

WELCOME TO



A SCTCS Division of Academics, Student Affairs & Research Initiative

TILT
TEACHING & LEARNING TUESDAY

**PUTTING STUDENT SUCCESS INITIATIVES ON THE MAP:
A FRAMEWORK TO INFORM EFFECTIVENESS & EFFICIENCY**

March 21, 2023
2:30pm

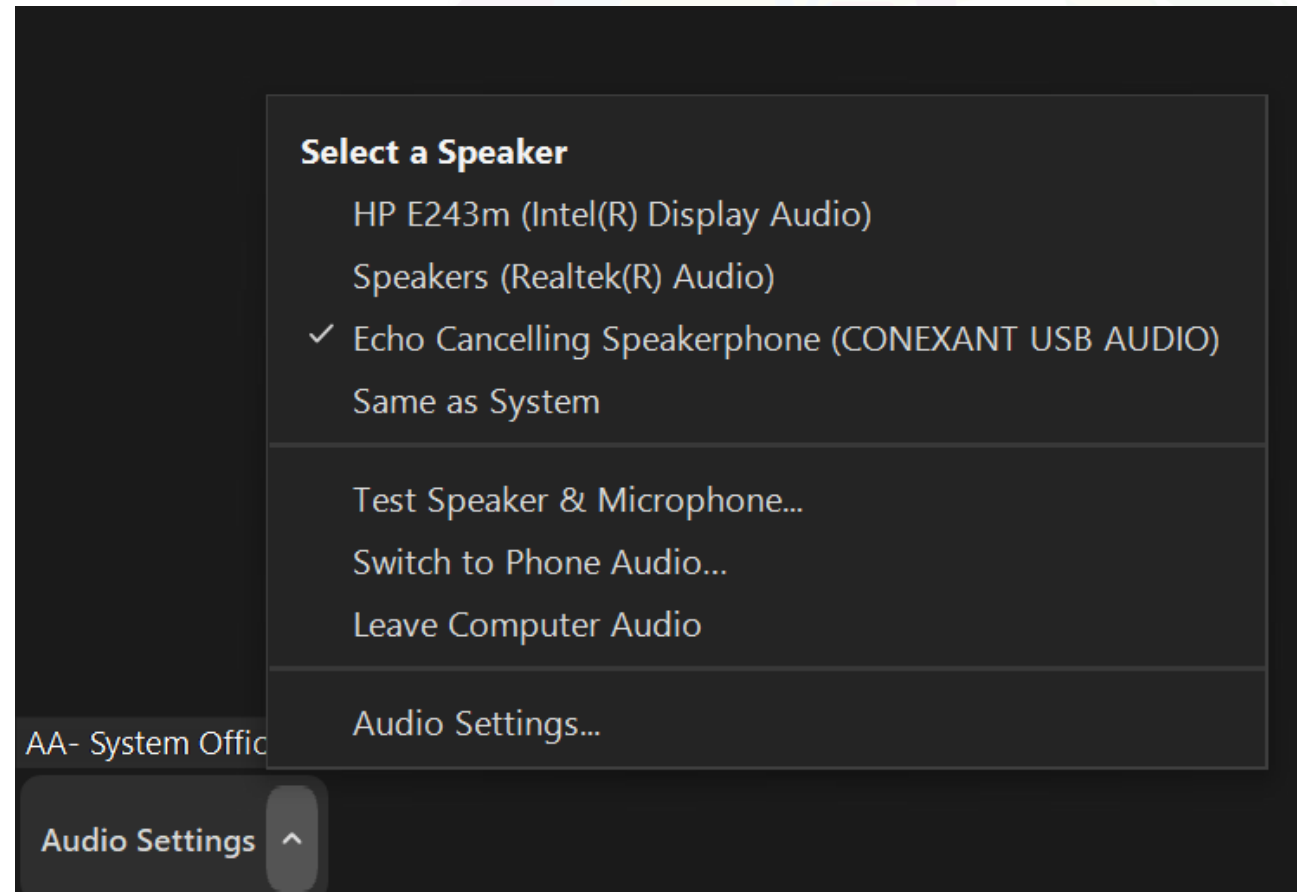
ABOUT THE PRESENTERS



Kevin McMIndes

Greenville Technical College

ZOOM WEBINAR




ZOOM WEBINAR

You are viewing AA- System Office's screen

View Options ▾

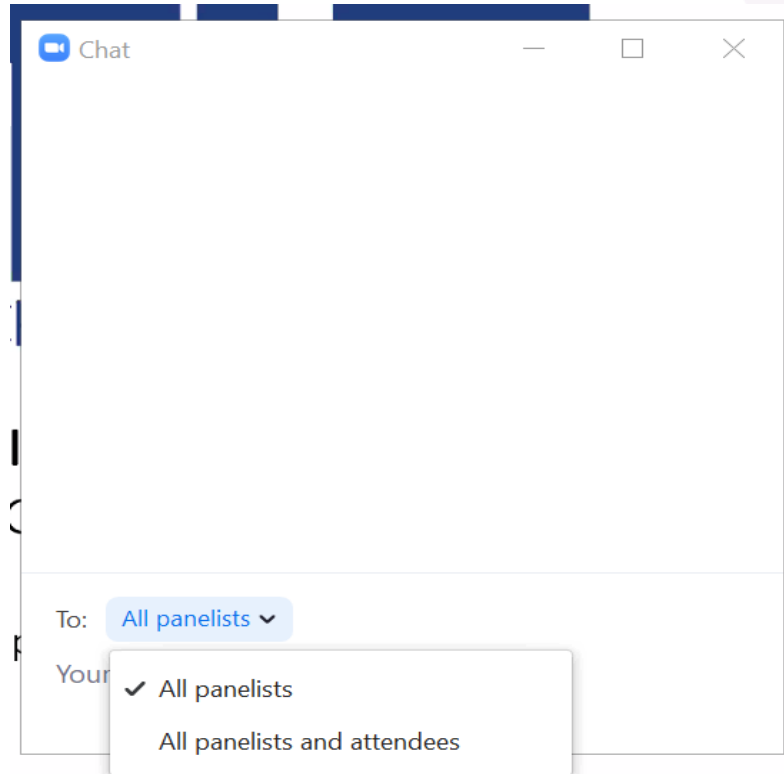
- Zoom Ratio Fit to Window ▸ ✓ Fit to Window
- Exit Full Screen 50%
