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Writing Center: Impact analysis Fall 2014 to Fall 2018

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Writing Center

IMPACT ANALYSIS

FALL 2014 - FALL 2018

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Presented July 2019

Student Writing Center Use Influences Student Persistence to the Next Term

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Students who used the writing center experienced an increase in persistence to the next term compared to similar students who did not use the writing center (DID = 0.031, p < 0.0004).

ABSTRACT:

The Utah State University (USU) Writing Center is dedicated to empowering students to express their knowledge and ideas in writing. Their approach promotes academic inquiry, critical thinking, and expressions of diversity. While research and evaluation suggest that the Writing Center significantly impacts student academic performance, the impact on student persistence is not yet clear. This report explores the association between USU's Writing Center and students' persistence toward graduation.

METHODS: Students' Writing Center use was captured through student log-ins at writing appointments. Students who had a record of using the Writing Center were compared to similar students who did not have a record of Writing Center use. Students were matched for comparison using prediction-based propensity score matching. Students were matched with non-users based on their persistence predication and their propensity to participate.

FINDINGS: Students were 97% similar following matching. Participating and comparison students were compared using difference-in-difference testing. Students who used the Writing Center were significantly more likely to persist at USU than similar students who did not use the Writing Center (DID = 0.031, p < .001). The unstandardized effect size can be estimated through student impact. It is estimated that Writing Center resources and services assisted in retaining 17 (CI: 3 – 32) students each year who were otherwise not expected to persist.

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Does the Writing Center influence student persistence to the next term?

WHY PERSISTENCE?

Student success can be defined in various ways. One valuable way to view student success is through progress towards graduation. Progress towards graduation reflects students acquiring the necessary knowledge and accumulating credentials that prepare them for graduation. Progress towards graduation can be measured through student persistence. Here, persistence is defined as term- to-term enrollment at Utah State University. As a measurement, persistence facilitates a quick feedback loop to identify what's working well and what can be better (Bear, Hagman, & Kil, 2020).

WHY USE ANALYTICS?

Higher education professionals labor to support student success, in all its various forms, not just through persistence. However, professionals now have access to far more data than they can feasibly interpret and utilize to support student success without the help of analytics. Fortunately, USU has access to professionals and tools that can process and organize data into insights that have historically been hidden from view (Appendix A). University professionals can leverage insights to directly influence student success (Baer, Kil, & Hagman, 2019).

Indeed, analytics aligns with USU's mission to be a "premier student-centered land-grant institution" by allowing professionals to know what is going well and what could be better (see Appendix G for the evaluation cycle).

PERSISTENCE & THE WRITING CENTER

Written communication is a vital competency. Once written competencies are developed individuals are equipped to transfer knowledge and ideas across contexts (Lea & Stierer, 1998). Interestingly, clear and powerful written communication is both a necessary skill for success in higher education and a by-product of success in higher education.

Students, faculty, and staff work together to build on students' foundational writing skills to further develop their communicative power. At USU, the Writing Center embodies this mission. Peer tutors and professional staff provide feedback and guidance to students as they complete written assignments.

Institutional research suggests that students who utilize the Writing Center have higher grades than students who do not. In additional to improved grades, it is anticipated that the Writing Center would have significant and positive impacts on student persistence. As students gain the necessary competencies for success in higher education, they strengthen their commitment to their academic goals (Tinto, 1993). This report explores the association between Writing Center use and student persistence.

Impact Analysis Results

SUMMARY STATISTICS

Overall Change in Persistence: .... 3.1% (0.6% – 5.6%)
Overall Change in Students (per term): ....17(3 – 32 Students)
Analysis Terms: Fa14, Sp15, Fa15, Sp16,
Fa16, Sp17, Fa17
Students Available for Analysis:.. 3,794 Students
Percent of Students Participating:...2.69%
Students Matched for Analysis:... 2,317 Students
Percent of Students Matched for Analysis 61.0%

STUDENT IMPACT

Students who used the Writing Center during a semester experienced a significant increase in persistence to the next term. The estimated increase in persistence is equivalent to retaining 17 (CI: 3 – 32) students each year who were otherwise not expected to persist. This represents an estimated $76,525.33 ($13,504.47 – $144,047.68) in retained tuition per year, assuming an adjusted tuition of $4,501.49 (see Appendix C for estimated tuition table).

