We Are

Julie Neisler
Quantitative Researcher
Learning Sciences Research Team

Barbara Means
Executive Director
Learning Sciences Research Team

Vanessa Peters Hinton
Senior Learning Sciences Researcher
Learning Sciences Research Team

EVERY LEARNER EVERYWHERE

Every Learner Everywhere's mission is to help colleges use new technology to innovate teaching and learning, with the ultimate goal of improving student outcomes for Black, Latinx, and Indigenous students, poverty-affected students, and first-generation students.

We are a network of 12 partner organizations with expertise in evaluating, implementing, scaling, and measuring the efficacy of education technologies, curriculum and course design strategies, teaching practices, and support services that personalize instruction for students.

Learn more at everylearnereverywhere.org

EXPERIENCE

In Fall 2019, Every Learner Everywhere supported 12 institutions in the redesign of 41 courses that resulted in more accessible, adaptive, and equitable environments for students.

Through Spring 2021, Every Learner worked with these institutions on continuous improvement, iteration, and scaling.

With the Herculean efforts of the faculty, staff, instructional designers, institutional research members, and leadership, as well as continued support from Every Learner Everywhere, the implementation of adaptive courseware at these institutions positively impacted student outcomes.
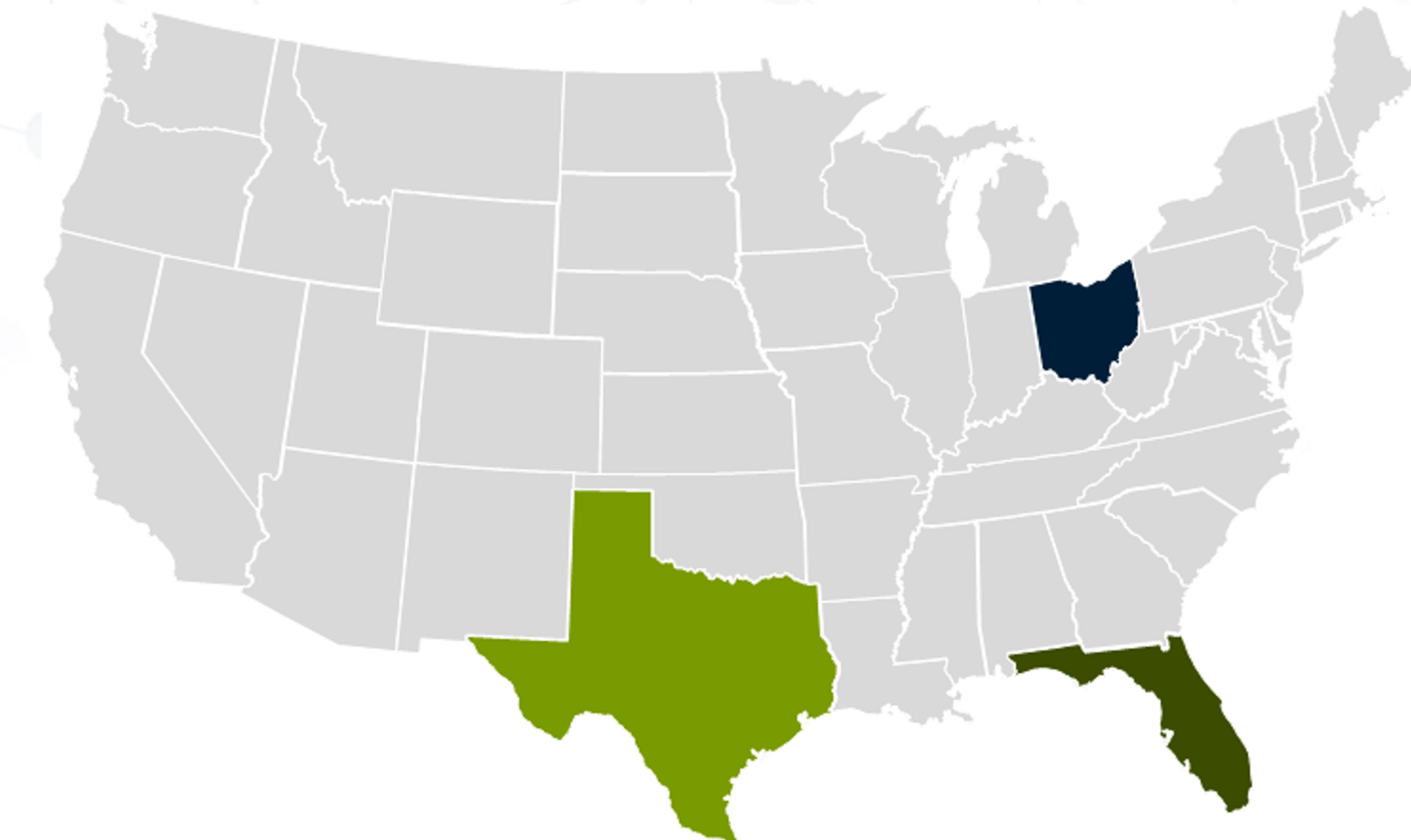
> Houston Community College
> University of Texas at El Paso
> University of Texas Rio Grande Valley

> Cleveland State University
> Cuyahoga Community College
> Lorain County Community College
> University of Toledo

> Broward College
> Florida International University
> Indian River State College
> Miami Dade College
> University of Central Florida

PROJECT SUMMARY

WHERE WE STARTED

‣ Each of the 12 institutions had a project lead who assembled a team with all or most of the kinds of expertise necessary to redesign their selected gateway courses to incorporate adaptive learning.

