



Leveraging Impact Analysis to Optimize Student Outcomes

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EDUCAUSE 2017

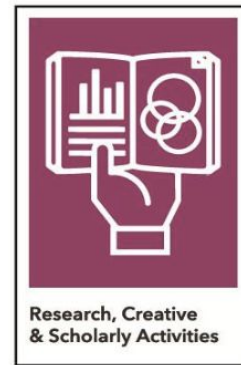
*What if we focused on graduating more humans
committed and equipped to contribute to the social good?*

At the University of Central Oklahoma,
college is about more than a degree. That's why we created STLR.

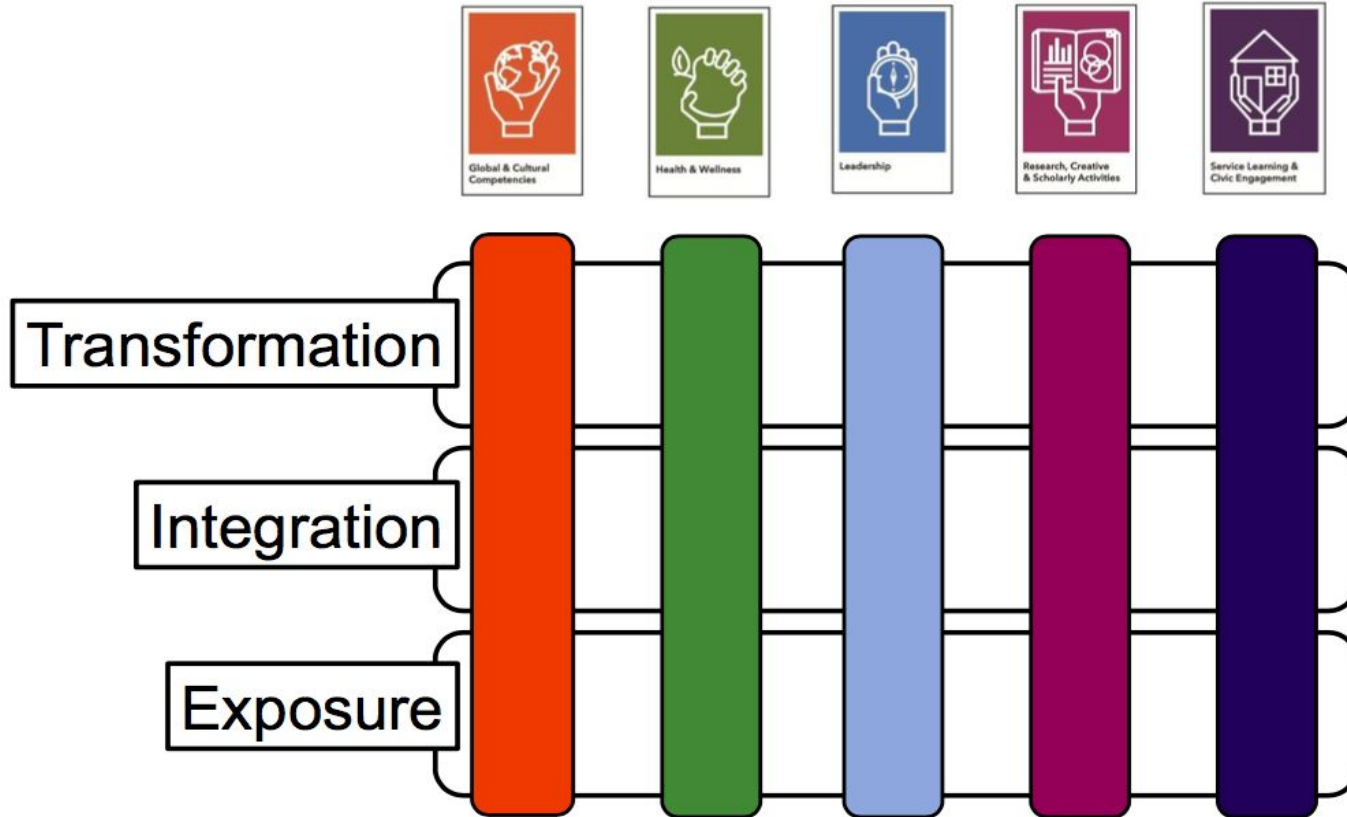


Transformative Learning at UCO

About STLR



STLR Achievement Badge Levels



STLR Student Mobile App

The screenshot displays the STLR Student Mobile App interface. At the top, there is a navigation bar with "My Home" and "Select a course..." options, along with user information for "Brenda Broncho". Below this is a blue header with the "UCO Learn@UCO UNIVERSITY OF CENTRAL OKLAHOMA" logo and navigation links for "My Dashboard", "ePortfolio", "LOR", "Self Registration", and "D2L Help".

The main content area features a "+ Add Tile" button and two primary sections:

- STLR - Overall Progress:** A grid of five colored tiles representing different competency areas, each with an icon and an "Achieved" count:
 - Global and Cultural Competencies (Orange): Achieved 5
 - Health and Wellness (Green): Achieved 9
 - Leadership (Blue): Achieved 7
 - Research, Creative and Scholarly Activities (Purple): Achieved 5
 - Service Learning and Civic Engagement (Dark Purple): Achieved 3
- My Grades:** A list of courses with expandable details:
 - Minorities in American Society
 - Sociological Research
 - Biological Psychology
 - Comparative Psychology
 - Psychology of Sport
 - Beginning Archery

At the bottom right, there is an "Upcoming Dates" section with a "WEEKLY OVERVIEW" for "Nov 01 - 07" and a red notification badge with the number "4".



UCO STLR Analysis Goals

Student Transformative Learning Record (STLR) is designed to *improve student success and retention, especially among those in the target group (low income, first generation, and non-majority).*