PARTICIPANT DEMOGRAPHICS

Matching procedures for this analysis resulted in the inclusion of 79.0% of available participants. Participating students were 40.9% male, 83.7% Euro-American, and 46.5% first-time college students. Students were 90.9% undergraduate.
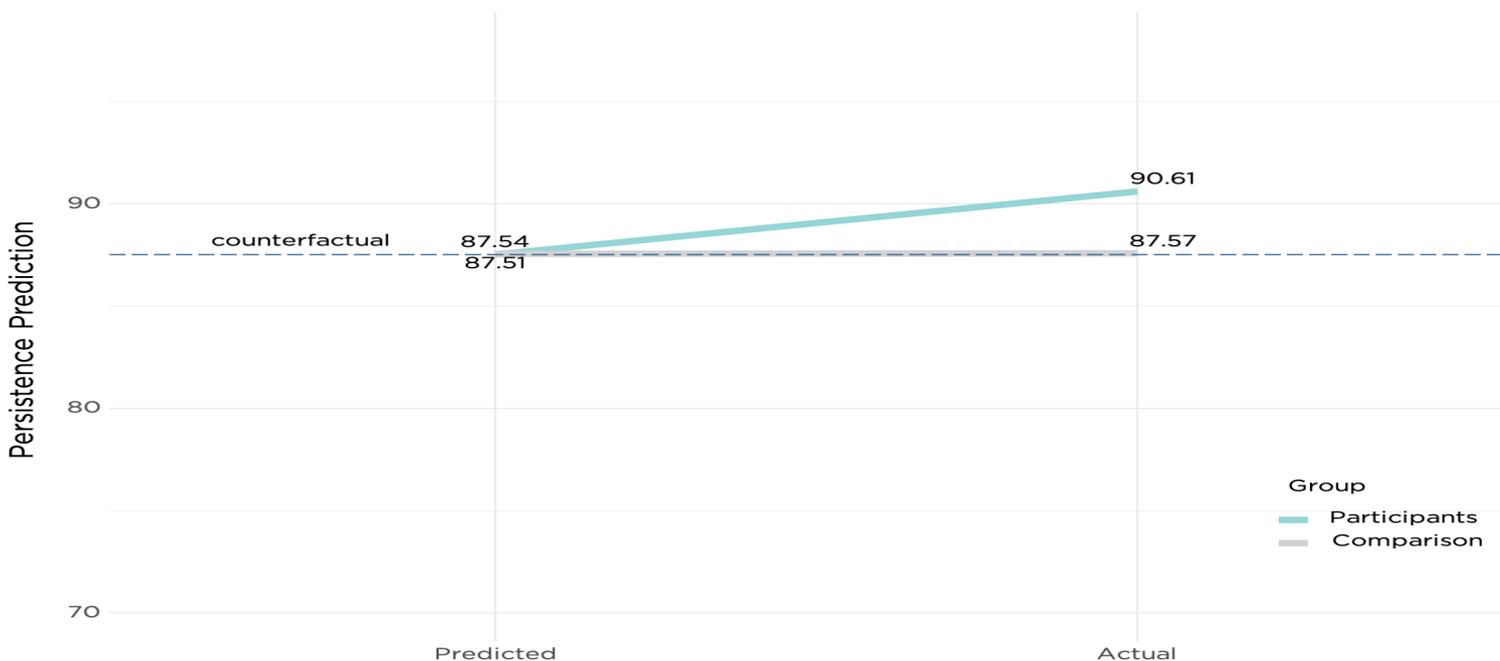
PARTICIPANT

Participants in this analysis were limited to Logan Main Campus students **who were not enrolled in an English course that required Writing Center participation.** Non-degree seeking students were excluded from the analysis. Participating students used the Writing Center at least once for a cross-curriculum visit during a semester. Possible comparison students were degree-seeking Logan Main Campus students who had no record of Writing Center participation during a semester.

FIGURE 1

Participant and comparison students began with highly similar persistence predictions. Actual persistence is significantly different between groups.

Student Segments & Terms Analysis

Impact analysis runs each term individually to capture differences in impact across time. Substantial differences exist by term for tutoring services. Fall 2014 and Fall 2017 both experienced significant changes in persistence; other semesters were not statistically significant (Figure 2).

An advantage of Civitas products is that they utilize historic data to predicted the likelihood that students will persist to the next semester. Figure 3 reflects the difference in actual student persistence between comparison and participating students. The Writing Center has a significant influence on students in the second persistence quartile. These students are in the 25th to 49th percentiles, and are considered high risk for dropping out of the university.
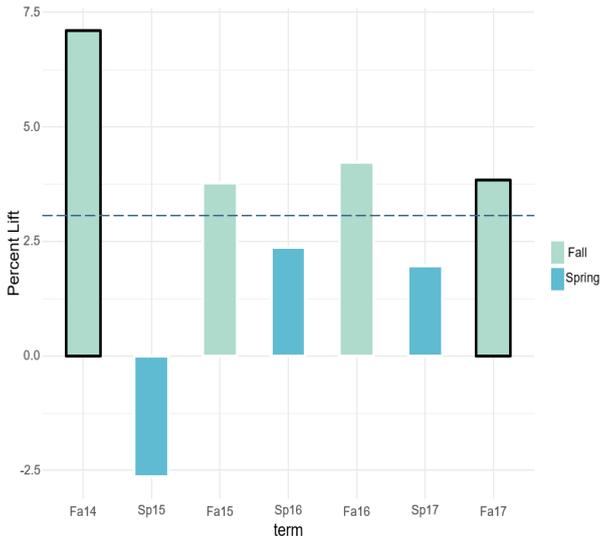
FIGURE 2: TERM ANALYSIS FOR ANY WRITING CENTER CROSS CURRICULUM STUDENTS
Variation in change in persistence by term.

FIGURE 3: ACTUAL PERSISTENCE FOR ANY WRITING CENTER CROSS CURRICULUM STUDENTS
Difference in actual persistence between participating and comparison students.

Student Segment Impact

TABLE 1:

Student Subgroups Experiencing a Significant Change From Participating

| N | Student Segment** | Actual Persistence | | Difference-in Difference | CI | Lift in People |
		Participant Persistence	Comparison Persistence			
2,317	Overall	90.61%	87.57%	3.07%	2.51%	71
2,197	Not Hispanic or Latino	90.48%	87.49%	3.08%	2.60%	68
1,940	White or Caucasian	90.06%	87.94%	2.67%	2.63%	52
1,819	Non-STEM Major	89.72%	87.01%	3.14%	2.91%	57
1,369	Female Students	91.49%	87.50%	4.13%	3.08%	57
1,078	First Time in College	93.56%	87.45%	4.75%	3.55%	51

N = sample size; CI = confidence interval

Impacted Student Segments

Impact analyses look at various student groups to identify how the program influenced different populations of students. Table 1 shows the student groups who experienced   a statistically significant change in their persistence scores from using Writing Center services. Please note that the student groups are not mutually exclusive. Groups are listed in descending order by number of students in each group (N). A table containing   all student groups that did not experience significant change can be found in Appendix A.

STUDENT TYPE: Undergraduate students are categorized as (a) first-time in college, (b) transfer students, or (c) readmitted students. The Writing Center has a significant influence on students who are first-time in college.

STUDENT GENDER: Students who identified as female experienced a significant increase in persistence associated with using the Writing Center. The analysis was unable to detect a significant difference among students who identified as males.

