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Fraternity & Sorority Life: Impact analysis Spring 2016 to Fall 2019

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Fraternity and Sorority Life

IMPACT ANALYSIS

SPRING 2016 TO FALL 2019

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Report Presented March 2020

Utah State University®

Fraternity and Sorority Life Participation Influences Student Persistence to the Next Term

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Students who participated in Fraternity and Sorority Life (FSL) experienced an increase in persistence to the next term compared to similar students who did not participate (DID = 0.0268, p < 0.01).

ABSTRACT:

Fraternity and Sorority Life (FSL) is a valued part of the USU community It connects students with leadership and philanthropic opportunities throughout their time at university. Many students cite their time spent associated with FSL as one of the biggest contributing factors of their university experience.

METHODS: Student's membership in a FSL is recorded each semester on rosters. These rosters were used in identifying which students participated in FSL. Students were compared using prediction-based propensity score matching. Students who participated in FSL were matched with non-participating students based on their persistence predication and their propensity to participate.

FINDINGS: Students were 98% similar following matching. Participating and comparison students were compared using difference-in-difference testing. Students who participated in FSL were significantly more likely to persist at USU than similar students who did not (DID = 0.0268, p < .001). The unstandardized effect size can be estimated through student impact. It is estimated that FSL assisted in retaining 20 (CI: 10 to 30) students each year who were otherwise not expected to persist.

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Fraternity & Sorority Life at USU

WHAT IS FSL?

Fraternities and sororities are values-based organizations that promote leadership development networking, friendships, academic support, and philanthropy. They are one of the largest network of volunteers in the U.S. with members donating over 10 million hours of volunteer service annually. Today, there are roughly 9 million people in North America that are members of fraternities and sororities.

USU'S FSL

Fraternities and sororities have played an integral role at USU since 1907. Today, there are 4 fraternities and 3 sororities with over 300 members in the community. Membership in a fraternity or sorority provide students with the foundation necessary to become a leader and a driving force for positive change on campus and in the community. Each chapter strives to create well-rounded individuals through leadership training, innovative programming and life-skill development.

Each fraternity and sorority at USU partner with a local and/or national philanthropic cause that they raise money for. Our groups from relationships with one another within the community, and interact with one another through socials, intramurals and other campus and community wide events.

SORORITY LIFE

Sorority life at USU offers so much: friendship, leadership, service, social events and more. It is a home away from home for many young women. Sorority life provides leadership development and philanthropic opportunities. Sorority sisters often become an integral support network both while in college and after.

FRATERNITY LIFE

Fraternity life at USU means finding fellowship, academic support, leadership opportunities, participation in campus activities, service to the community and to the university, and preparing oneself for the future. Being a member of a fraternity allows students to connect with other brothers not only in the region, but also nationally and in some cases internationally.

Does participation in FSL influence student persistence into 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 enrolment 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 then can feasibly interpret and utilize to support student success without the help of analytics. Fortunately, USU has access to professional and tools that can process and organize data into insights that have historically been hidden from view (Appendix A). University professions 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 & FSL

Fraternity and sorority life is rooted in the American university cultural experience. Current studies have examined many aspects of FSL. Current literature point to many of the shortfalls of the organizations, but often admit that "FSL tends to facilitate social integration and en-hance the development of close and influential relationships". FSL members also have a long history of high levels of engagement outside of the class-room (Asel, Seifert, Pascarella,2009). We have seen that engage-ment in the university community outside of the classroom often has an effect on persistence.

Impact Analysis Results

SUMMARY STATISTICS

Overall Change in Persistence:..2.68% (1.36% - 4%)
Overall Change in Students (per term):...87 (44 - 130)
Analysis Terms:........................Fa16,Sp16,Fa17,Sp17,Fa18 Sp18,Fa19,Sp19
Students Available for Analysis:...127,991 Students
Percent of Students Participating:...2.5%
Students Matched for Analysis:...3254 Students
Percent of Students Matched for Analysis 61.0%

STUDENT IMPACT

Students who participate in FSL during a semester experienced a significant increase in persistence to the next term. The estimated increase in persistence is equivalent to retaining 20 (CI: 10 to 30) students each year who were otherwise not expected to persist. This represents an estimated $90,884.20 ($45,442.10 - $136,326.30) in retained tuition per year, assuming an average fall tuition of $4,544.21 (See Appendix C for details).