1. Understand the impact of STLR upon our students (i.e. STLR vs. non-STLR; target vs. non-target).
2. Compare the impact of two programs on campus (i.e. STLR participants vs. Enrollment Central participants) to understand and compare their potential outcomes.
3. Leverage timely analysis that meets What Works Clearinghouse standards -- needed for decision-making and grant reporting.



Analysis Overview

Examining Impact by Student Group

Nine separate analyses were run to look at impact on term to term persistence for STLR only and a Double Dose (both STLR and Enrollment Central) compared to No Dose and EC only. Results were run Overall and for Target and Non-Target populations.

No.	Student Group	STLR Participant	Enrollment Central Participant	Target	Non-Target
1	STLR Overall	YES	NO	YES	YES
2	STLR Target	YES	NO	YES	NO
3	STLR Non-Target	YES	NO	NO	YES
4	Double Dose Overall vs. No Dose	YES	YES	YES	YES
5	Double Dose Target vs. No Dose	YES	YES	YES	NO
6	Double Dose Non-Target vs. No Dose	YES	YES	NO	YES
7	Double Dose Overall vs. EC Only	YES	YES	YES	YES
8	Double Dose Target vs. EC Only	YES	YES	YES	NO
9	Double Dose Non-Target vs. EC Only	YES	YES	NO	YES



Impact Analysis

To understand the impact of a program, initiative, or service (such as STLR) Civitas Learning uses PPSM (prediction-based propensity score matching) to create a control group where one did not exist. To do this, students are **matched on two dimensions**:

- persistence prediction
- propensity score

This two-dimensional matching ensures that the matched pair of students is similar in both their persistence likelihoods and their propensity to participate in the initiative and controls for selection bias. The impact of the initiative is then calculated by measuring the overall difference between the persistence rate of the students who participated (received an outreach) vs. matched students who did not.

Why PPSM? It meets What Works Clearinghouse standards for evaluation. RCT can pose challenges.