MAJOR TYPE: Impact analyses categorize majors into two group (1) STEM and (2) Not STEM. STEM majors include the sciences, technologies, engineering, and math; all other majors are considered Not STEM. Students with a non-STEM major experience a significant increase in persistence associated with using the Writing Center. STEM majors experience a near-significant increase in persistence.
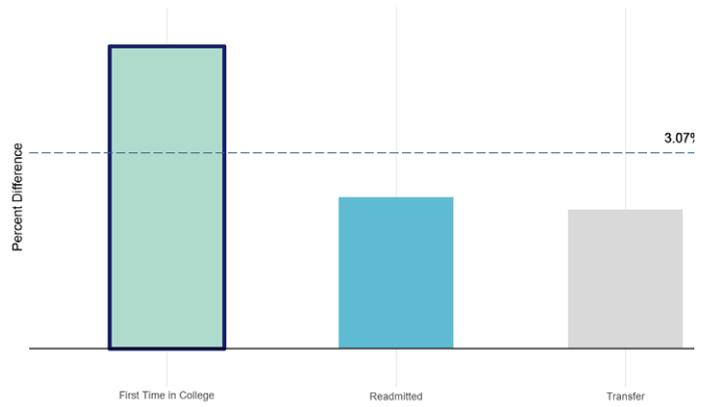
FIGURE 4: CHANGE IN PERSISTENCE BY STUDENT TYPE
Boxes outlined in dark blue had a significant p-value & confidence interval
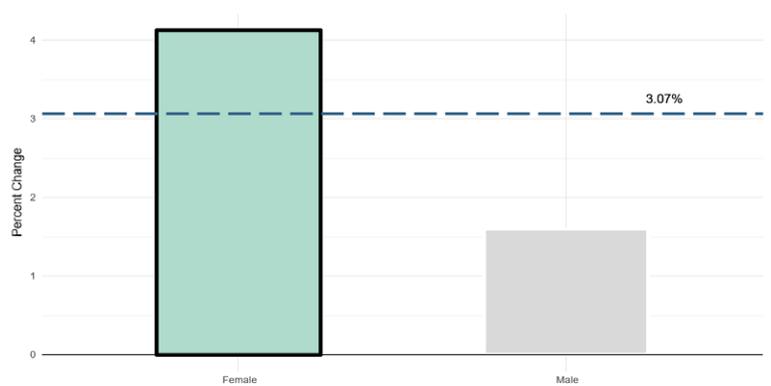
FIGURE 5: CHANGE IN PERSISTENCE BY GENDER
Boxes outlined in dark blue had a significant p-value & confidence interval

FIGURE 4: CHANGE IN PERSISTENCE MAJOR TYPE
Boxes outlined in dark blue had a significant p-value & confidence interval

Additional Analyses

There are several ways to consider Writing Center use that help to paint a picture of the impact on student persistence. The report described above considered students who visi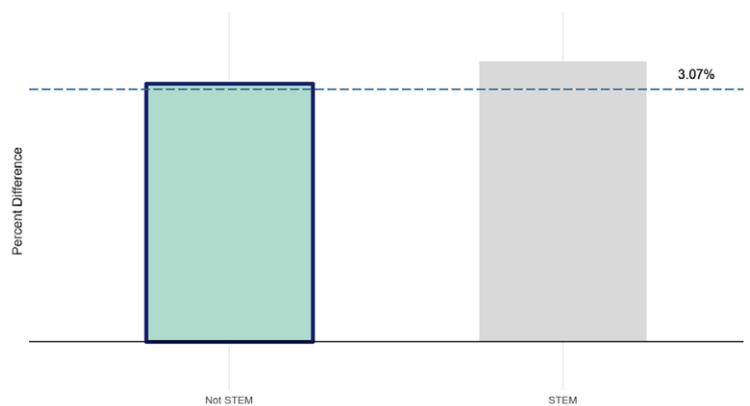ted the Writing Center for a cross-curriculum visit. Students can also use the Writing Center associated with an English course or for a required assignment in an English 1010 or 2010 course. The Writing Center is also regularly available and can be used multiple times by the same student.

To better understand the influence of the Writing Center on student persistence, additional analyses were conducted. These analyses looked at:

•   Level of Use

•   English 1010 & 2010 above required use

•   English Courses without a requirement

Cross-curriculum users experienced an increase in persistence with single of the Writing Center. The other considered analysis were unable to detect a significant difference between participating and comparison students.