PARTICIPANT DEMOGRAPHICS

Matching procedures for this analysis resulted in the inclusion of 100% of available participants. Students were 49.44% male, 87.15% Euro-American, and 78.75% first-time college students. Students are 99.49% undergraduate

PARTICIPANT

Sample utilized students on the Logan Main Campus that participated in FSL. Participation was qualified as being on an FSL organization's semester rosters. Non-degree seeking students were excluded from the analysis. Non participant comparison students were Logan Main Campus students who did not participate in FSL.
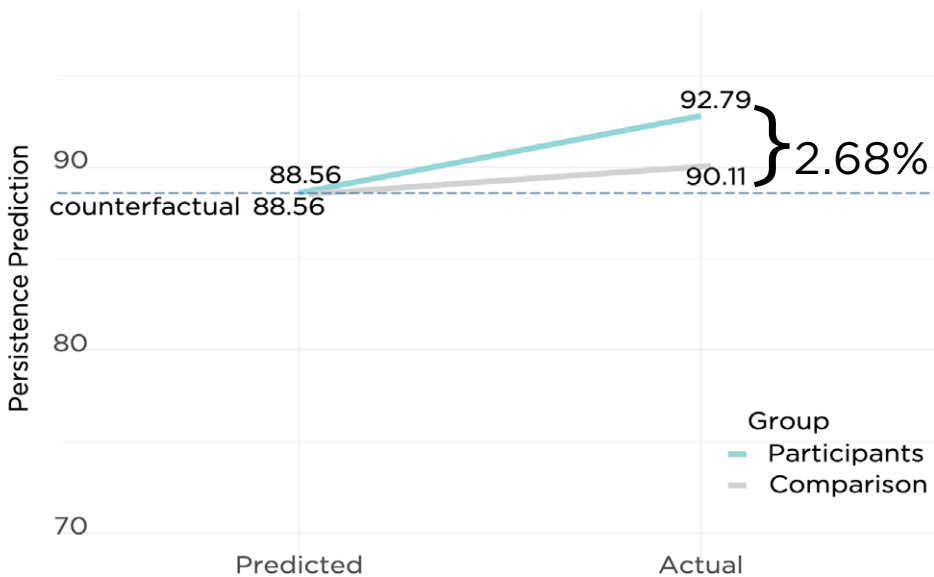

FIGURE 1

Participant and comparison students begin with highly similar persistence predictions. Actual persistence is significantly different between groups.
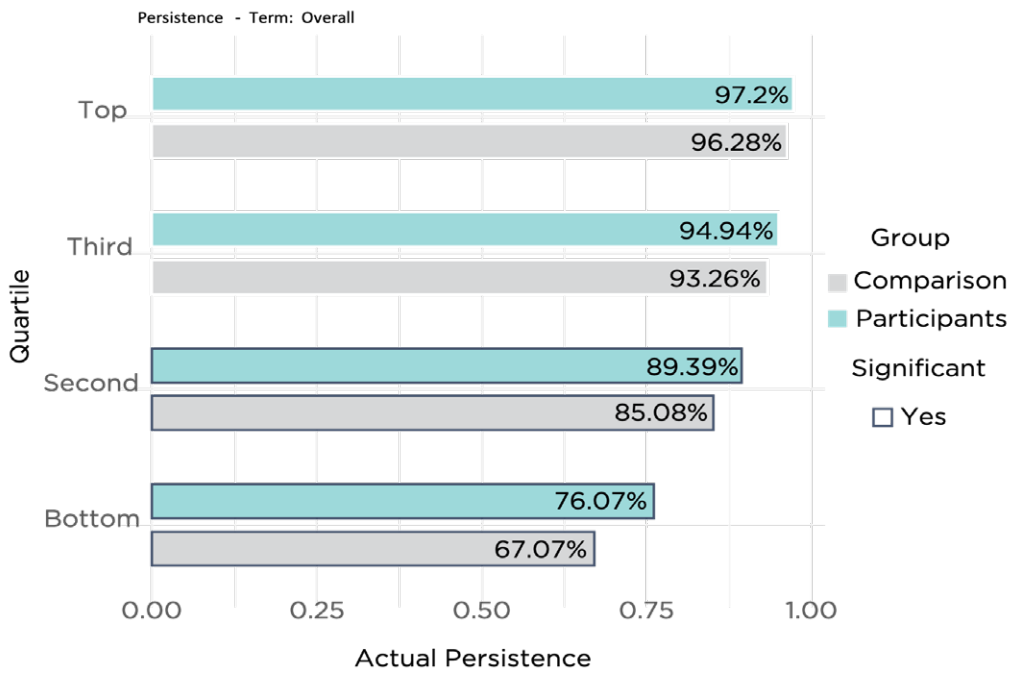
Persistence - Term: Overall

Impact by Persistence Quartile

STUDENT PERSISTENCE

Illume Impact utilizes historical data to predict student persistence to the next term. FSL participation influences students in the bottom and second persistence quartiles; students between the 1st and 49th persistence quartiles. In general students in the bottom and second persistence quartiles are the most likely to leave USU; they also have the greatest potential for impact.

The largest impact is experience among students in the bottom persistence quartiles (student most likely to leave USU). The estimated difference in persistence between participating and comparison students is 9.05% (CI: 1.6% to 16.5%). This reflects approximately 5 students a year who were otherwise not expected to persist. Retained students from the second quartile was estimated at 8 students per academic year.