- ✓ Side-by-side mode 100%(Original Size)
- 150%
- 200%
- 300%

Contact Us

 **TLT**
A SCTCS Division of Academics, Student Affairs & Research Initiative

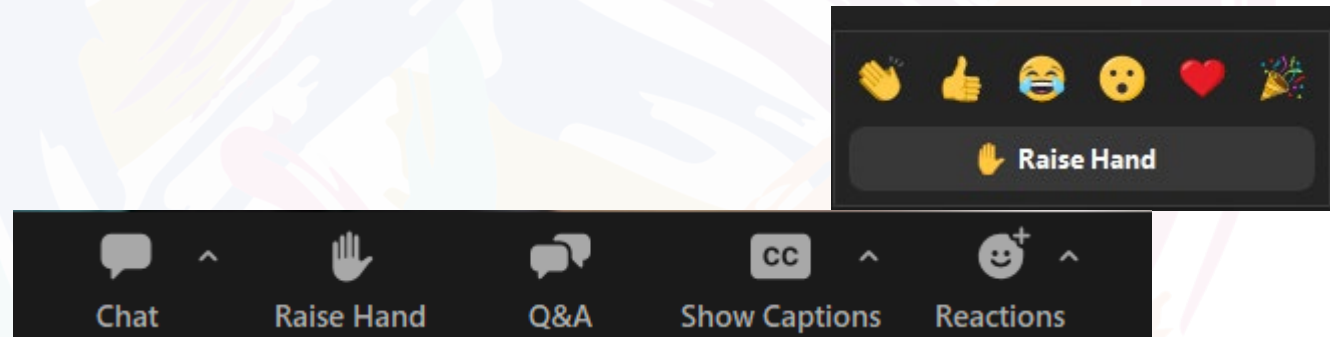
ZOOM WEBINAR

Chat



A screenshot of a Zoom chat window. The window title is "Chat". Below the title bar, there is a text input field. At the bottom of the window, there is a "To:" dropdown menu set to "All panelists". A dropdown menu is open below it, showing three options: "All panelists" (selected with a checkmark), "All panelists and attendees", and "All panelists and attendees".

