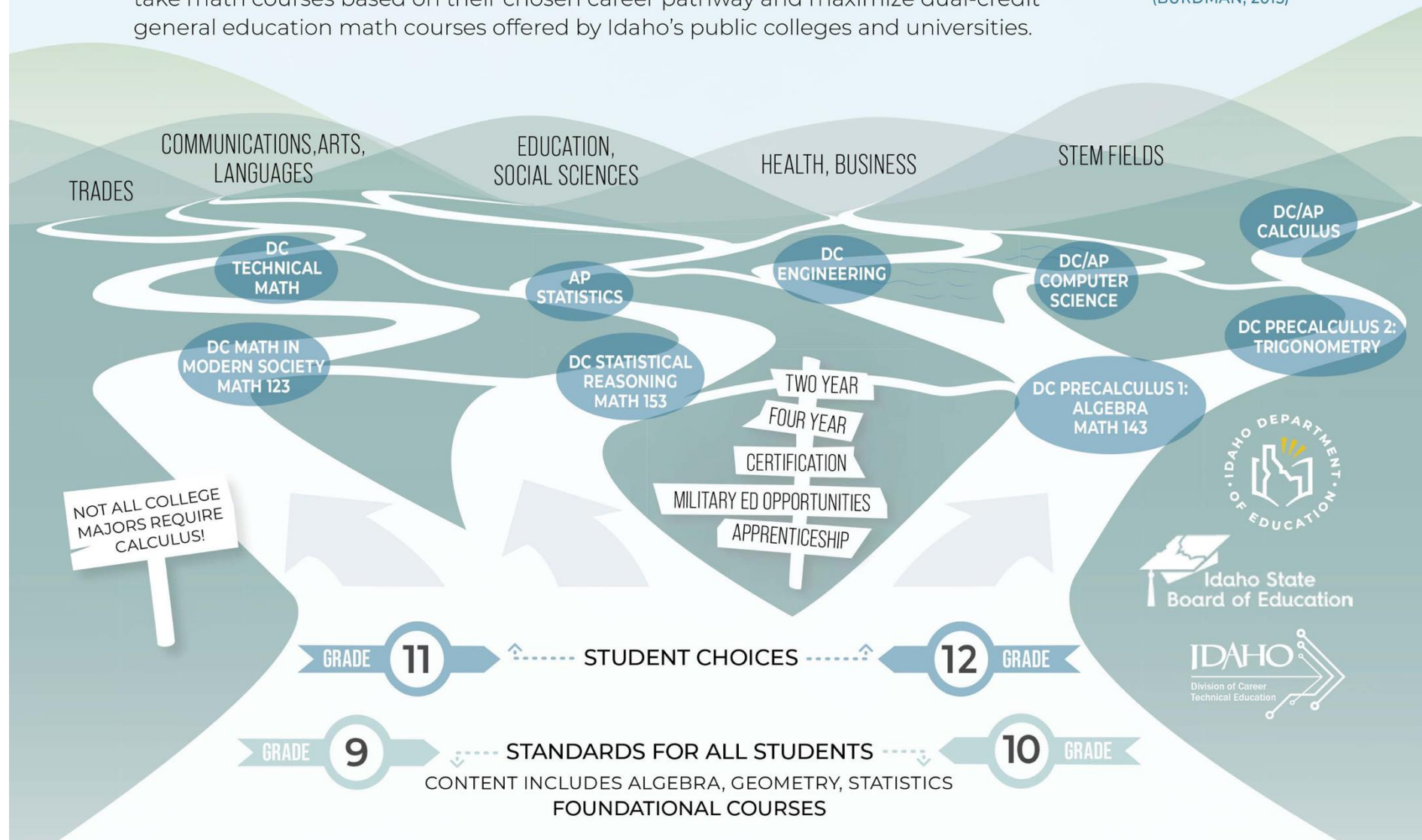
IDAHO MATH TRANSITIONS

The Idaho Math Transitions project supports Idaho high schools offering math courses aligned with college and career interests, with the goal of advancing opportunities in mathematics for students. High school juniors and seniors may take math courses based on their chosen career pathway and maximize dual-credit general education math courses offered by Idaho's public colleges and universities.

72% REQUIRE OTHER MATHEMATICS

28% REQUIRE CALCULUS

FRESHMAN ENROLLMENT IN FOUR-YEAR MAJORS (BURDMAN, 2015)



NOT ALL COLLEGE MAJORS REQUIRE CALCULUS!