Interestingly, the distribution of FSL participants was skewed towards students with higher predicted persistence, 71.36% of participants were in the top or third persistence quartile. FSL did not significantly influence these students' persistence.

IMPACT BY TERM

The impact of FSL participation was broken down by term. During each term, the change in persistence associated with participating in FSL trended positive. Interestingly, two semesters emerged as significant independently, Spring and Fall 2017.
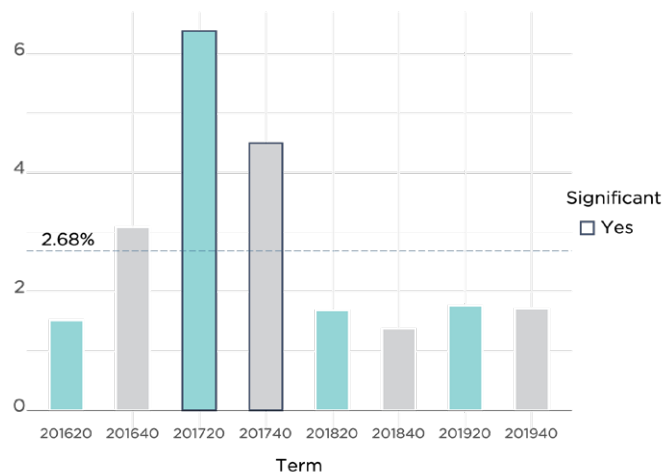

FIGURE 3

Change in persistence by term.

Impacted Student Segments

Illume Impact provides an analysis that looks at various student segments to identify how the program influenced students by specific characteristics. Please note that the student segments are not mutually exclusive. Table 1 shows all student groups who experienced a significant change from taking a community-engaged learning course. Appendix D lists all subgroups with non-significant findings.

Impact by Gender: Both female and male students experienced a significant lift in persistence. Persistence lift of both groups were around the 2.68% that was seen with the overall group. Females made up 50.56% of the analysis.

Impact by Student Type: Students that were first time in college experienced a significant lift of 2.91%. Those that were transfer students, or readmitted students did not experience a significant change.

Impact by Course Modality: All on-ground status students and mixed or blended status students both experienced a significant lift in persistence. The sample size for all online status students was extremely small, 35 students across all 4-years. The impact on this group of students could not interpreted because of the small sample.

Impact by Major Type: Impact analysis considers the impact by STEM classification. STEM and non-stem majors both experienced a significant lift in persistence from participating in FSL. The majority of students in FSL were non-STEM majors. They accounted for 76.22% of students and experienced a lift of 2.64%. STEM majors experienced a 2.82% lift in persistence.
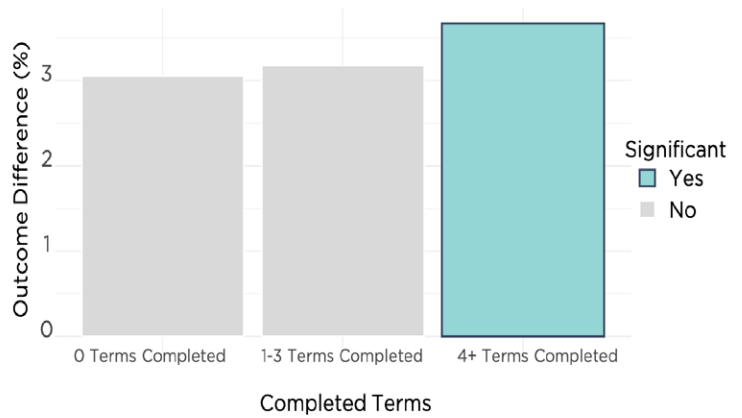

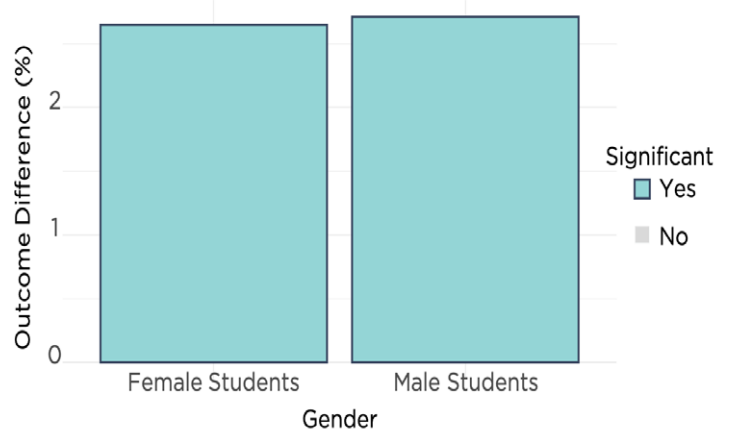**FIGURE 4**

Change in persistence by completed terms

FIGURE 5

Change in persistence by gender

Student Segment Impact

TABLE 1:

Student Segments Experiencing a Significant Change From Participating

N	Student Segment**	Actual Persistence		Difference-in-Difference	CI	p-value	Lift in People
		Participants	Comparison				
3,129	Overall	92.79%	90.11%	2.68%	1.32%	0.0001	20
3,113	Undergraduate Students	92.82%	90.15%	2.67%	1.33%	0.0001	20
2,816	Not Hispanic or Latino	93.07%	90.35%	2.73%	1.38%	0.0001	19
2,742	Full-time Courses	94.11%	91.53%	2.58%	1.32%	0.0001	18
2,727	White or Caucasian	92.50%	90.12%	2.38%	1.43%	0.0011	16
78.75	First Time in College	93.40%	90.50%	2.91%	1.45%	0.0001	18
2,385	Non-STEM Major	92.57%	89.94%	2.64%	1.53%	0.0007	16
1,759	All On-Ground Status	92.58%	89.98%	2.60%	1.77%	0.004	12
1,597	4+ Terms Completed	95.39%	91.91%	3.48%	1.64%	0.0001	14
1,582	Female Students	93.27%	90.62%	2.65%	1.83%	0.0044	11
1,547	Male Students	92.30%	89.59%	2.71%	1.92%	0.0057	11
1,332	Mixed or Blended Status	93.41%	90.84%	2.57%	1.98%	0.011	9
756	Second Persistence Prediction Quartile (25th - 49th Percentiles)	89.39%	85.08%	4.32%	3.30%	0.0102	8
738	STEM Major	93.73%	90.91%	2.82%	2.62%	0.0352	5
262	Bottom Persistence Prediction Quartile (1st - 24th Percentiles)	76.07%	67.07%	9.05%	7.45%	0.0173	6

*Subgroups with fewer than 250 students are considered too small for reliable analysis
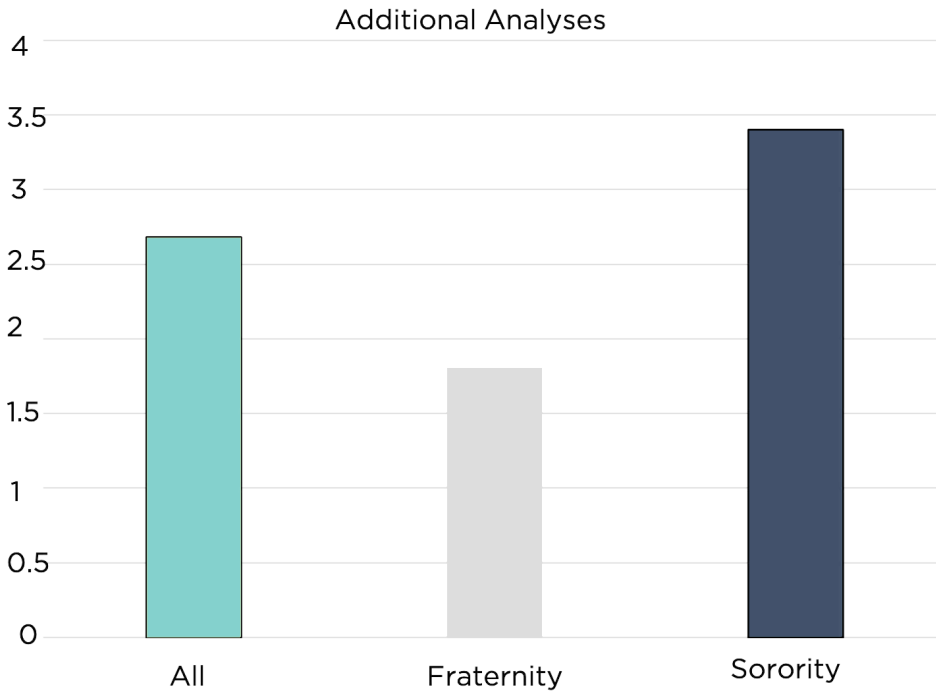**Student group definitions available in appendix F

Additional Analyses

Additional Analyses

In addition to conducting an overall analysis of FSL, two segments of the data were analysed separately: sorority life and fraternity life. As discussed in the previous pages, FSL produced a significant and positive impact on student persistence, i.e. students who participated in FSL were more likely to persist at USU compared to similar students who did not participate in FSL. However, when sororities and fraternities were separated, only the analysis considering sorority life identified a significant and positive impact for participants. The analysis exploring the impact on fraternity life on student persistence, on the other hand, did not identify a significant difference between students who participated in fraternity life and similar students who did not. But, while the overall analysis for fraternity life was non-significant, several student segments did experience significant and positive increases in persistence through participating in fraternity life.

The following pages detail each of the additional analyses.

SORORITY LIFE

Students who participated in sorority life experienced a significant lift in persistence. Overall, those participants experienced a lift of 3.41%. As with the analysis that included all of FSL, sorority life significantly impacted the lower predicted quartiles. These students are most at risk for leaving the institution and have the biggest opportunity for impact.