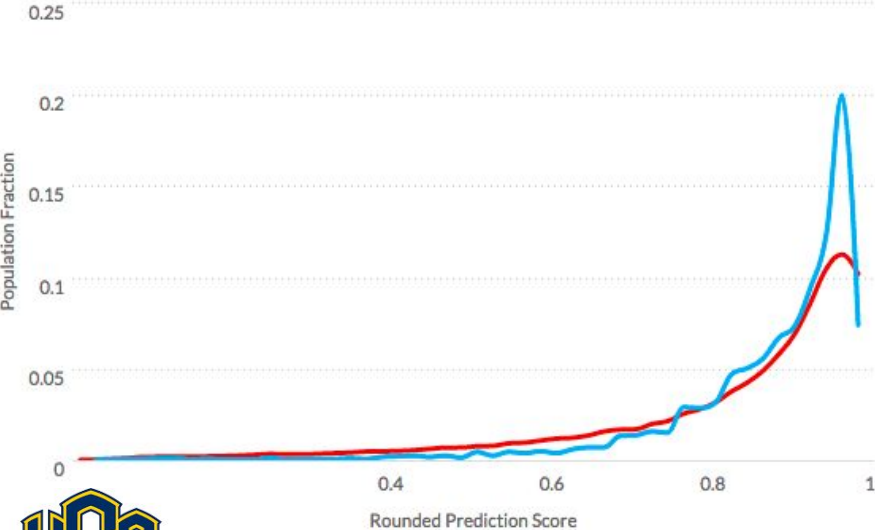


UCO STLR Prediction Matching

Before Matching (Similarity = 84%)

Initiative Participants Eligible Comparison Group

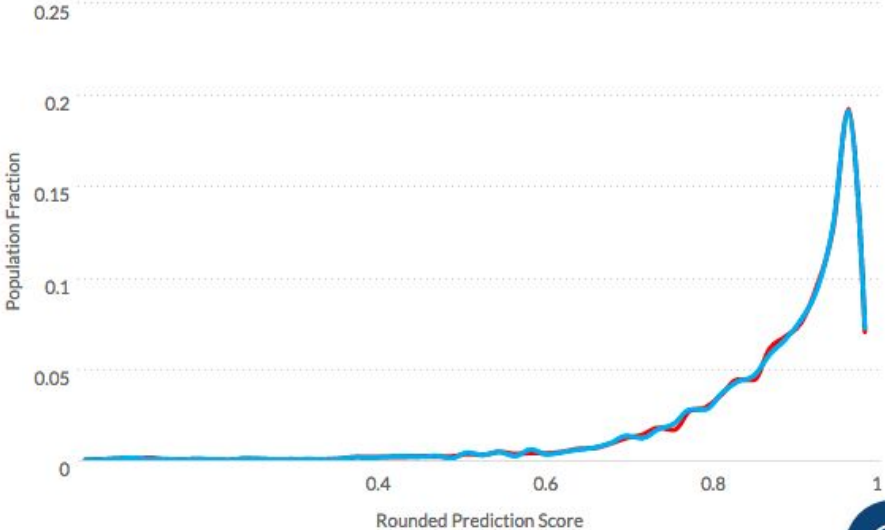
Comparison of initiative participants and eligible comparison students



After Matching (Similarity = 98%)

Initiative Participants Comparison Group

Comparison of matched initiative participants and comparison students



Note: before and after matching pattern similar for overall, target, and non-target analyses. All charts are viewable within Illume Impact.