GRADE 11 — STUDENT CHOICES — GRADE 12

GRADE 9 — STANDARDS FOR ALL STUDENTS — GRADE 10
 CONTENT INCLUDES ALGEBRA, GEOMETRY, STATISTICS FOUNDATIONAL COURSES


DC
TECHNICAL
MATH








DC MATH IN
MODERN SOCIETY
MATH 123

FALL COLLEGE

Boise State University

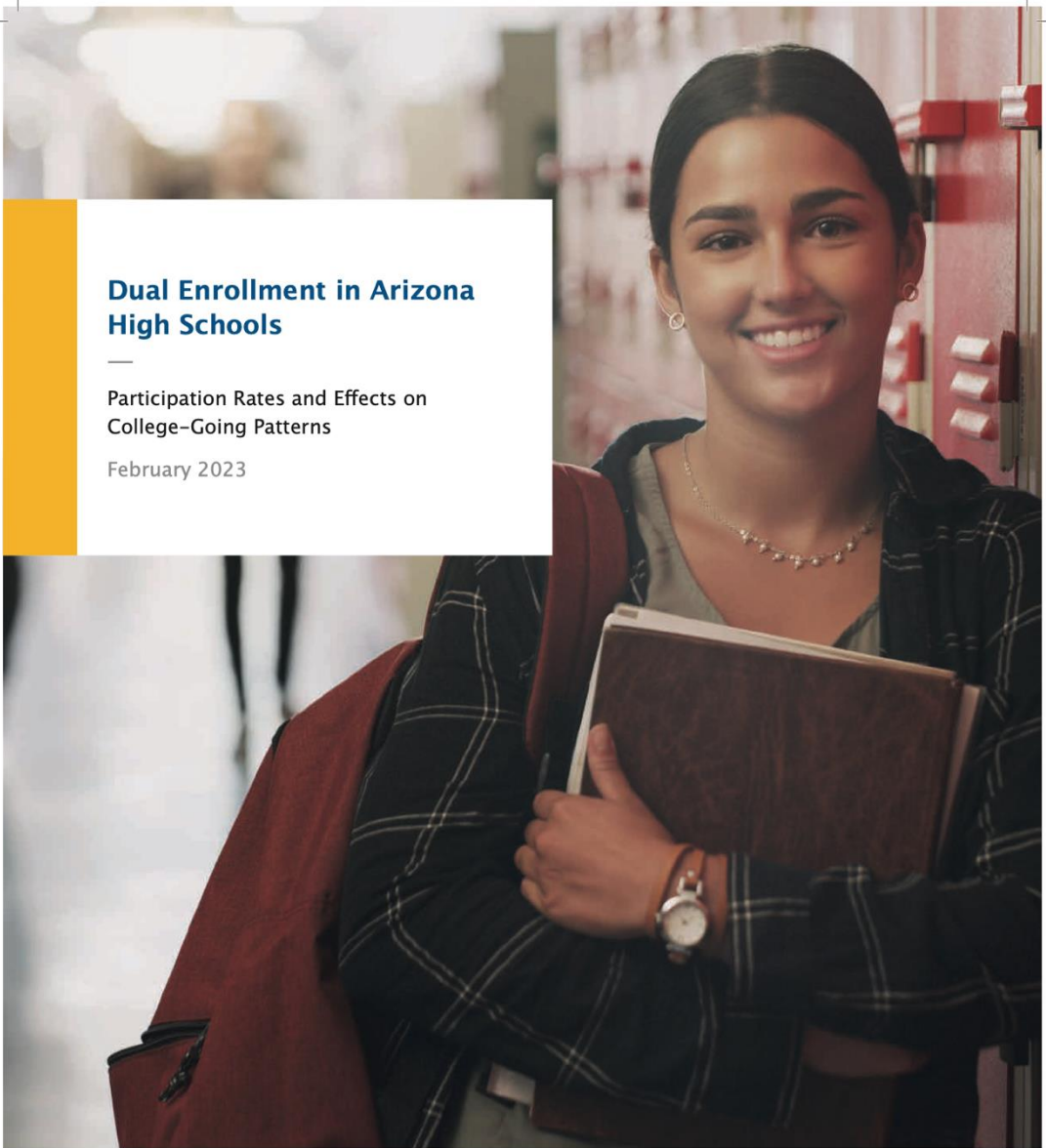
MATH123 Math in Modern Society

Institution	Course	Title	Notes
	MATH123	Math in Modern Society	click to visit institution site for more details about transfers
	MATH123	Math in Modern Society	click to visit institution site for more details about transfers
	MATH123	Math in Modern Society	click to visit institution site for more details about transfers
	MATH1123	Math in Modern Society	click to visit institution site for more details about transfers
	MATH123	Math in Modern Society	click to visit institution site for more details about transfers
	MATH123	Math in Modern Society	click to visit institution site for more details about transfers
	MATH123	Math in Modern Society	click to visit institution site for more details about transfers

 Written Communication  Oral Communication  Mathematical Ways of Knowing  Scientific Ways of Knowing  Humanistic and Artistic Ways of Knowing
 Social and Behavioral Ways of Knowing  Institution Specific

The cost for dual credit is set at \$75 per credit statewide. In addition to gaining quality low-cost credits, students also have access to academic resources available in person or online.

Dual/concurrent credit courses are accepted by all Idaho institutions of higher education and most institutions outside the state. The credits may transfer as meeting a major requirement, general education or as an elective credit.