SUMMARY STATISTICS HEADLINE

Overall Change in Persistence: ....3.1% (0.6% - 5.6%)
     Single Use ....4.0% (0.4% to 7.6%)
     2 or more Uses ....4.5% (-2.2% to 10.7%)
     English 1010 & 2010 ....1.5% (-3.5% to 5.5%)
     English Not Required..2.0% (-5.9% to 10.1%)
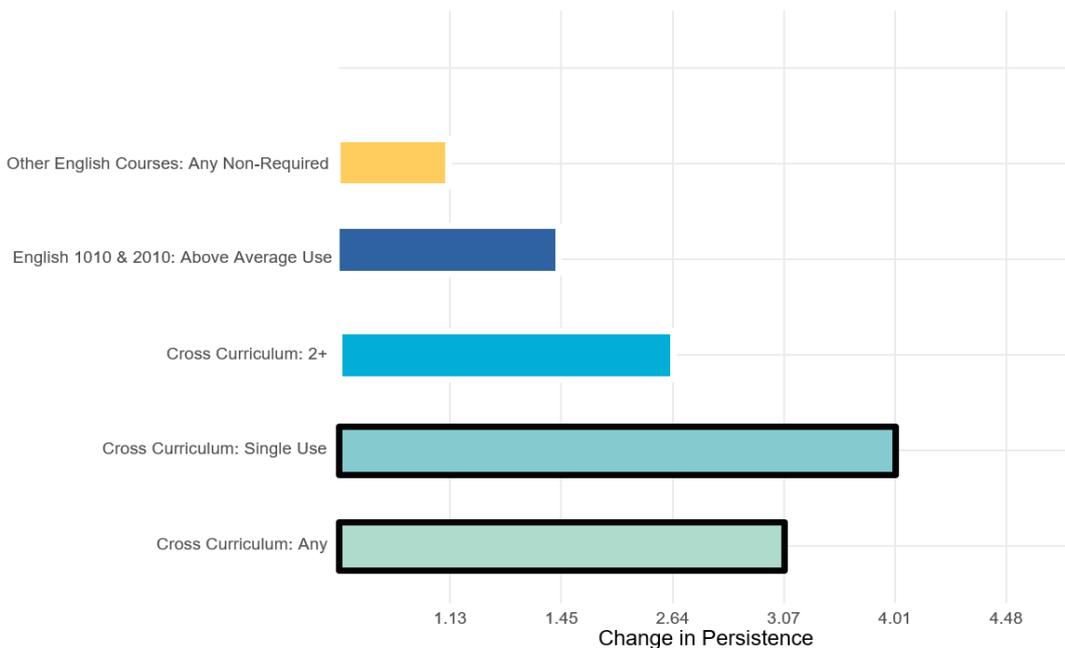
FIGURE 7: CHANGE IN PERSISTENCE ACROSS MULTIPLE ANALYSES
Change in persistence by analysis category. Boxes outlined in dark blue are significant in both p-value & confidence interval.
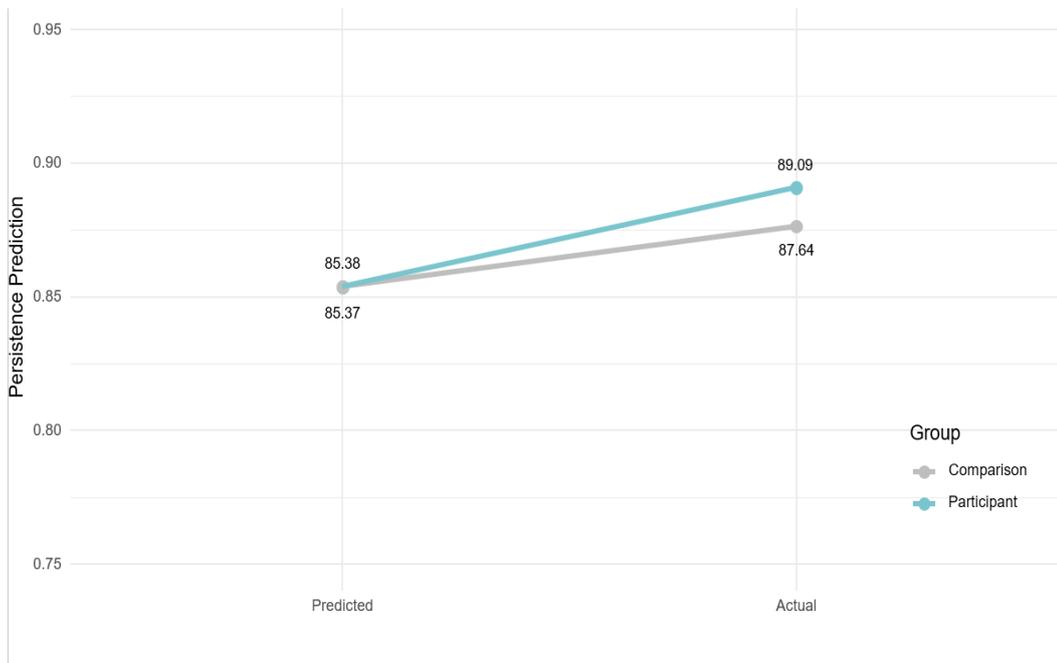
Change in persistence for English 1010 & 2010 users of the Writing Center

ADDITIONAL ANALYSES: REQUIRED USE OF THE WRITING CENTER

Students enrolled in English 1010 and 2010 are major users of the Writing Center. These students are often required to visit the Writing Center 2 times during the semester; however, some students will attend more than the required amount. Students who used the Writing Center more than required (3 or more times) were compared to classmates that used the Writing Center only twice.

A comparison between the predicted and actual persistence scores among students who used the Writing Center 3 or more times would suggest a significant increase in persistence associated with use. Studetns who used the Writing Center 3 or more times changed from a predicted persistence of around 85% to an actual persistence of 89%, a 4% increase in persistence. However, when considered against other Writing Center users, the difference was not statistically significant. This analysis was confounded by the fact that students who used the Writing Center twice in a semester (the comparison students for this analysis) also experienced a change in their persistence (about 85% to 87%). The change in actual persistence by comparison students and participating students was not sufficiently large to detect a significant difference for students who used the Writing Center 3 or more times.

Additional Analyses: April 2019

IMPACT OF REQUIRED WRITING CENTER USE

ENGLISH 1010 & 2010

Most English 1010 and 2010 courses require at least one visit to the Writing Center during the course. Professors see the value in this activity because it helps students organize, develop, and clarify their writing. Given the requirement for visits, finding an appropriate comparison group became a challenge. First, students in English 1010 and 2010 courses that did not require Writing Center visits were considered. These sections were identified by comparing the number of students who visited the Writing Center by section number. Sections with single-digit visits were assumed to have no requirement for visits. The sections identified as not having a requirement were 86, 87, 91, 95, 100, and 107. Across the semesters reviewed in this evaluation, that equated to 252 students who took either English 1010 or 2010 and who were not required to visit the Writing Center. Of the 252 students identified as being in English 1010 and 2010 courses that did not require a Writing Center visit, 15 students (6%) voluntarily visited the Writing Center. Given that roughly 13,000 students in English 1010 and 2010 courses visited the Writing Center during the analysis terms, this comparison group was unacceptable. The analysis using this group of comparison students was too small to detect a significant difference.

The second comparison group considered was students in English 1010 and 2010 who were required to visit the Writing Center but did not. This group could be a poor match given that they may not value completing all their assignments as much as students who did utilize the Writing Center. However, the grade given for completing the Writing Center visits was not substantial and would not have drastically affected students' grades. This group of students was the best match for estimating the impact of Writing Center services on student persist for students in English 1010 and 2010 course.

Interestingly, 63% of students who were required to visit the Writing Center for course credit did visit the Writing Center. This left 37% of USU 1010 and 2010 students to contribute to the analysis as comparison students.

Matching: The analysis was able to match 57% of available participating students, or 7,581 students. The lower match rate is due to the shortage of comparison students, i.e. 63% of available students needed to be matched with 37% of comparison students.