Raise Hand and Q&A



A screenshot of the Zoom toolbar. The toolbar is dark grey and contains several icons: a speech bubble for "Chat", a hand for "Raise Hand", two speech bubbles for "Q&A", a "CC" icon for "Show Captions", and a smiley face for "Reactions". A tooltip is visible over the "Raise Hand" icon, showing a row of reaction emojis (clapping hands, thumbs up, laughing, surprised, heart, party popper) and a button labeled "Raise Hand".



Make a statistically significant difference in education.

Putting Student Success Initiatives on the Map: A framework to inform effectiveness and efficiency

Greenville Technical College

Kevin McMIndes

@HarvardSDP • #SDPfellow



- One of the largest public, two-year institutions in SC
- One of 16 State Technical Colleges
- Fall 2020 Headcount = 10,533
- 61% Female 39% Male
- 58% Part-Time 42% Full-Time
- Average Age = 24 years old
- Graduation Rate: approximate 3 year grad rate: 12%
 - about 2x that of African American/Black Males. (Psst! I think we might have an equity issue.)

We all love a good success initiative, but...

- What's the Problem?
 - How effective is my program and for whom? (equity gaps)
 - How efficient is my program? (\$)
 - Where is there room for improvement in each measure?
 - How is my program improving over time?

What we wanted to do

- Measure Effectiveness: How many more students are persisting than would have without participating in the initiative?
- AND...
- Measure Efficiency: How much are we spending per student served?
- Plot them on an X-Y axis = ROI MAP

Data Sources

- Success Initiative participant lists
 - Success Initiative eligibility criteria
 - Student Information System (Colleague)
 - Blackboard (LMS)
 - Operationally focused budget data
- } Feeds Predictive Analytics tool

Analysis

- Civitas Illume Impact tool
 - Prediction-based Propensity Score Matching (PPSM)

PPSM (Prediction-based Propensity Score Matching)