Dual Enrollment in Arizona High Schools

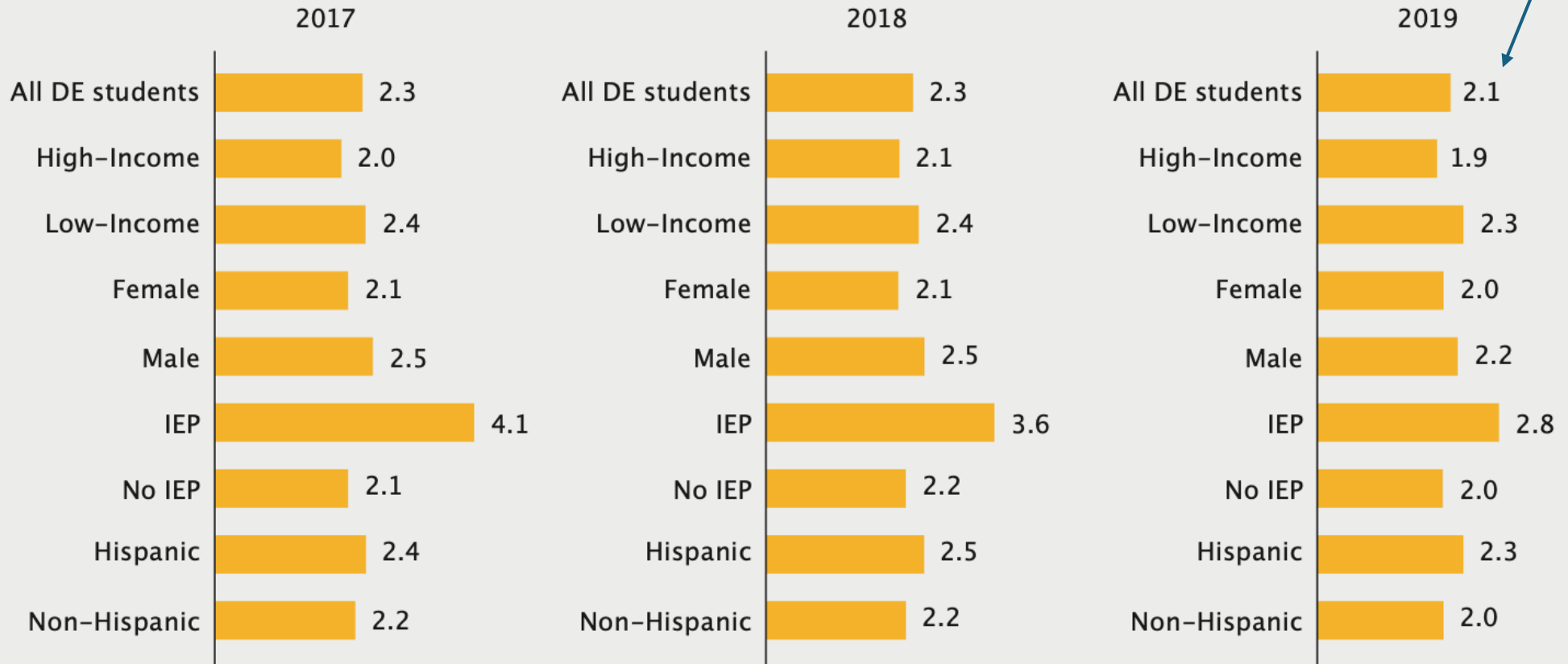
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Participation Rates and Effects on College-Going Patterns

February 2023



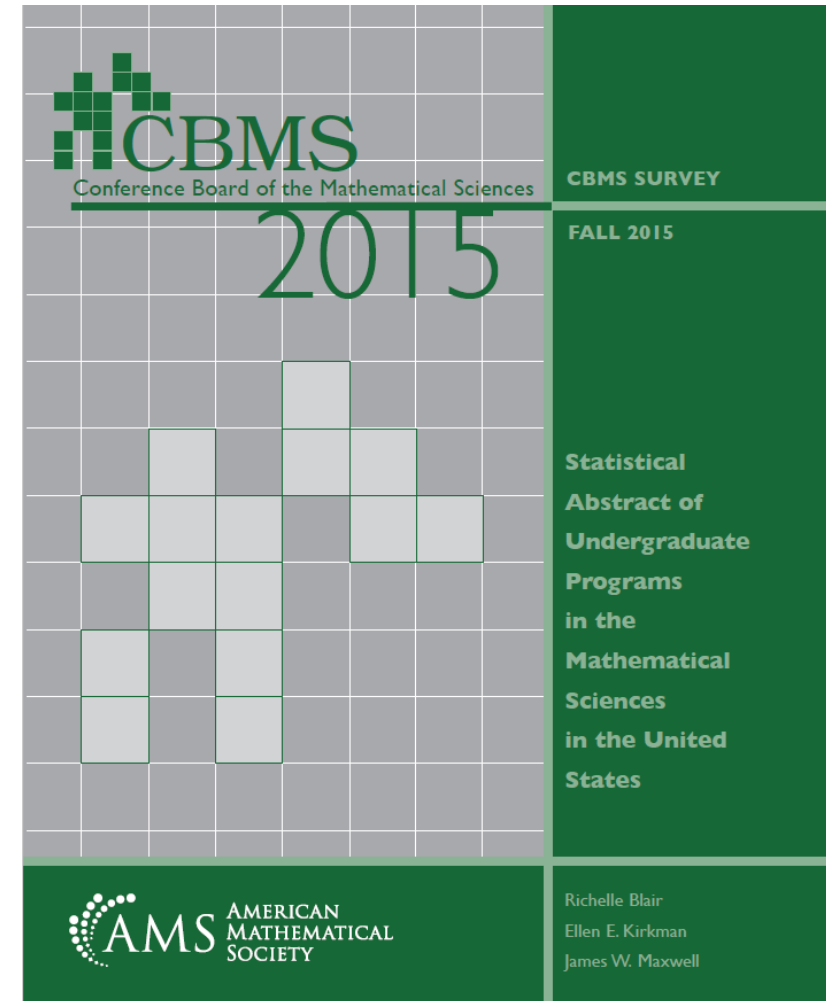
“2019 were 2.1 times more likely to attend college”