Results: Students who used the Writing Center during a semester experienced a significant increase in persistence to the next term. The estimated increase in persistence is equivalent to retaining 35 (CI: 15 – 55) students each year who were otherwise not expected to persist. This represents an estimated $157,552.15 ($67,522.35 – $247,581.95) in retained tuition per year, assuming an adjusted tuition of $4,501.49 (see Appendix C for estimated tuition table).

Impact Student Segments: English 1010 and 2010 students who completed their assignment to visit the Writing Center experienced a significant increase in persistence. This increase was also felt among many student segments, including:

- Caucasian and non-Hispanic/Lantix students
- Full-time students
- Non-STEM majors
- Students taking course all on-ground
- First time in college students
- Students with 0 terms completed (i.e. new freshmen)
- Students with 1 to 3 completed terms
- Students who identify as male

- Readmitted students
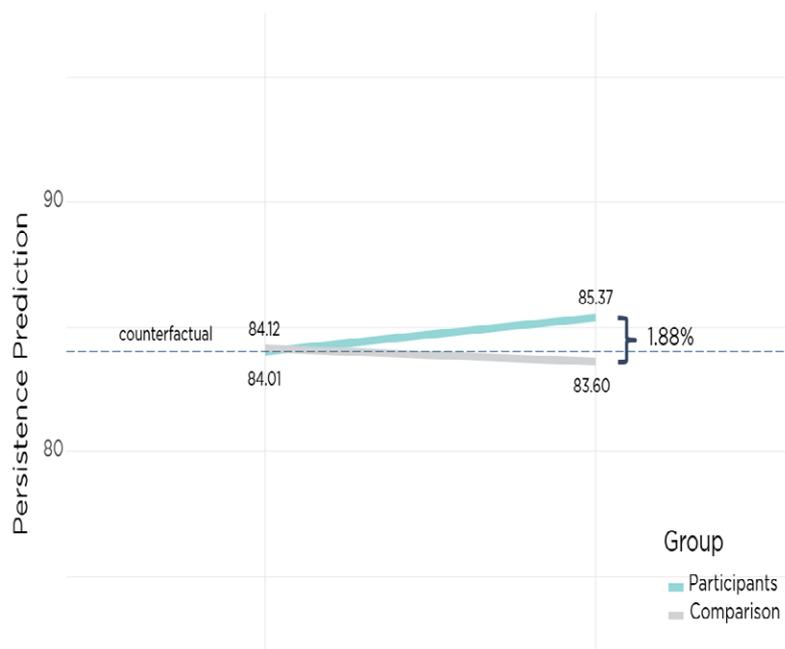
FIGURE 9: DIFFERENCE OF DIFFERENCE GRAPH

comparing participating and comparison students. The difference between groups was statistically significant.

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Appendix A

THEORETICAL FOUNDATION FOR IMPACT ANALYSES: INPUT, ENVIRONMENT, OUTPUT MODEL (ASTIN, 1993)

STUDENT ENVIRONMENTS

STUDENT INPUTS
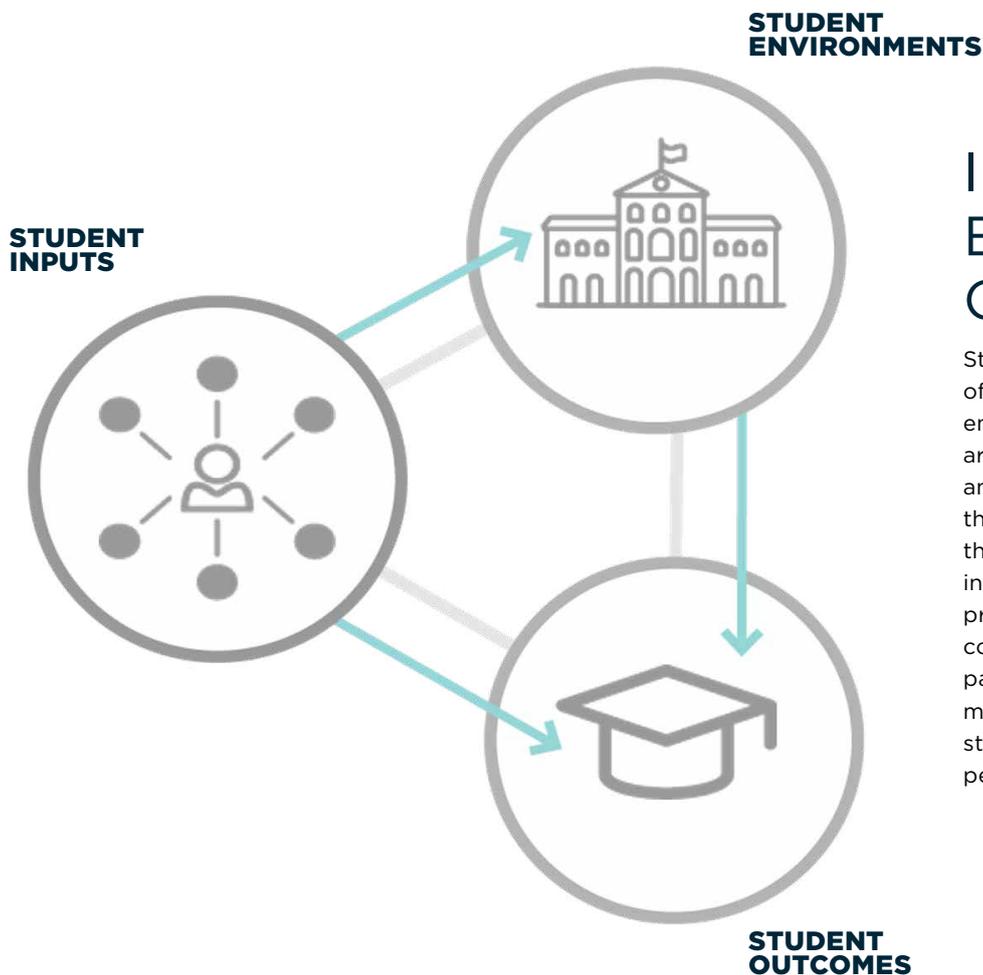
STUDENT OUTCOMES

Input - Environment - Outcomes

Student success is composed of both personal inputs and environments to which individuals are exposed (Astin, 1993). Impact analysis controls for student input though participant matching on their (1) likelihood to be involved in an environment and (2) their predicted persistence score. By controlling for student inputs, impact analyses can more accurately measure the influence of specific student environments on student persistence.