FRATERNITY LIFE

Students who participate in fraternity life overall did not experience a significant lift in persistence. However, there were subgroups within fraternity life that did experience a significant lift in persistence.

- Caucasian & non-Hispanic/Latino
- First time in college
- 4 or more completed terms
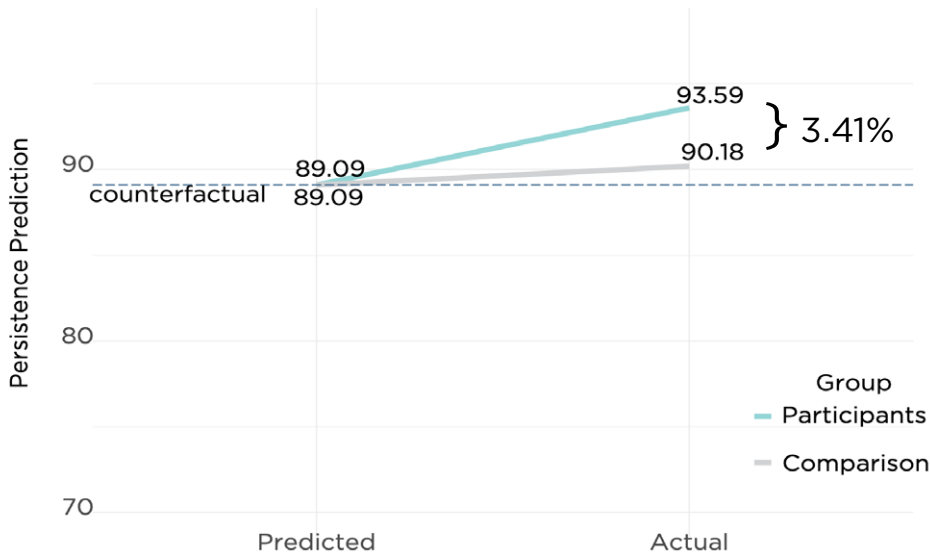- Mixed course modality
- STEM majors

Sorority Life

STUDENT IMPACT

Students who participated in sorority life experienced a significant increase in persistence to the next term. The estimated increase in persistence is equivalent to retaining 13 (CI: 6 to 20) students each year who were otherwise not expected to persist. This represents an estimated $59,074.73 ($27,265.26 - $90,884.20) in retained tuition per year, assuming an average fall tuition of $4,544.21.

PARTICIPANT

Sample utilized female students on the Logan main campus that participated in sorority life. Non degree seeking students were excluded from the analysis. Non participant comparison students were Logan main campus students who did not participate in sorority life. Participation was qualified as being on a sorority organization's semester rosters.

DEMOGRAPHICS

Matching procedures for this analysis resulted in the inclusion of 99% of available participants. Students were, 98.85% Euro-American, and 98.8% first-time college students. Students are 99% undergraduate.

IMPACT BY PERSISTENCE QUARTILE

The largest impact was experienced among students in the bottom persistence quartiles (student most likely to leave USU). Students in the bottom quartile experienced a 12.1% (CI: 0.7% to 23.5%) lift. And, students in the second persistence quartile experienced a 7.56% (CI: 2.7 to 12.5%) increase in persistence. Interestingly, there were few students in the bottom persistence quartile than expected, 7% compared to an expected 25%. In fact, most participants (72%) were in the top and third persistence quartiles, i.e. the quartiles most likely to persist. Given the impact on students in the lower persistence quartiles, Sorority life may consider how they may better reach that demographic of student.
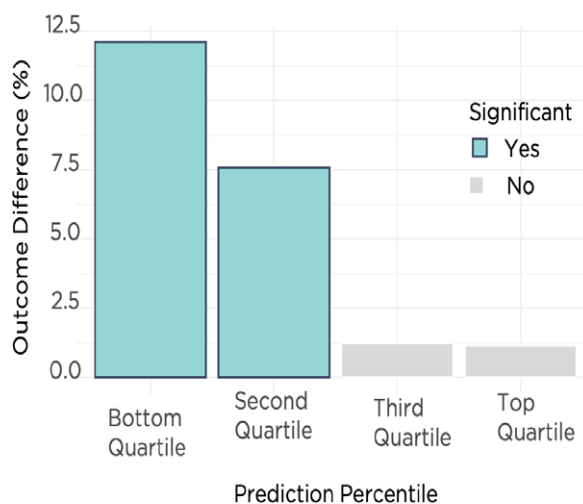
Student Segment Impact Sorority Life

TABLE 2:

Student Subgroups Experiencing a Significant Change From Participating in Sorority Life