Dual Enrollment Students' Likelihood of Attending College (Compared to Non-Dual Enrollment)



CBMS 2015 Survey

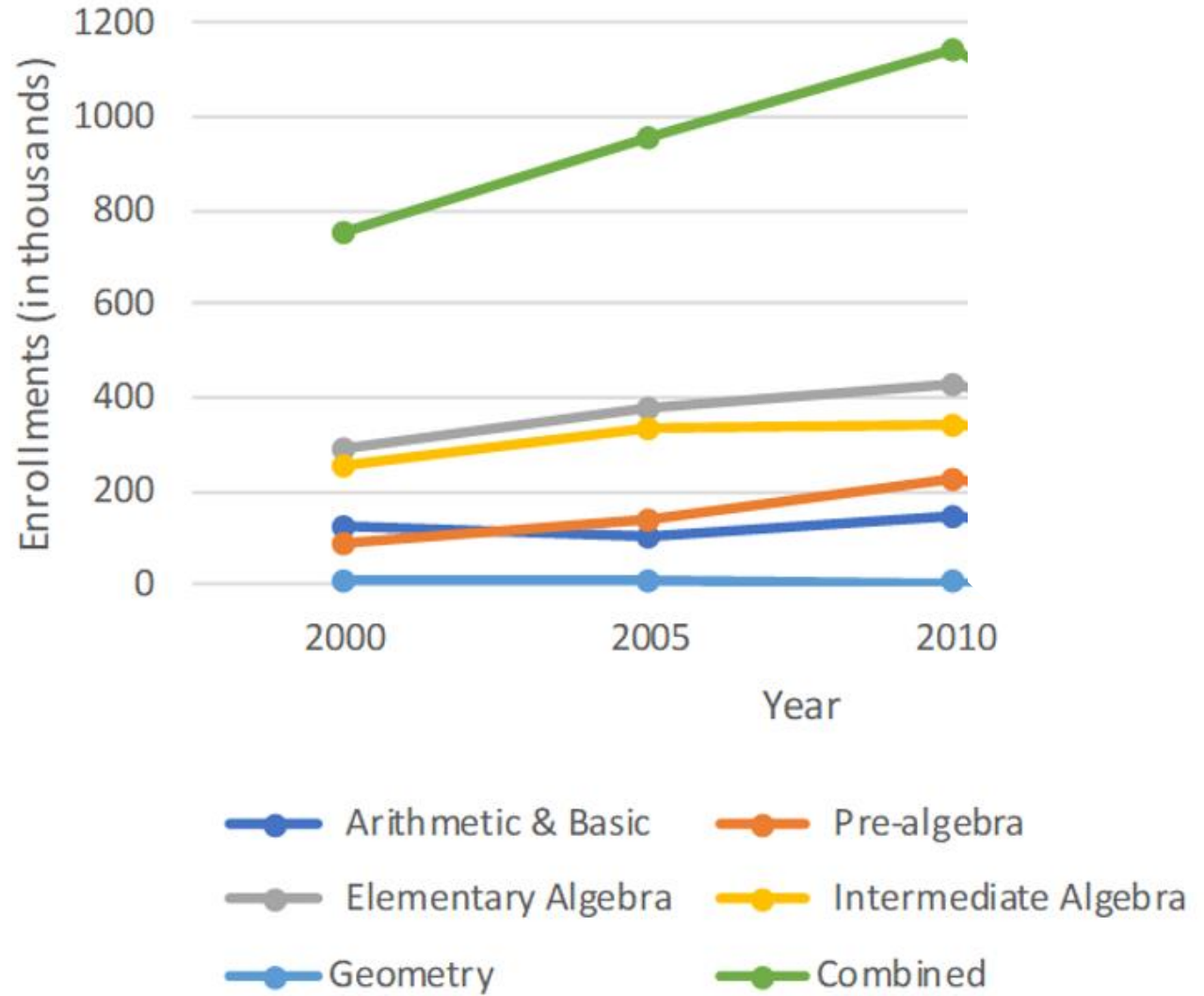
- In fall 2015, 58% of two-year colleges reported having implemented a pathways sequence