STUDENT INPUTS

Students bring different combinations of strengths to their university experience. Their inputs influence student life and success, but do not determine it.

STUDENT ENVIRONMENTS

The University provides a diverse array of curricular, co-curricular, and extra-curricular activities to enhance the student experience. Students selectively participate to varying degrees in activities. Student environments influence student life and success, but do not determine it.

STUDENT OUTCOMES

While student success can be defined in multiple ways, a good indicator of student success is persistence to the next term. It means that students are continuing on a path towards graduation. Persistence is influenced by student inputs and university environments.

IMPACT ANALYSIS

An impact analysis can effectively measure the influence of university initiatives on student persistence by accounting for student inputs through matching participants with similar students who chose not to participate.

Appendix B

ANALYTIC DETAILS: ESTIMATING PROGRAMMATIC IMPACT THROUGH PREDICTION-BASED PROPENSITY SCORE MATCHING (PPSM)

Impact analyses are quasi-experiments that compare students who participate in university initiatives to similar students who do not. Students who participate are called participants, students who do not have a record of participation are called comparison students. The analysis results in an estimation of the effect of the treatment on the treated (ETT). In other words, it estimates the effect of participating in university initiatives on student persistence for students who participated. This estimation is appropriate for observational studies with voluntary participation (Geneletti & Dawid, 2009).

Accounting for bias. While ETT is appropriate for observational studies with voluntary participation, voluntary participation adds bias. Specifically, voluntary participation results in self-selection bias, which refers to the fact that participants and comparison students may be innately different. For example, students who self-select into math tutoring (or intramurals or the Harry Potter Club) may be quantitatively and qualitatively different than students who do not use math tutoring (or intremurals or the Harry Potter Club). To account for these differences, reduce the effect of self-selection bias, and increase validity a matching technique called Prediction-Based Propensity Score Matching (PPSM) is used.

In PPSM, matching is achieved by pairing participating students with non-participating students who are similar in both their (a) predicted persistence and (b) their propensity to participate in an iterative, boot-strapped analysis (Milliron, Kil, Malcolm, & Gee, 2017).

(A) Predicted Persistence. Utah State University utilizes student data to create a persistence prediction for each student. The main benefit to students of the predictive system is that it can be an early alert system; it identifies students in need of additional resources to support their success at USU. A secondary use of the predicted persistence scores is to evaluate the impact on student-facing programs on student success. This is an invaluable practice that fosters accountability, efficiency, and innovation for the benefit of students.

The predicted persistence scores are derived through a regularized ridge regression. This technique allows for the incorporation of numerous student data points, including:

- academic performance
- degree progress metrics
- socioeconomic status
- student engagement

The ridge regression rank orders the numerous covariates by their predictive power. This equation is then used to predict student persistence scores for students at USU. This score is utilized as one point for matching in PPSM.

(B) Propensity to Participate. The second point used for matching in PPSM is a propensity score. Propensity scores reflect a students likelihood to participate in an initiative (Rosenbaum & Rubin, 1983). It is derived through logistic ridge regression that utilizes participation status as the outcome variable. Using the equation, each student is given a propensity score which reflects thier likelihood to participate regardless of their actual participation status.

Matching is achieved through bootstrapped iterations that randomly selects a subset of participant and comparison students. Within each bootstrapped iteration, comparison students are paired using 1-to-1, nearest neighbor matching. Matches are created when students' predicted persistence and propensity scores match within a 0.05 calliper width. Within the random bootstrapping iterations, all participants are included at least once. Students who do not find an adequate match are excluded from the analysis (for additional details see Louviere, 2020).

Difference-in-difference. To measure the impact of university services on student persistence, a difference-in-difference analysis is used. A difference-in-difference analysis compares the calculated predicted means from the bootstrapped iteration distributions to the actual persistence rates of participating and comparison students. In other words, the analysis looks at the difference between predicted persistence and actual persistence between the two groups of well-matched students. Statistical significance is measured at the 0.05 alpha level and utilizes confidence intervals.

Appendix C

ADJUSTED RETAINED TUITION MULTIPLIER

Retained tuition is calculated by multiplying retained students by the USU average adjusted tuition. Average adjusted tuition was calculated in 2018/2019 dollars with support from the Budget and Planning Office. The amounts in the table below reflect net tuition which removes all tuition waivers from the overall gross tuition amounts. Utilizing net tuition provides a more accurate and conservative multiplier for understanding the impact of university initiatives on retained tuition. The table below parses the average adjusted tuition by campus and academic level. The teal highlighted cell represents the multiplier used in this analysis.

RETAINED TUITION MULTIPLIER CALCULATION

Student Groups	Net Tuition	Number of Students	Average Annual Tuition & Fees
All USU Students	$148,864,384	33,070	$4,501.49
Undergraduates	$131,932,035	29,033	$4,544.21
Graduates	$16,932,349	4,037	$4,194.29
Logan Campus Students	$119,051,003	25,106	$4,741.93
Undergraduates	$107,711,149	22,659	$4,753.57
Graduates	$11,339,854	2,447	$4,634.19
State-Wide Campus Students	$25,941,419	7,964	$3,257.34
Undergraduates	$20,303,215	3,864	$5,254.46
Graduates	$5,638,204	1,590	$3,546.04
USU-E Price & Blanding Students	$3,871,962	2,560	$1,512.49