‣ Most of these institutions had staff with instructional design expertise but prior to the collaboration with Every Learner Everywhere, these teaching and learning staff had worked with individual faculty members rather than teams of faculty teaching a common course.

‣ At the start of the engagement, participating faculty typically were aware of the proportion of students succeeding in their course overall but did not know the success rates for specific racial/ethnic subgroups and were not engaged in a systematic process of reviewing student outcome data for their courses.

HOW WE PROGRESSED

‣ Planning templates and convenings supported similar course redesign and data use processes and knowledge sharing across the 12 institutions, while coaching and project timelines were customized to fit each institution's capacity and objectives.

‣ In fall 2019, about two-thirds of participating faculty felt adequately or very well prepared to implement the courseware; that grew to almost 90% in fall 2020.

‣ A fall 2020 instructor survey suggested that instructors using adaptive courseware at these institutions implemented many research-based instructional practices including:

- Low-stakes formative assessments
- Feedback providing students with information on how to improve,
- Examination of learning system data dashboards

- Sending personalized messages to students
- Incorporating real-world relevant content
- Opportunities for students to reflect on their own learning

INSTRUCTORS' EXPERIENCES WITH ADAPTIVE COURSEWARE

"Since we've used this adaptive environment, I've had students say, 'Oh my goodness, I'm so glad that this caught me where I was instead of pushing me through.' Students were very happy to actually struggle. That was interesting, because I've never had that kind of comment before when I pushed them, I guess because the [adaptive] program takes them to the place where they belonged."

"At first, I thought I'd just use the videos that Wiley created. Then my students begged me to hold WebEx sessions, so I held a WebEx session every day during class time because they still wanted the interaction."

"The adaptive components brought a sense of calm for them [students]. That was important because this many of my students, they find math to be very difficult… That's the most demanding task, is to calm a student and to help them reach their fullest potential."

"Previously, I would utilize so much class Time on a specific question…For one of the lab assignments that we do, I would spend a long time explaining things. Now I can record a little explanation about it, post it and say, 'Make sure you watch that [video] prior to completing that assignment, and we can utilize the class time for something else.' So most definitely, yes—these are things that will stay with me."

STUDENTS' EXPERIENCES WITH ADAPTIVE COURSEWARE

"For the most part things stayed the same [after COVID]. Because of the way the class was structured it was pretty easy for all that to continue because there were still days where you had to listen to video lectures and take notes on them, and then scan them and post them online by the due date. That kept the expectations pretty consistent."

"I honestly think this class could go online. I was always opposed to taking online math classes. Never in a million years would I ever do that. But after this course, I definitely think it's doable."

"I thought [the professor] made a good choice for this class in breaking up the lectures... she posted the same amount of material but broke them up into, like, eight videos, and that made things much easier.