Blair, R., Kirkman, E. E., & Maxwell, J. W. (2018). Statistical abstract of undergraduate programs in the mathematical sciences in the United States: Fall 2015 CBMS survey. Providence, RI: American Mathematical Society. Retrieved from www.ams.org/cbms/cbms-survey

CBMS 2015 Survey

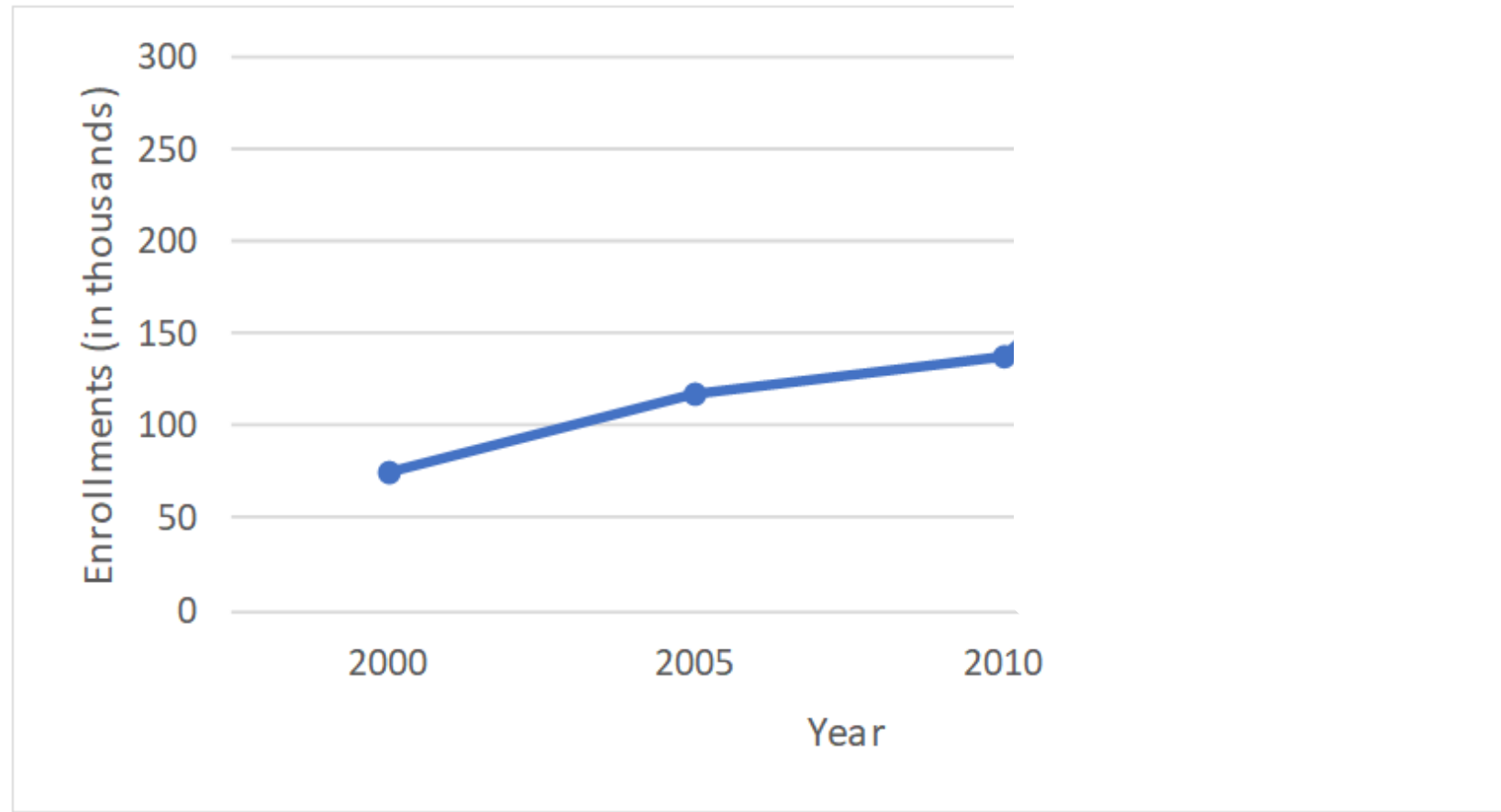
Two-year pre-college level enrollments



Two-year pre-college level enrollments (in thousands, not including Dual Enrollment), in mathematics programs based on Table TYE.3 in the Fall 2015 CBMS Survey.

CBMS 2015 Survey

Two-year college
Statistics and Probability
enrollments.