Appendix D

STUDENT SEGMENTS THAT DID NOT EXPERIENCE A SIGNIFICANT CHANGE IN PERSISTENCE

N	Student Segment**	Actual Persistence		Difference-in-Difference	CI	p-value
		Participants	Comparison Students			
2,105	Undergraduate Students	90.07%	87.34%	2.75%	2.83%	0.0026
1,860	Full-time Courses	93.22%	91.29%	2.10%	2.52%	0.0148
1,541	All On-Ground Status	89.26%	86.88%	2.39%	3.16%	0.0209
1,021	4+ Terms Completed	94.63%	91.59%	2.74%	3.04%	0.003
948	Male Students	89.34%	87.63%	1.60%	3.69%	0.1191
863	1-3 Terms Completed	85.66%	84.20%	2.03%	4.96%	0.2023
828	Top Persistence Prediction Quartile (75th – 100th Percentiles)	99.25%	98.94%	0.57%	1.31%	0.2595
666	Mixed or Blended Status	94.30%	91.22%	3.10%	4.37%	0.0149
652	Third Persistence Prediction Quartile (50th – 74th Percentiles)	95.67%	94.86%	1.11%	3.13%	0.2427
561	Second Persistence Prediction Quartile (25th – 49th Percentiles)	89.96%	85.01%	5.33%	6.29%	0.007
491	Transfer Students	91.44%	87.31%	2.18%	5.13%	0.0148
481	STEM Major	96.09%	90.83%	3.41%	5.03%	0.0002
455	Part-time Courses	80.22%	74.85%	6.51%	7.15%	0.0216
433	0 Terms Completed	90.98%	84.17%	6.24%	6.29%	0.0011
384	Readmitted Students	91.32%	87.70%	2.38%	5.63%	0.0494
271	Bottom Persistence Prediction Quartile (1st – 24th Percentiles)	53.16%	51.37%	5.06%	12.38%	0.3285
212	Graduate Students	96.02%	89.81%	6.29%	6.46%	0.0061
150	Asian or Asian American	93.31%	93.09%	-1.67%	9.15%	0.4733
119	Hispanic or Latino	93.18%	89.13%	2.54%	11.18%	0.1507
115	High School Dual Enrollment	47.37%	100.00%	-40.07%	20.16%	0.0001
110	All Online Status	87.52%	75.19%	12.55%	13.34%	0.0088
101	Unknown Racial Heritage	91.62%	84.06%	4.60%	14.94%	0.0489
46	Two or More Racial Heritages	96.52%	87.27%	8.82%	11.82%	0.0337
42	Black or African American	90.77%	67.87%	17.37%	25.44%	0.0113
32	American Indian/Alaskan Native	100.00%	79.12%	13.00%	31.32%	0.0301
16	Unknown Undergraduate Type	88.26%	47.58%	35.90%	52.02%	0.0295
3	Pacific Islander	94.25%	76.22%	21.70%	40.20%	0.126

*Subgroups with fewer than 250 students are considered too small for reliable analysis

**Student group definitions available in appendix F

Appendix E

MATCHING DETAILS

Matching for the analysis resulted in 79.0% of available participants, or 3,794 students, being successfully matched for the analysis. Participating students who did not have an adequate match in the comparison group during the PPSM process were excluded from the analysis. While higher matching is pre-ferred, a 79.0% match is adequate with a large sample size, like those seen in this analysis. Furthermore, upon reviewing the matching distributions for predicted persistence (Figure A) and propensity to participate (Figure B) there was substantial overlap between the red and blue lines. This means that the matching included a representative sample of available participants.

Prior to matching samples were 94% similar based on students' predicted persistence (Figure A). Following matching the samples were 98% similar.

Participating and comparison students were 76% similar based on propensity score prior to matching. Following matching, the similarity in propensity was 96%.
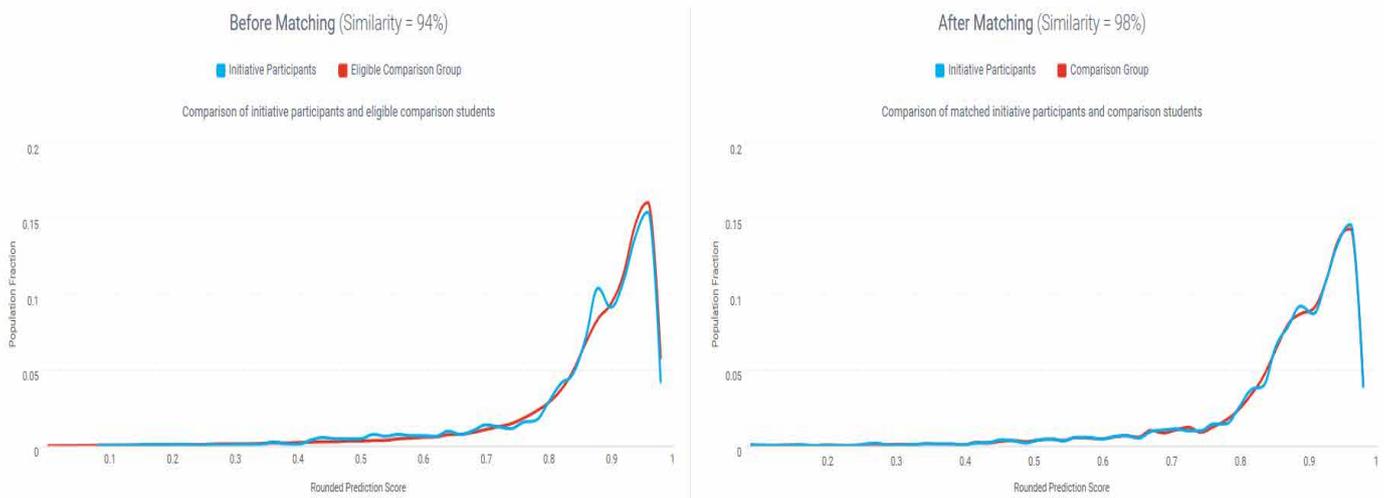
PREDICTED PERSISTENCE: PARTICIPATING & COMPARISON STUDENTS
Participating and comparison students received scores based on their predicted persistence to the next semester. This score was based on historic data from Utah State University Students
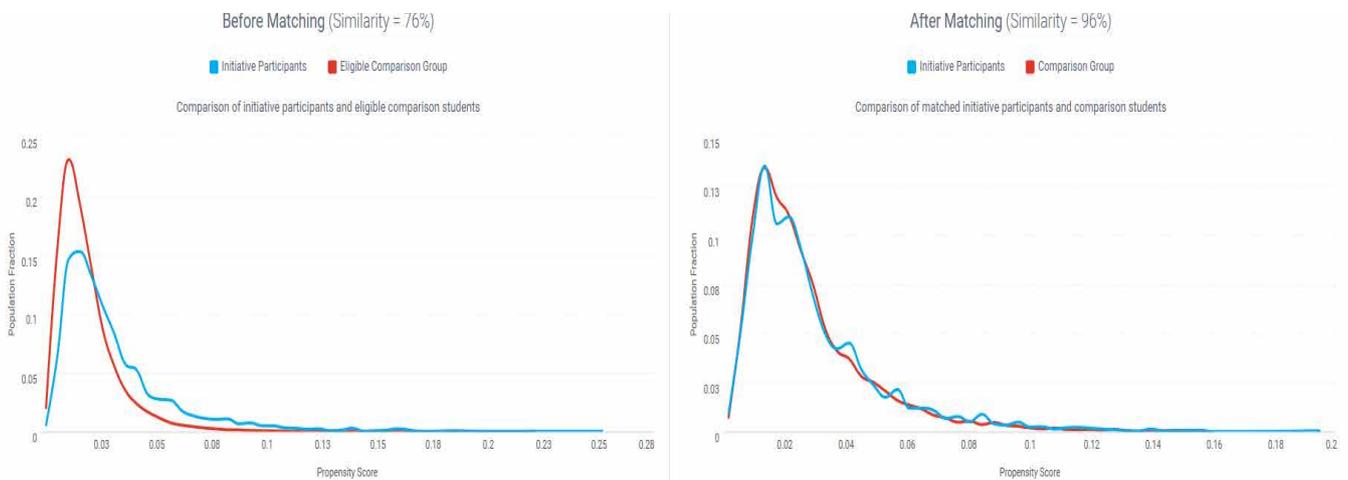
PROPENSITY TO PARTICIPATE BTW PARTICIPATING & COMPARISON STUDENTS
Participating and comparison students received scores based on their likelihood to participate in the initiative.