Persistence Prediction



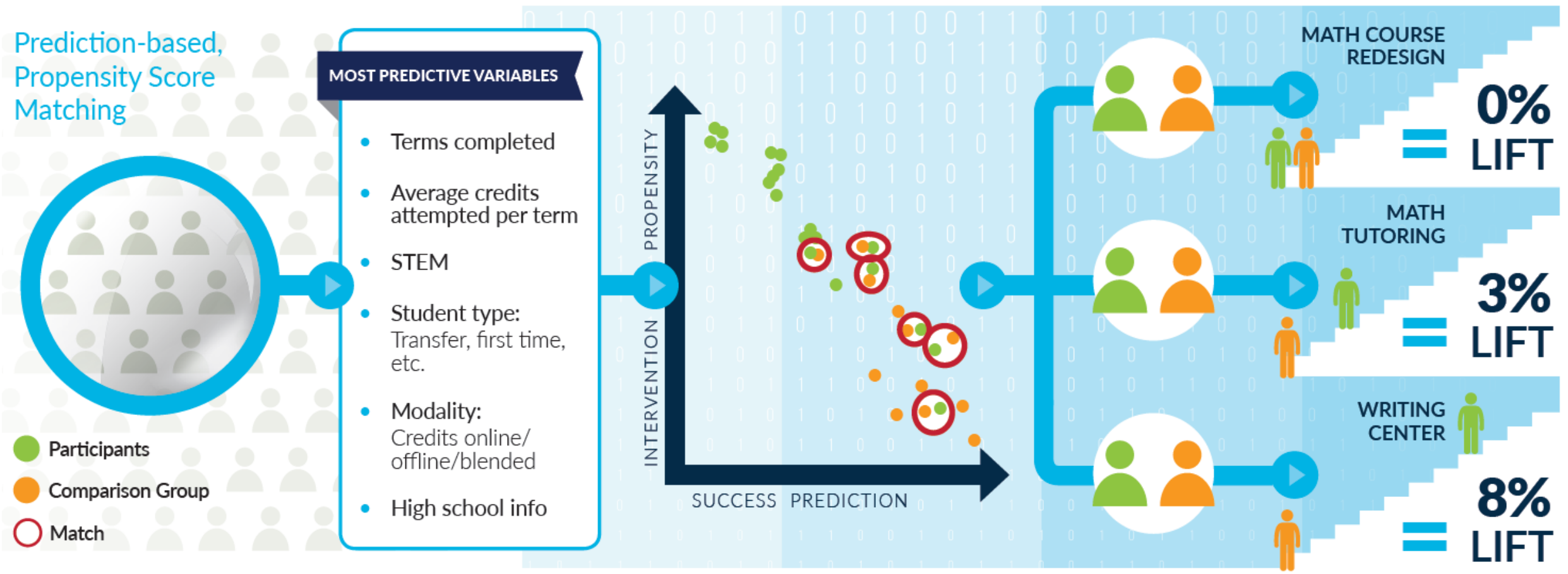
Propensity Score

Matching a student who participated in an initiative with a similar student who did not participate in the same initiative. This matching occurs on two dimensions:

1. Similar persistence probabilities of the students (persistence prediction) and
2. Similar probability of taking part in the initiative in question (propensity score)