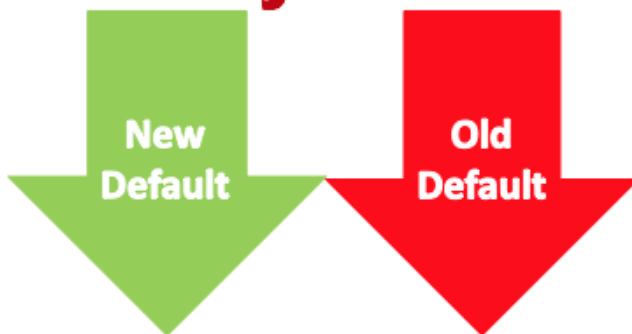


AMATYC (2014)

- The equivalent content in intermediate algebra courses is not required to master the content for most college-level mathematics courses that do not lead to calculus;

University System of Georgia

Math Pathways



Who?	All majors other than those listed to the right	Majors that require calculus at some point in the sequence	Science, Technology, Mathematics majors	Engineering majors and all Georgia Tech students
Area A2 Math course>>	Quantitative Reasoning OR Mathematical Modeling	College Algebra	Pre-calculus OR Trigonometry	Calculus
Next Math course>>	Statistics	Pre-calculus>>> Calculus	Calculus	More Calculus

Academic advisors have tended to advise students into [College Algebra] no matter what their major, seeing this as a “safe choice” that can apply to any major. The problem is that it really isn’t a “safe choice.” [College Algebra] has a very high withdrawal or failure rate, and for many students it becomes the singular barrier to degree completion.

Test Requirements to Exit Learning Support

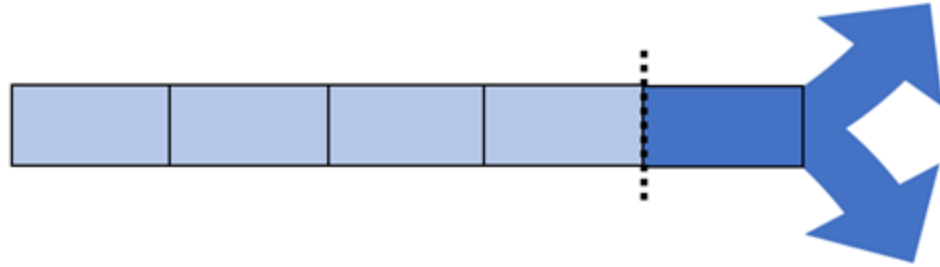
Test	Required for ENGL 1101	Required for non-STEM majors MATH 1001 or MATH 1101	Required for STEM majors MATH 1111
ACT	English – 17 Math – 17	English – 17 Math – 17	English – 17 Math – 20
Old SAT (before Mar 2016)	Critical Reading – 430 Math – 400	Critical Reading – 430 Math – 400	Critical Reading – 430 Math – 470
New SAT (Mar 2016 or after)	Evidence-Based Reading & Writing – 480 Math – 440	Evidence-Based Reading & Writing – 480 Math – 440	Evidence-Based Reading & Writing – 480 Math – 510
Classic Accuplacer (before Jan 28 2019)	Reading – 61 Writeplacer – 4 Elementary Algebra - 67	Reading – 61 Writeplacer – 4 Elementary Algebra – 67	Reading – 61 Writeplacer – 4 Elementary Algebra – 79
Next-Generation Accuplacer (Jan 28 2019 or later)	Reading – 237 Writeplacer – 4 Quantitative Reasoning, Algebra and Statistics - 258	Reading – 237 Writeplacer – 4 Quantitative Reasoning, Algebra and Statistics – 258	Reading – 237 Writeplacer – 4 Quantitative Reasoning, Algebra and Statistics – 266

- **Next-Generation Quantitative Reasoning, Algebra, and Statistics (QAS)** assesses the following knowledge and skills:
 - Rational numbers
 - Ratio and Proportional Relationships
 - Exponents
 - Algebraic Expressions
 - Linear Equations
 - Linear Applications and Graphs
 - Probability Sets
 - Descriptive Statistics
 - Geometry Concepts

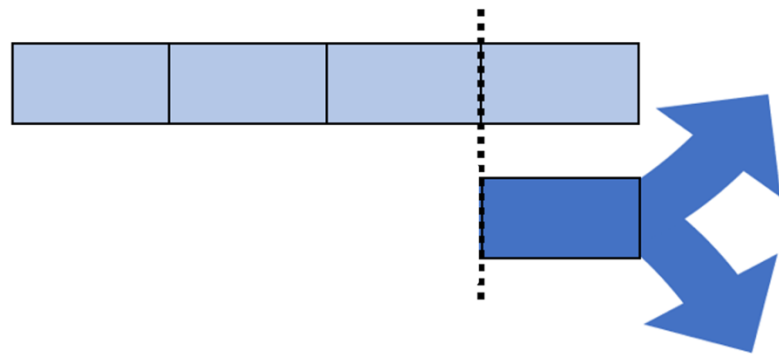
This is a placement chart from ega.edu (East GA state college):
www.ega.edu/admissions/exam/accuplacer_scores_and_placement