Appendix F

STUDENT SEGMENT DEFINITIONS

Student Subgroup	Definition
0 Terms Completed	Students with 0 terms in their collegiate career completed; incoming freshmen
1 – 3 Terms Completed	Students who have completed 1 to 3 terms in their collegiate career
4+ Terms Completed	Students with 4 or more terms in their collegiate career completed
All On-Campus	Students attending all courses face-to-face
Online or Broadcast	Students attending all courses online or via broadcast
Mixed or Blended Course Modality	Students attending both face-to-face and online or broadcast courses
Full-time Students	Undergraduate students enrolled in 12 or more credits; graduate students enrolled in 9 or more credits
Part-time Students	Undergraduate students enrolled in less than 12 credits; graduate students enrolled in less than 9 credits
First Time in College	Students who entered USU as new freshmen, who have maintained continuous enrollment or records of absences (i.e. LOA)
Transfer Students	Students who attended another university prior to attending USU
Readmitted Students	Students who attended USU, left for a time (without filing a LOA), and returned after re-applying to USU
Unknown Undergraduate Type	Students with an unknown admitted type
High School Dual Enrollment	High school students simultaneously taking high school and college courses
STEM	Students with a primary major in science, technology, engineering, or mathematics
Non-STEM	Students with a primary major not in science, technology, engineering, or mathematics
Top Persistence Prediction Quartile	The total USU student population is divided so that 25% of students fall in each quartile. The bottom quartile contains students with the lowest predicted persistence (75th – 100th percentile)
Third Persistence Prediction Quartile	The total USU student population is divided so that 25% of students fall in each quartile. The bottom quartile contains students with the lowest predicted persistence (50th – 74th percentiles)
Second Persistence Quartile	The total USU student population is divided so that 25% of students fall in each quartile. The bottom quartile contains students with the lowest predicted persistence (25th – 49th percentiles)
Bottom Persistence Quartile	The total USU student population is divided so that 25% of students fall in each quartile. The bottom quartile contains students with the lowest predicted persistence (1st – 24th percentile students)
Female	Students identifying as female
Male	Students identifying as male

STUDENT SEGMENT DEFINITIONS [CONTINUED]

Student Subgroup	Definition
Non-Hispanic or Latino	Students who do not identify as Hispanic or Latino
Hispanic or Latino	Students who identify as Hispanic or Latino
Race: Two or More	Students who identify with two or more races
Race: Unknown	Students who did not provide race information
Race: Asian	Students who identify as Asian
Race: Black or African American	Students who identify as African American
Race: Pacific Islander	Students who identify as Pacific Islander
Race: American Indian/ Alaskan Native	Students who identify as American Indian or Alaska Native
Race: White or Caucasian	Students who identify as White or Caucasian

Appendix G

UTAH STATE UNIVERSITY'S EVALUATION CYCLE

MAKE DECISIONS

PLAN

IMPLEMENT

EVALUATE & RE-EVALUATE

REFLECT & DISCUSS

AIS Evaluation Schedule

The process of program evaluation is never complete. Using the reported methodology, we will assist you to continually re-evaluate your program impacts on student retention each semester. Using this report, determine a mid-initiative fidelity check to quickly assess how the activity is doing. Identify an end of initiative evaluation date, and a cadence to re-evaluate future results.

EVALUATE & RE-EVALUATE

Get the data to AIS and we can run an evaluation on persistence. For goals that don't include persistence, AIS can assist you in finding resources to measure your improvement.

REFLECT & DISCUSS

Consider the report and the evaluators' insights to produce discussion within your department.

MAKE DECISIONS

Formulate possible actions to improve your program. Select actions that align with your program goals.

PLAN

Make concrete plans to apply your decisions. Determine the who, where, and when of your actions.

IMPLEMENT

Put your plans into actions. Remember to periodically check the progress of your plans as they are being implemented.