Illume Impact: PPSM Model

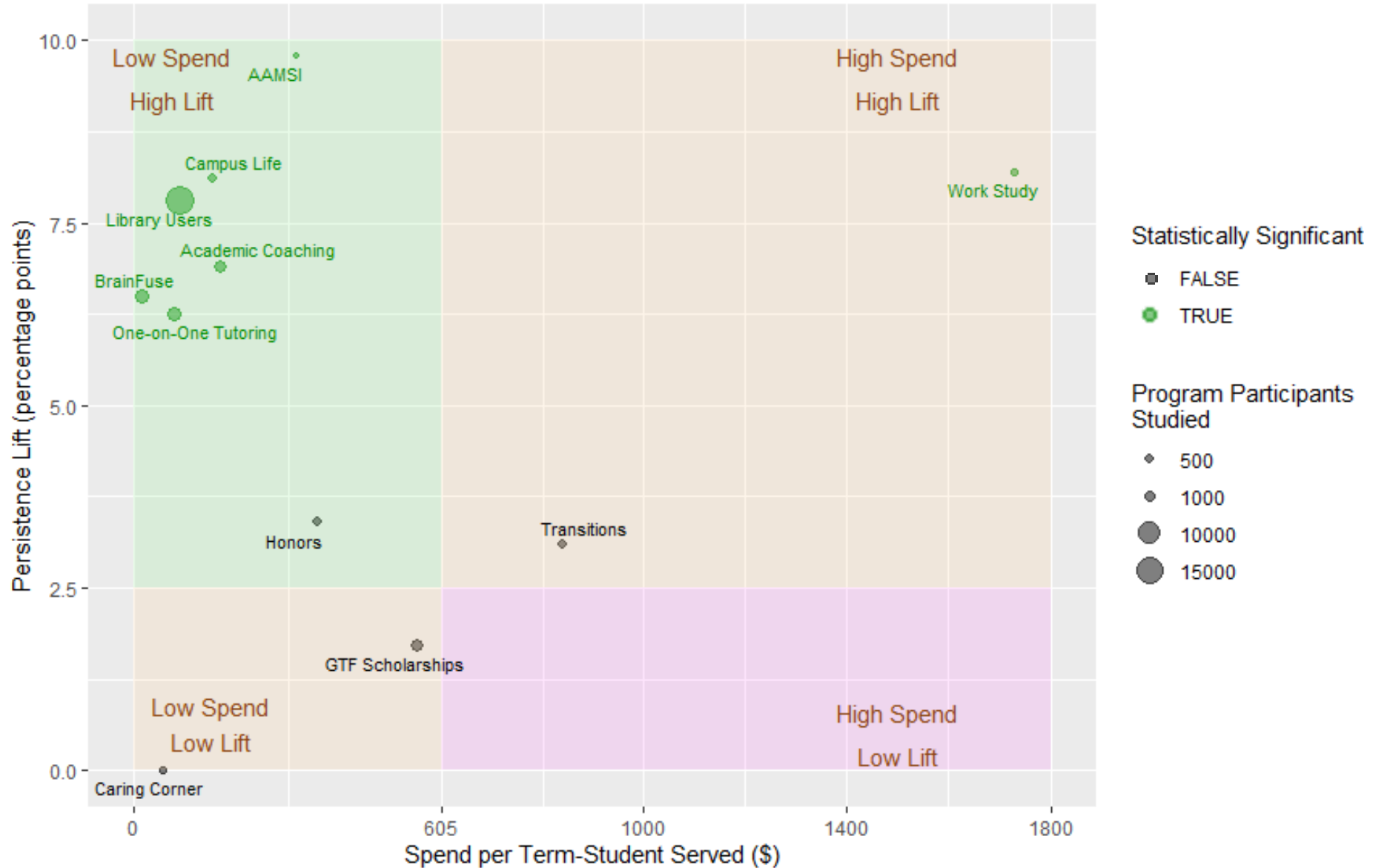


- 1 IDENTIFYING ELIGIBLE STUDENTS**
- 2 SELECTING THE RIGHT DATA VARIABLES**
- 3 DEVELOPING PERSISTENCE & PROPENSITY SCORES**
(BEHIND THE SCENES)
- 4 GETTING TO APPLES-TO-APPLES COMPARISON**
(PARTICIPANT & COMPARISON GROUPS)
- 5 ASSESSING THE IMPACT**

Analysis

- Civitas Illume Impact tool
 - Prediction-based Propensity Score Matching (PPSM (pat pend))
- AND...
- Incorporate Budget/Expense data to get cost per student served

Success Initiative ROI Map



Results – Going Deeper

↑ **6.9%**
+/-3.0%

Lift in Persistence

< 0.01

P-Value

1,791

Analyzed Participants

[← Back](#)

Academic Coaching FY17-FY18

Does attending one or more Academic Coaching Sessions improve persistence?

Initiative Impact

Matching Details

Data Details

Impact by Student Group

[↓ Export Raw Data](#)

Overall Summer 2017 Fall 2017 Spring 2018 Summer 2018 Fall 2018 Spring 2019 Summer 2019