N	Student Group**	Participant Persistence	Comparison Persistence	Difference	CI	Lift in People
1,570	Overall	93.59%	90.18%	3.41%	1.83%	13
1,569	Female Students	93.63%	90.18%	3.45%	1.83%	13
1,563	Undergraduate Students	93.58%	90.20%	3.38%	1.83%	13
1,419	Full-time Courses	94.69%	91.47%	3.22%	1.82%	11
1,408	Not Hispanic or Latino	93.29%	89.95%	3.34%	1.96%	11
1,368	White or Caucasian	93.20%	90.06%	3.13%	1.98%	11
1,320	Non-STEM Major	93.93%	90.19%	3.74%	1.97%	12
1,317	First Time in College	93.87%	90.52%	3.36%	1.96%	11
789	All On-Ground Status	94.59%	90.35%	4.25%	2.51%	8
729	4+ Terms Completed	96.48%	92.81%	3.67%	2.24%	7
355	Second Persistence Prediction Quartile (25th - 49th Percentiles)	90.27%	82.72%	7.57%	4.94%	7
104*	Bottom Persistence Prediction Quartile (1st - 24th Percentiles)	78.80%	66.77%	12.10%	11.43%	3
60*	Unknown Racial Heritage	98.82%	89.73%	9.11%	8.24%	1

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

**Definitions for student segments can be seen in Appendix F

IMPACTED STUDENT SEGMENTS:

Students that participated in sorority life experienced an overall increase in persistence. When the analysis was divided to explore the impact on different student segments, several student segments emerged as independently significant. These groups included:

- Students who identify as females
- Undergraduates
- Students taking a full course load (12+ credits)
- Students who identify as Caucasian & non-Hispanic/Latina

- Students in Non-STEM majors
- First time in college students
- Students taking course all on-ground
- Students with 4+ terms completed
- Students in the lower persistence quartiles (bottom and second quartiles)
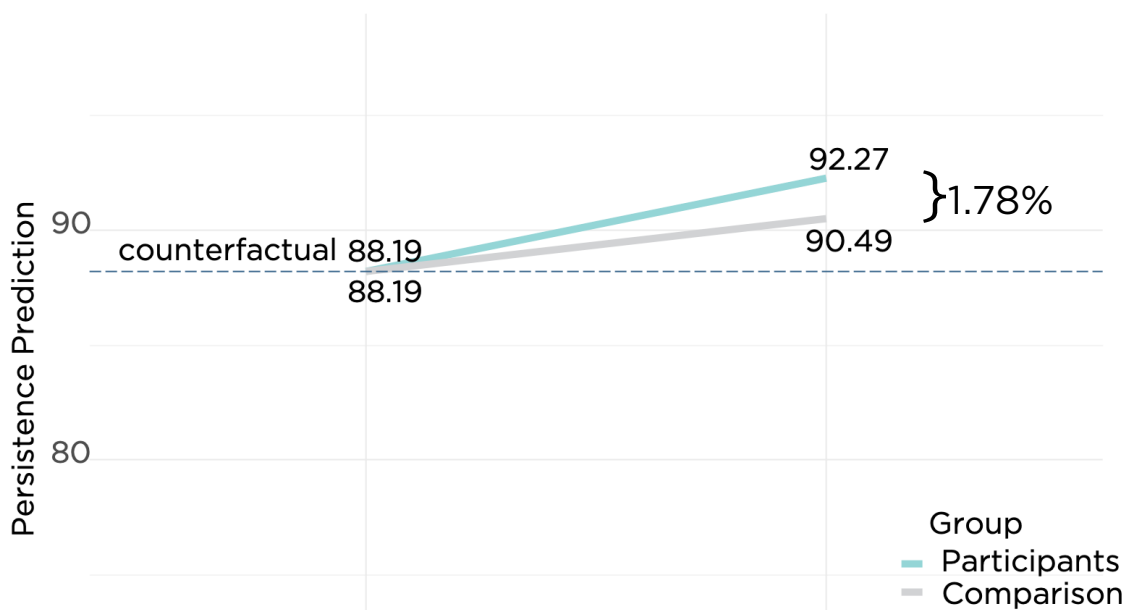
FIGURE 9
Participant and comparison students begin with highly similar persistence predictions. Actual persistence is significantly different between groups.

Fraternity Life

STUDENT IMPACT

Students who participate in fraternity life during a semester did not experience a significant increase in persistence to the next term. However, the analysis did approach statistical significance. To be statistically significant an analysis much have a p-value below 0.05, which means that the difference between groups was very unlike to happen by chance. Fraternity life had a p-value equal to 0.06, which is really close to 0.05.

PARTICIPANT

Sample utilized male students on the Logan main campus that participated in fraternity life. Non degree seeking students were excluded from the analysis. Non participant comparison students were Logan main campus students who did not participate in fraternity life. Participation was qualified as being on a fraternity organization's semester rosters.

PARTICIPANT DEMOGRAPHICS

Matching procedures for this analysis resulted in the inclusion of 99% of available participants. Students were, 98.85% Euro-American, and 98.8% first-time college students. Students are 99% undergraduate.

Student Subgroup Findings

IMPACT BY STEM MAJOR:

Students that participated in fraternity life who were STEM majors experiences a significant lift of 3.37%. Non-STEM majors who participated did not experience a significant change in their persistence.