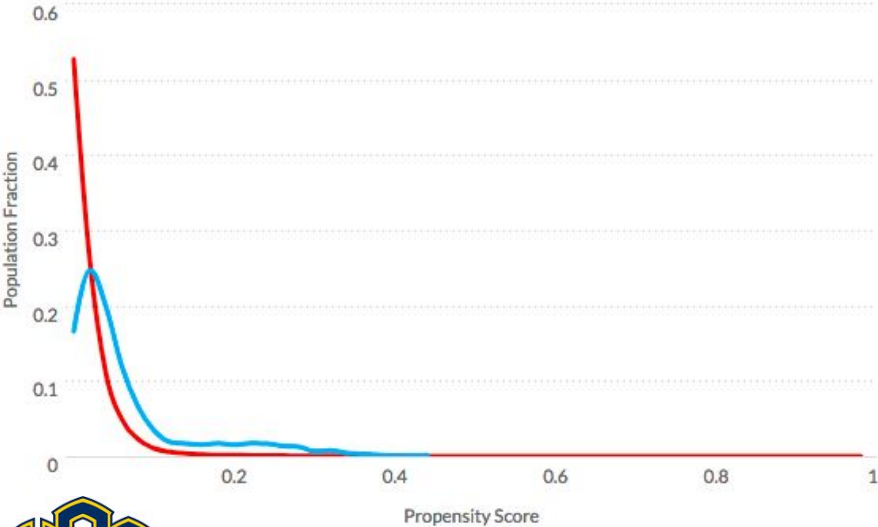


UCO STLR Propensity Matching

Before Matching (Similarity = 63%)

Initiative Participants Eligible Comparison Group

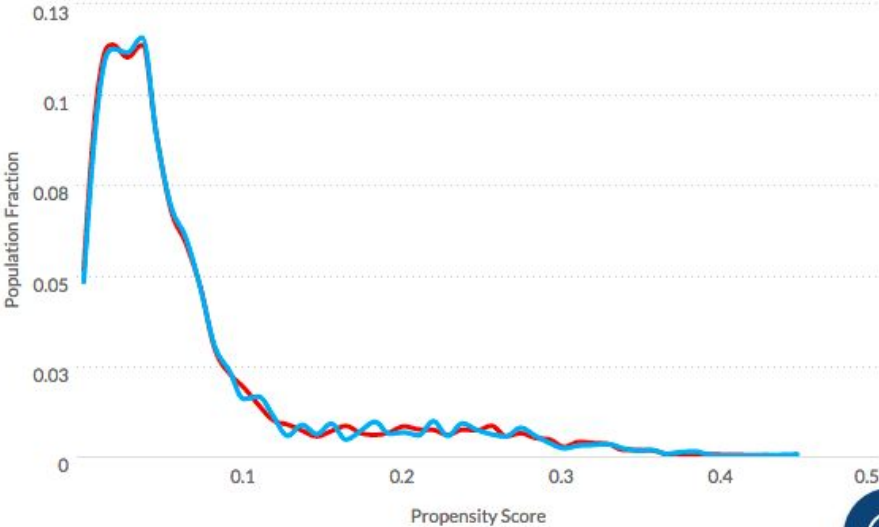
Comparison of initiative participants and eligible comparison students



After Matching (Similarity = 97%)