"Those two tools, ALEKS and LearnSmart are helpful because they don't let you move on until you've answered the questions correctly. If the software recognizes that you had difficulty with those [questions] it'll bring you back. I think those are good programs to use because it adapts per student to learn what they need to learn."
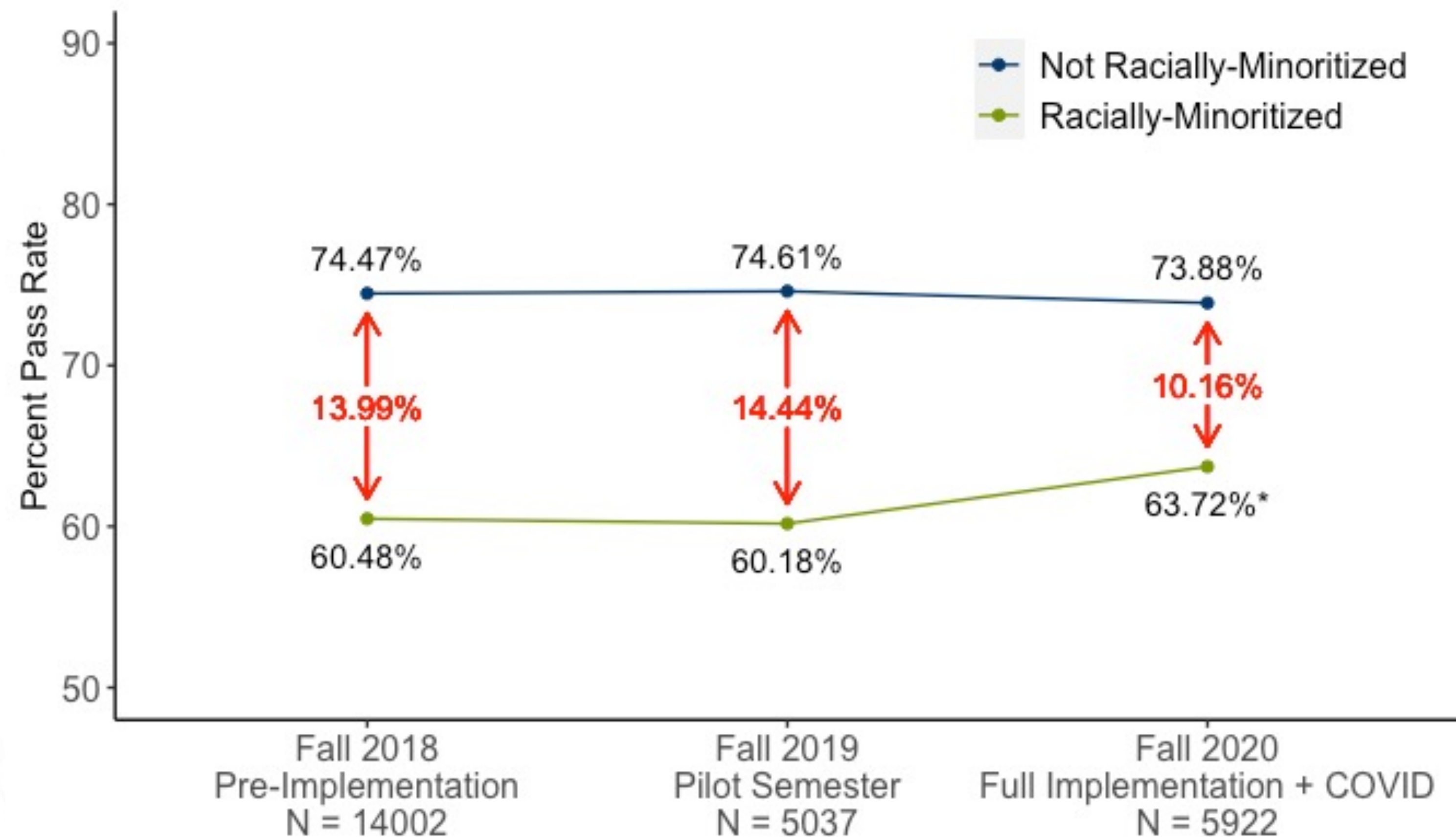
WHERE WE FINISHED: FACULTY

▸ **193** adaptive courseware implementations in **62** different courses experienced by **26,400** students

▸ **96 percent** of faculty agreed that adaptive courseware improves student learning and that it helps them monitor student progress and hold students accountable

▸ **93 percent** agreed that courseware helps them present course material more effectively, increases student engagement, provides students with timely feedback, and helps instructors monitor the progress of the class as a whole.

▸ The average net promoter score (NPS) among faculty for the adaptive courseware products they were using rose from **+23** in fall 2019 to **+46** in fall 2020.

NPS = % PROMOTERS − % DETRACTORS

0 1 2 3 4 5 6   7 8   9 10

DETRACTORS   PASSIVES   PROMOTERS

WHERE WE FINISHED: STUDENTS

- Prior course success rates varied considerably across the courses identified for redesign, ranging from 39% to 90%, with a weighted average of 66%

- When disaggregated, this resulted in ~14% gap between Racially-Minoritized Students and those who are Not

- This gap decreased to ~10% in Fall 2020, when most instructors were on their third or fourth semester of implementation

Legend:
- Not Racially-Minoritized
- Racially-Minoritized

Percent Pass Rate (y-axis: 50, 60, 70, 80, 90)

Fall 2018 Pre-Implementation N = 14002: 74.47% / 60.48%, gap 13.99%

Fall 2019 Pilot Semester N = 5037: 74.61% / 60.18%, gap 14.44%

Fall 2020 Full Implementation + COVID N = 5922: 73.88% / 63.72%*, gap 10.16%

* Significantly different than Fall 2019 and Fall 2019 pass rates, p < 0.01

Lessons for Future Engagement with Higher Education Institutions

FINAL TAKE-HOME LESSONS

▸ Treat improvement of teaching and learning as a team sport.

▸ Consider use of incentives and enlisting external facilitators for change processes.

▸ Collect and analyze both early indicators and course outcome data.

▸ Stick with the improvement effort long enough for departments and programs to internalize the process.

▸ Attend to specific equity issues identified through student feedback and data analysis.

▸ Attend to scaling within departments and institutions.

WHAT QUESTIONS CAN WE ANSWER?