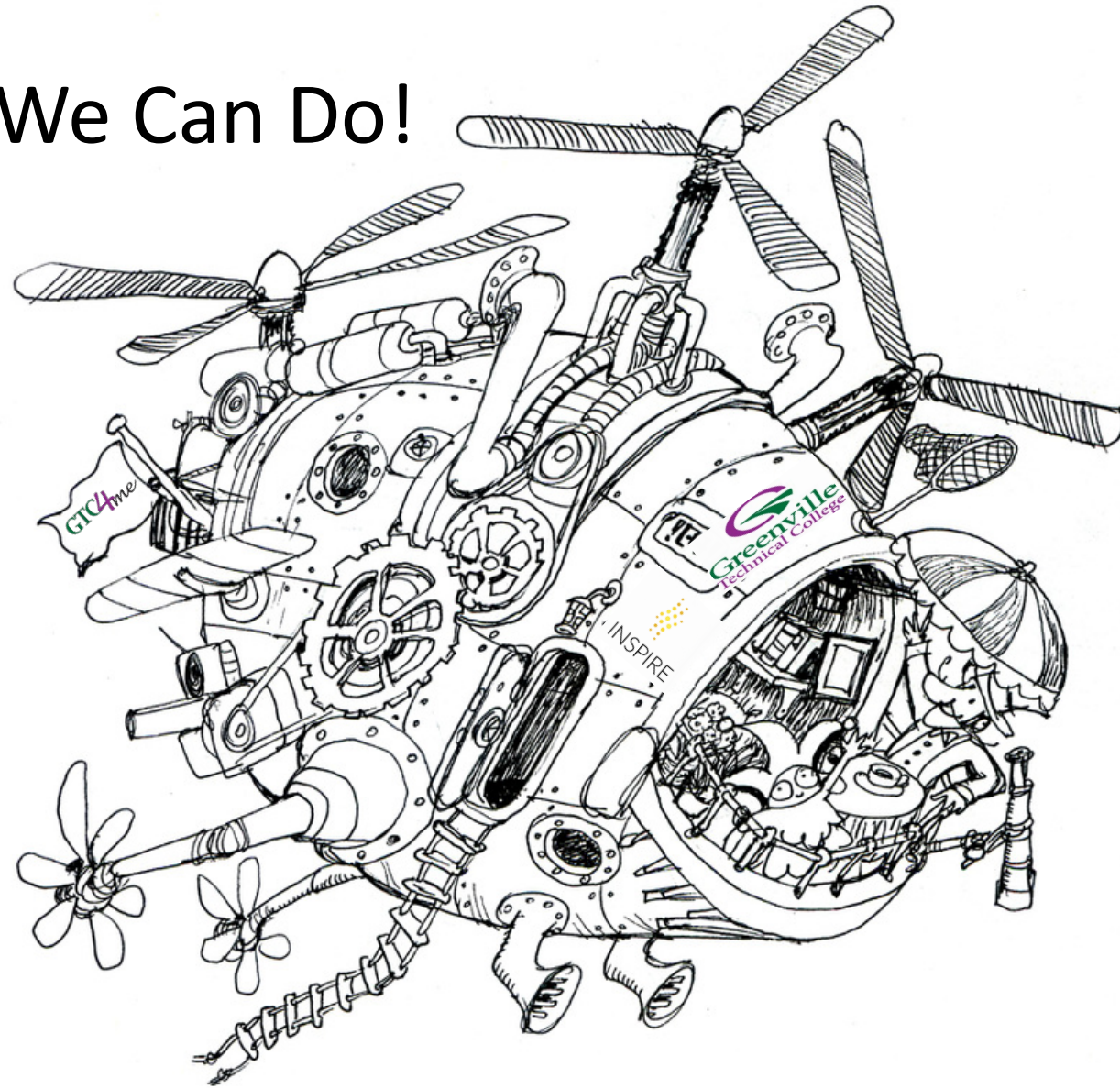
STUDENT GROUP ▲	ANALYZED PARTICIPANTS	P-VALUE	PERSISTENCE LIFT
Overall	1,791	< 0.01	6.90% +/- 3.0%
Completed Terms: 0 Terms	342	0.03	7.02% +/- 6.3%
Completed Terms: 1-3 Terms	788	< 0.01	7.76% +/- 4.7%
Completed Terms: 4+ Terms	660	0.02	5.85% +/- 5.0%

STUDENT GROUP ▲	ANALYZED PARTICIPANTS	P-VALUE	PERSISTENCE LIFT
Prediction Percentile: Bottom Quartile	481	< 0.01	10.86% +/- 6.2%
Prediction Percentile: Second Quartile	541	< 0.01	11.94% +/- 5.6%
Not statistically significant Prediction Percentile: Third Quartile	458	0.84	0.61% +/- 5.8%
Not statistically significant Prediction Percentile: Top Quartile	308	0.69	1.20% +/- 5.9%
Race: Black or African American	646	0.01	6.34% +/- 5.1%
Race: Unknown	214	0.03	9.75% +/- 8.8%
Race: White or Caucasian	840	< 0.01	6.91% +/- 4.3%

Looking Forward

- Communicate results ✓
 - College Leadership – overall results
 - Program Directors and Staff – details by program
 - College-wide – What Works style publication
- Write it all up ✓
- Lather, rinse, repeat

Let's See What We Can Do!



2023 TLT SPRING SESSIONS

April 18, 2023

7-Week Courses

Dr. Cathy Almquist, Trident Technical College

May 16, 2023

Jobs for America's Graduates

Elaine Midkiff & Jennie Brantley, SCTCS

June 20, 2023

Metacognition Pilot Study for SC Technical Colleges

Jenn Hulehan (TCTC), Benita Yowe (SCC), & Alicia Ramberg (HGTC)



Want to showcase your expertise? Is there a teaching technique that has been effective in the classroom? Apply to be a TLT presenter! For more information and full schedule: www.sctechsystem.edu/tlt

GIVE US YOUR FEEDBACK

<https://www.surveymonkey.com/r/March2023TLT>