Initiative Participants Comparison Group

Comparison of matched initiative participants and comparison students

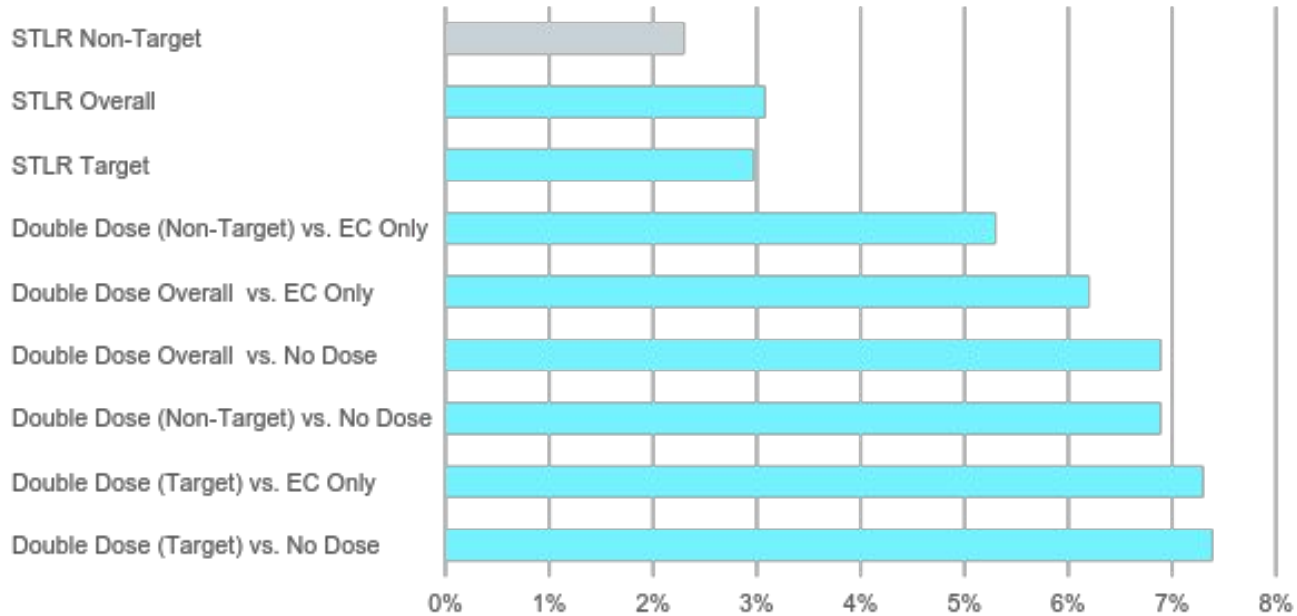


Note: before and after matching pattern similar for overall, target, and non-target analyses. All charts are viewable within Illume Impact.



Program Results

Results by Student Group



Lift in persistence measured by comparing participating student persistence rates to those of comparable students, matched on prediction and propensity scores. Note: Positive but lower statistical significance (.06 p-value) for Non-Target STLR participation. Higher threshold of p-value of .05 is used in this analyses.



Overall Results: Lift in Persistence

Positive, statistically significant lifts for STLR participants overall and, in particular, Target students. Largest lifts for students who have a “Double Dose” – those who participate in BOTH STLR and Enrollment Central when compared to students with Enrollment Central only or neither.

Student Group	Overall	Target	Non-Target
STLR	+3.1% (pp)	+3.0% (pp)	+2.3% (pp) - .06 p-value
Double Dose vs. EC Only	+6.2% (pp)	+7.3% (pp)	+5.3% (pp)
Double Dose vs. No Dose	+6.9% (pp)	+7.4% (pp)	+6.9% (pp)

All results on this page (other than noted) reach a statistical significance of at least .05 p-value. Most results reach the level of <0.01 p-value or 99.9% confidence. NSS stands for “not statistically significant”.