IMPACT BY COMPLETED TERMS:

Students participating in sorority life who had completed 4 or more terms at the university had a significant lift in their persistence. These students experienced a 2.69% lift in persistence. While those who had completed 0 or 1-3 terms did not experience a significant change in their persistence.
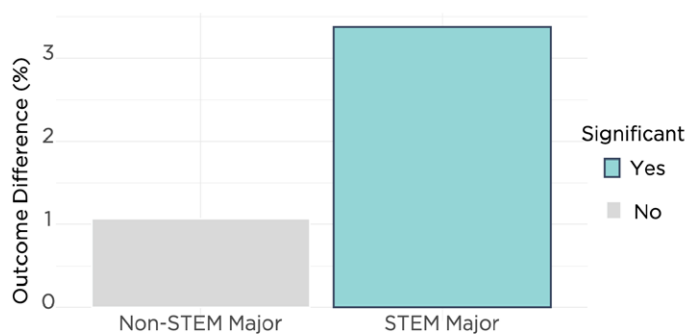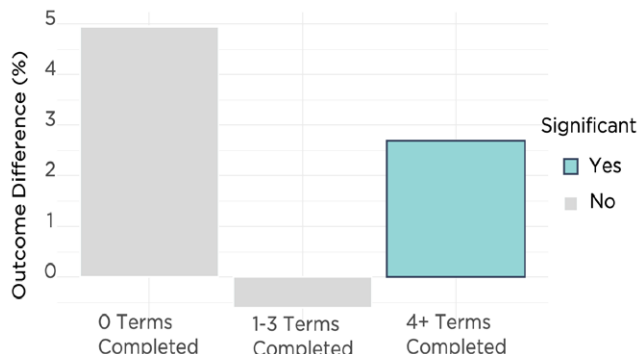
FIGURE 10
Change in persistence by number of completed terms for fraternity life

FIGURE 11
Change in persistence by major type

Student Segment Impact for Fraternity Life

TABLE 3:

Student Subgroups Experiencing a Significant Change From Participating in Fraternity Life

N	Student Group**	Participant Persistence	Comparison Persistence	Difference	CI	Lift in People
1,388	Not Hispanic or Latino	93.10%	91.01%	2.09%	1.92%	29
1,129	First Time in College	93.12%	90.65%	2.46%	2.12%	28
859	4+ Terms Completed	94.53%	91.84%	2.69%	2.31%	23
561	Mixed or Blended Status	94.35%	91.22%	3.13%	2.90%	18
483	STEM Major	95.20%	91.82%	3.37%	3.01%	16