<https://accuplacer.collegeboard.org/students/prepare-for-accuplacer/whats-on-tests>

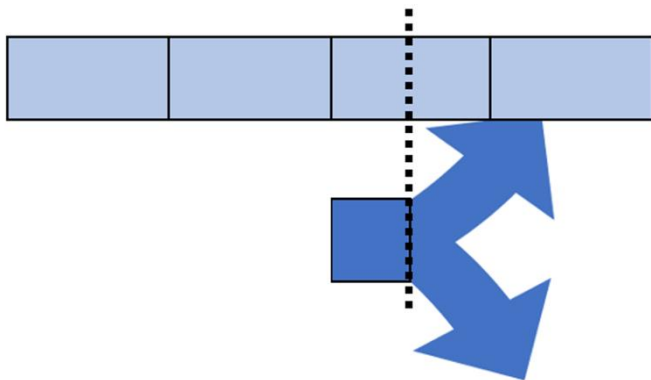
An oversimplified, yet illustrative picture:



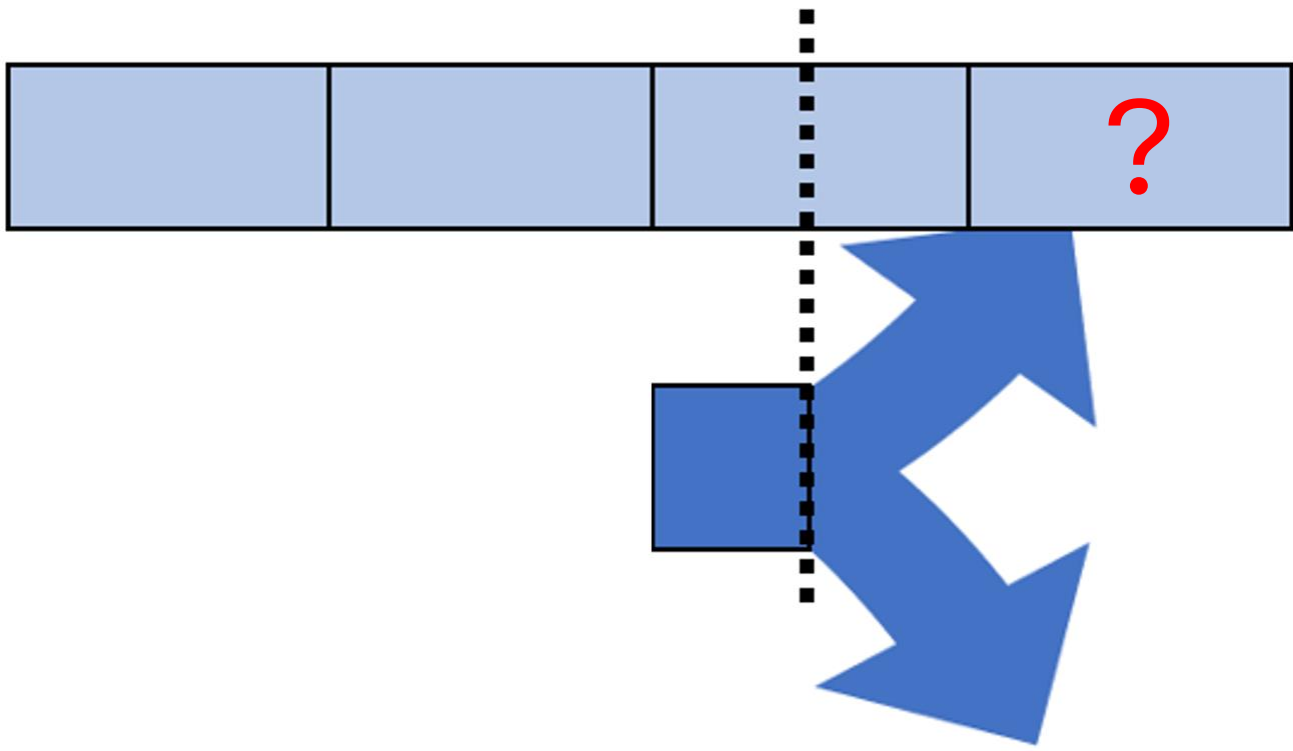
K12 and college systems are structured for a clean line between high school and college. After four years of high school mathematics a student is ready for college.



Really, though, colleges teach much of the same mathematics as high schools, and the “college ready” bar (content-wise) often overlaps with HS.