STLR: Larger Lifts

↑ 3.1%
+/-2.5%

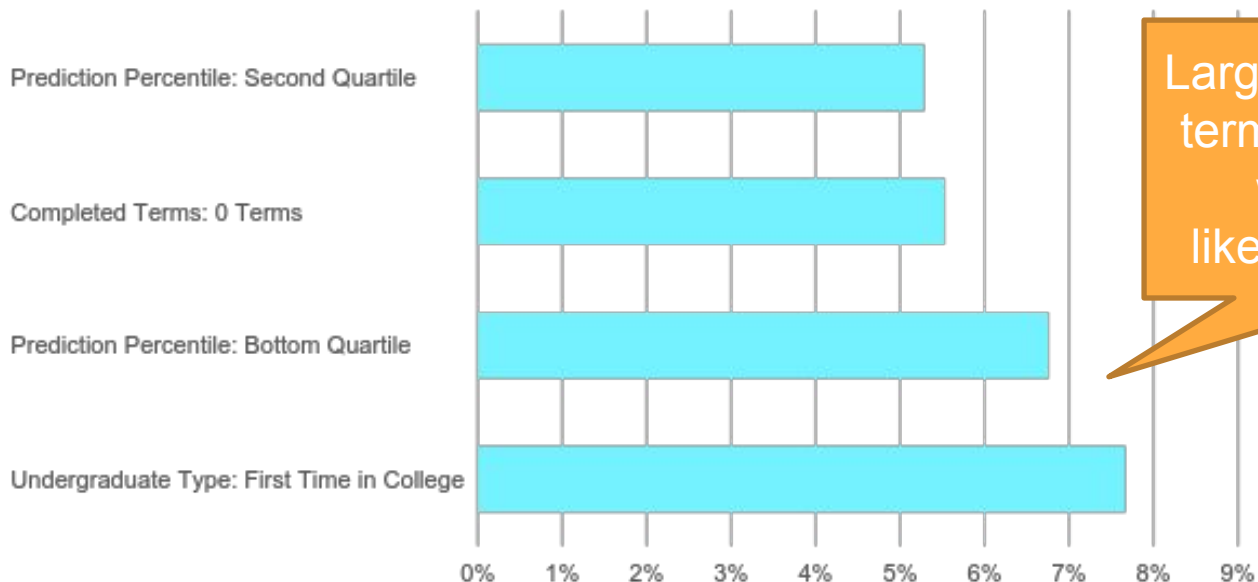
Lift in Persistence

< 0.01

P-Value

👤 2,807

Analyzed Participants



Largest impacts for first term, FTIC, and those with the lowest likelihoods to persist.



Lift in persistence measured by comparing participating student persistence rates to those of comparable students, matched on prediction and propensity scores. Note: All results on this page in blue meet the .05 threshold for statistical significance.



Double Dose: Larger Lifts

↑ 6.9%
+/-3.5%

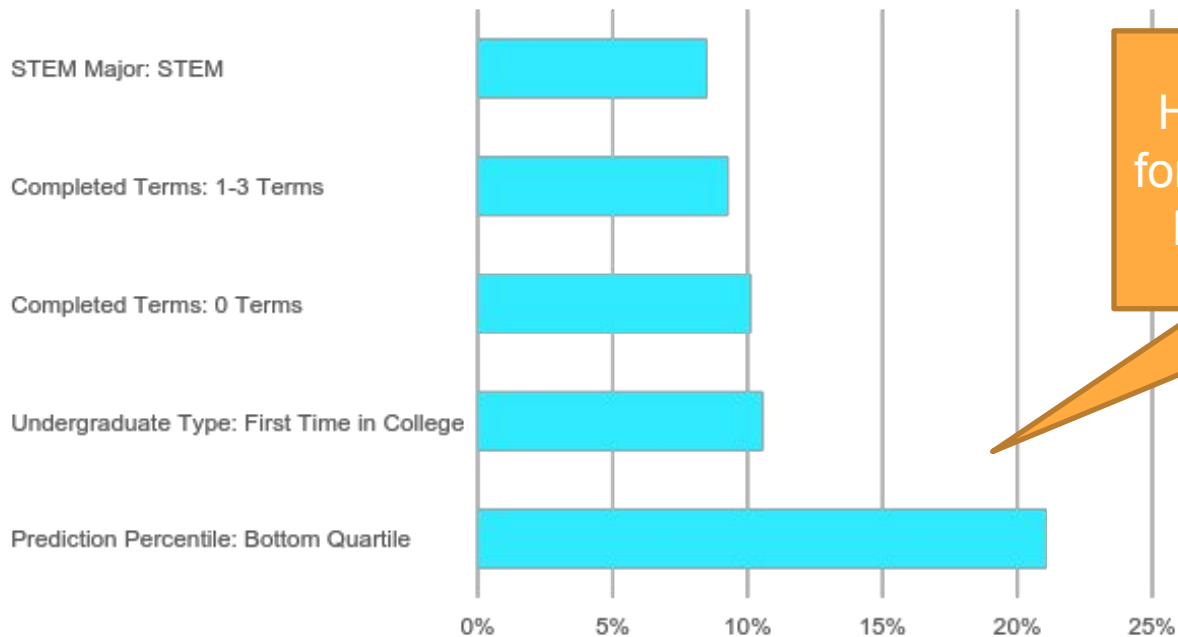
Lift in Persistence

< 0.01

P-Value

👤 1,100

Analyzed Participants



Huge +21.1% (pp) lift for students with lowest likelihood to persist.



Lift in persistence measured by comparing participating student persistence rates to those of comparable students, matched on prediction and propensity scores. Note: All results on this page in blue meet the .05 threshold for statistical significance.



↑ 3.1%
+/-2.5%

Lift in Persistence

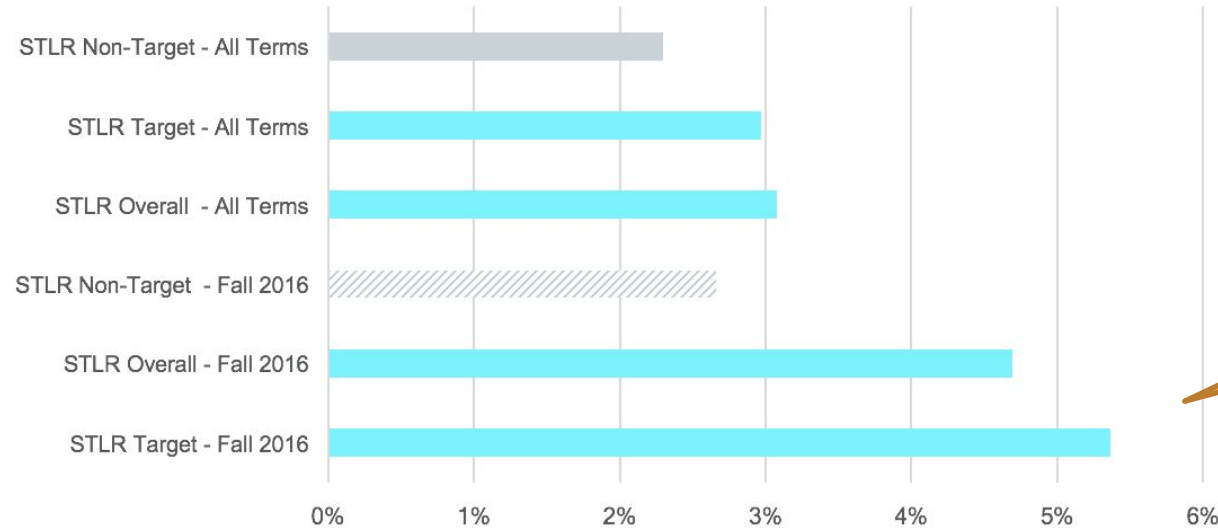
< 0.01

P-Value

👤 2,807

Analyzed Participants

STLR: Increasing Gains



Larger impacts in most recent term. 5.4% (pp) lift in Fall 2016 for Target population!



Lift in persistence measured by comparing participating student persistence rates to those of comparable students, matched on prediction and propensity scores. Note: All results on this page in blue meet the .05 threshold for statistical significance.



Impact on Scale & Decision-Making

What's Next For UCO

- Added Parent Orientation during New Student Orientation -- included messaging about how to support their students because we know these students need their full network available.
- Institutionalization of STLR. Grant funding ends in Sept. 2019, and this analysis is exactly what UCO leadership needed to know that we need to continue the program.
- Statewide leadership opportunities with Board of Regents for continued higher ed innovation and beyond



Scaling STLR

- 10 other institutions across the world are in various stages of adopting / adapting STLR.
- Western Carolina University used STLR as part of institutional re-accreditation (SACS), and it was included as their quality enhancement plan.
- Transformative Learning Conference will include pre-conference session STLR Institute for institutions interested in / adopting STLR.



Contact Info

Contacts

- Transformative Learning Conference: www.uco.edu/tlconference
- UCO STLR Website: <http://sites.uco.edu/central/tl/stlr/>
- Continued Reading / Connecting:
<http://info.civitaslearning.com/measure-impact-maximize-investments>
- Email Jeff: JKing47@uco.edu
- Email Civitas: partnerships@civitaslearning.com