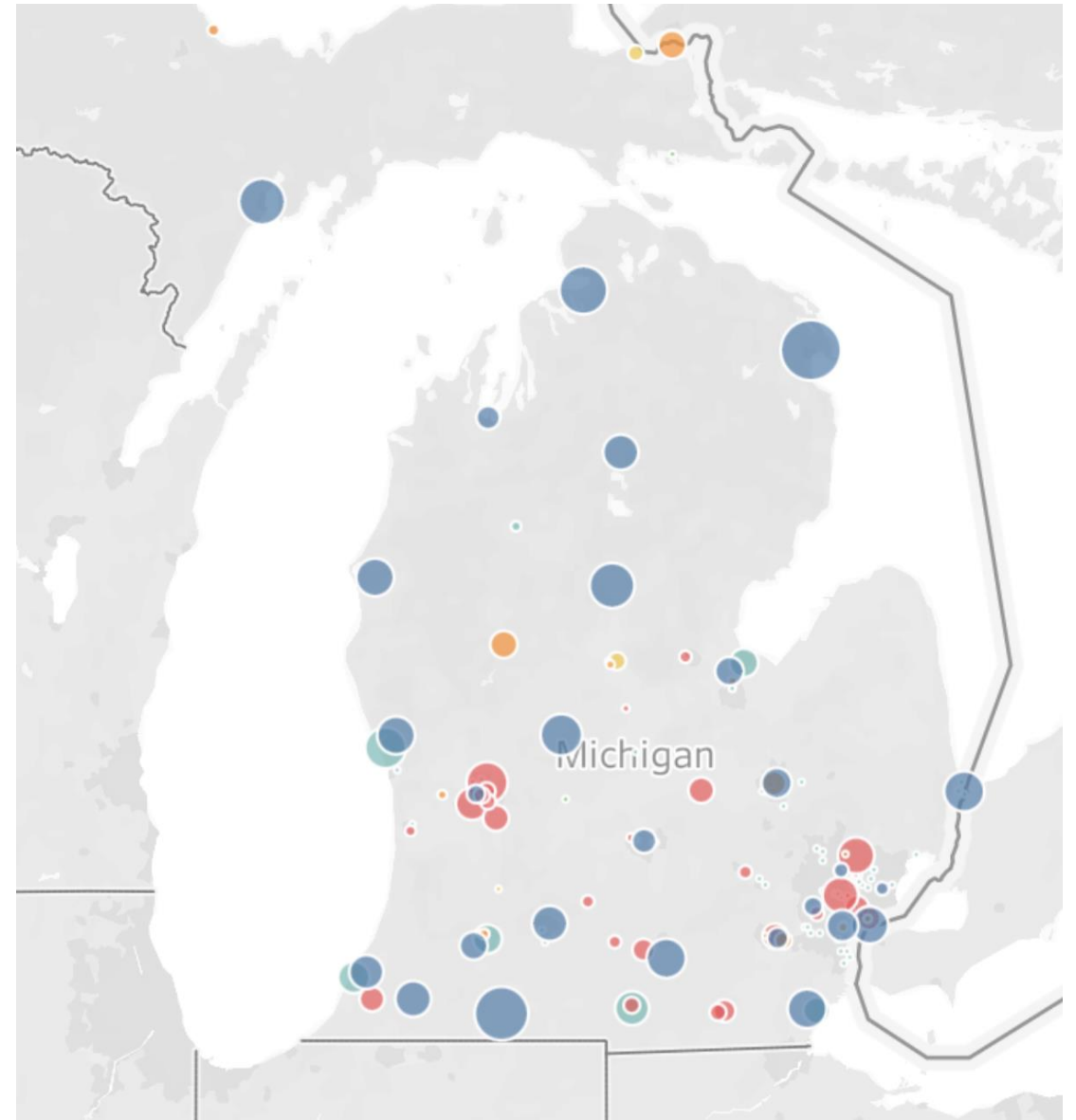


With new college pathways the “college ready” line becomes even more ambiguous.



Ponder...

- Who has access? Who doesn't?
- How will we build trust?



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Eligibility to Teach Bridge to College Courses

In order to maintain the integrity of the Bridge to College courses and the associated college placement agreement, Bridge to College teachers must **annually** maintain their eligibility to teach the course. To meet the various schedules and needs of teachers, we offer several professional learning (PL) options.

	Requirements	Eligibility
New Teachers: 35 hours of PL	Complete New Teacher Institute the summer before teaching the course (15 hours), and:	Eligible to teach the course the year of the initial training; classified as NEW
	Participate in Communities of Practice (20 hours) during the first year of teaching the course. Note: CoPs meet in various modalities throughout the academic year. This includes 2 full-day meetings in-person (5 hours each), 3 virtual synchronous meetings (2 hours each), and 2 virtual asynchronous activities (2 hours each).	Eligible to teach the course the year after the initial training year; classified as RETURNING for the following year
Returning Teachers: at least 5 hours of PL	Complete one of these options after September 1 of the current school year and prior to the start of the next	Eligible to teach for the next school year. Must

Public Policy Associates



Increasing Dual Enrollment Access and Success

MICHIGAN COMMUNITY COLLEGE ASSOCIATION
DUAL ENROLLMENT WORK GROUP

Updated July 2024



Thank you!

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#drtedcoe



bit.ly/mimath24