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

**Definitions for student segments can be seen in Appendix F

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Appendix A

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

STUDENT ENVIRONMENTS

STUDENT INPUTS
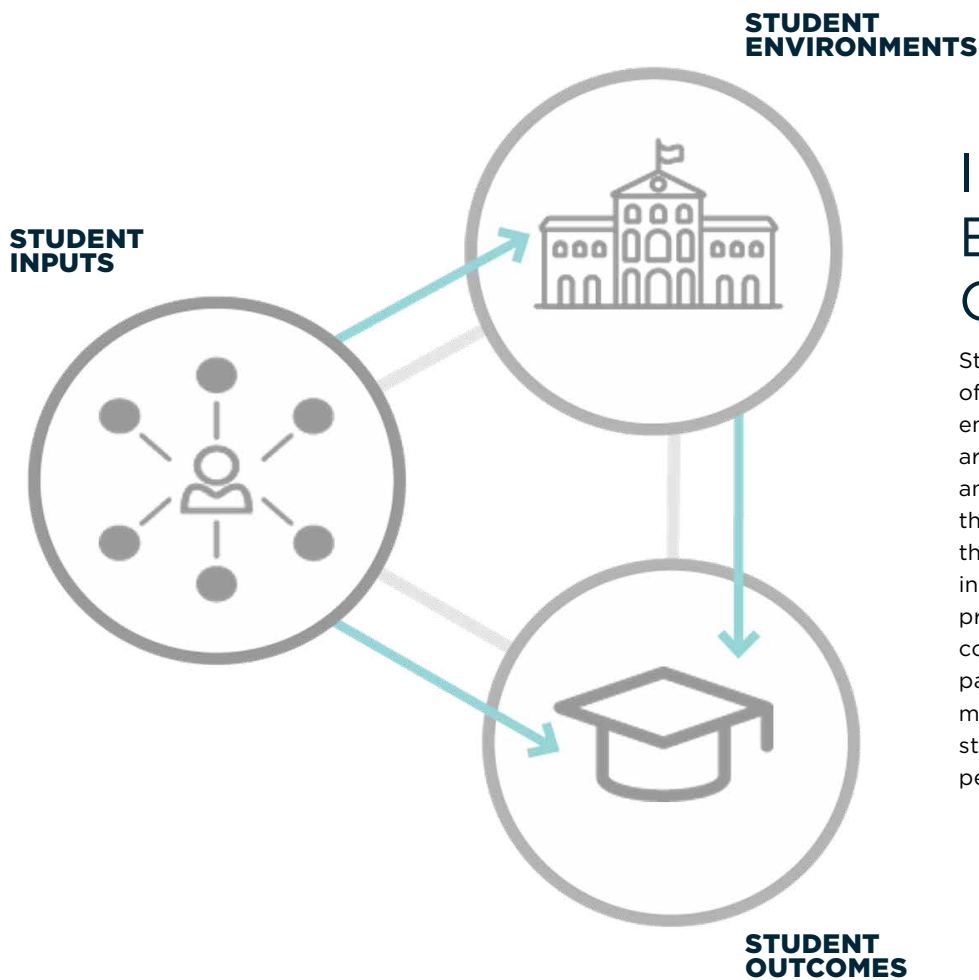
STUDENT OUTCOMES

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	CI	p-value
		Participants	Comparison Students			
7,998	4+ Terms Completed	91.04%	90.20%	0.62%	0.87%	50
4,076	Third Persistence Prediction Quartile (50th - 74th Percentiles)	94.10%	93.19%	0.99%	1.05%	40
3,938	Top Persistence Prediction Quartile (75th - 100th Percentiles)	96.73%	96.42%	0.29%	0.80%	11
3,843	STEM Major	91.45%	91.26%	0.65%	1.14%	25
3,056	Readmitted Students	86.93%	85.64%	1.45%	1.65%	44
1,416	Graduate Students	91.93%	90.77%	1.55%	2.01%	22
510	Unknown Racial Heritage	86.08%	83.32%	1.73%	4.29%	9
455	Two or More Racial Heritages	88.52%	87.91%	-0.36%	4.08%	-2
382	American Indian/Alaskan Native	74.21%	70.98%	3.93%	6.97%	15
361	Hispanic or Latino	87.01%	82.43%	2.74%	5.26%	10
298	Asian or Asian American	90.38%	91.82%	0.08%	4.11%	0
245*	High School Dual Enrollment	48.96%	49.16%	-1.25%	8.17%	-3
155*	Black or African American	89.13%	83.16%	3.77%	7.35%	6
117*	Unknown Undergraduate Type	63.68%	51.27%	9.09%	11.28%	11
45*	Pacific Islander	87.11%	89.54%	0.25%	11.07%	0

*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 61% of available participants, or 3,254 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 preferred, a 61% 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) the there

is 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 63% similar based on propensity score prior to matching. Following matching, the similarity in propensity was 97%.
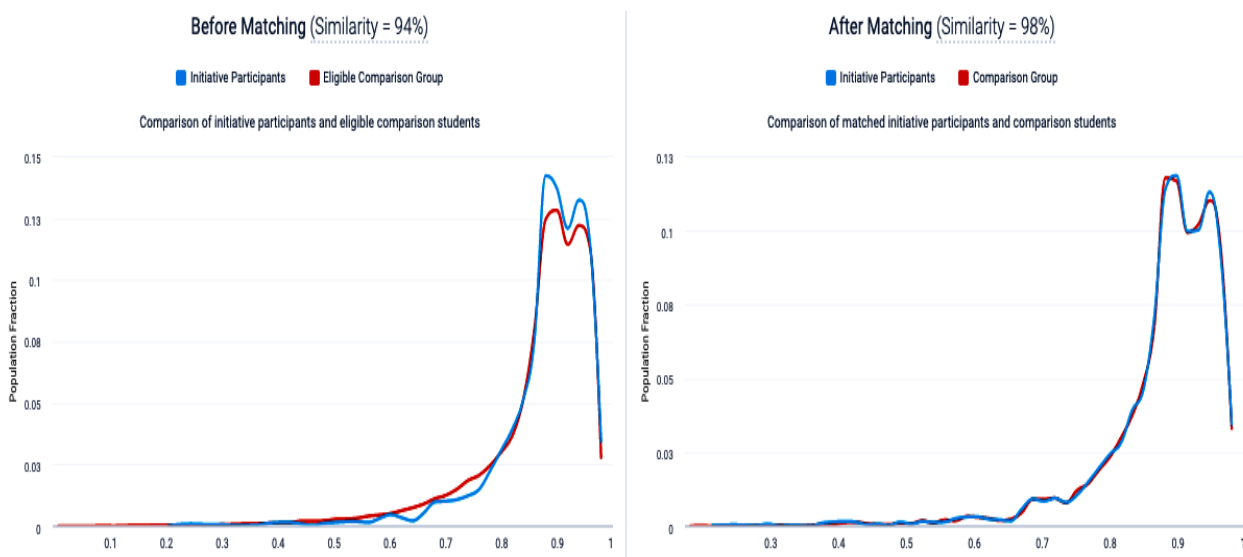
PREDICTED PERSISTENCE: PARTICIPATING & COMPARISON STUDENTS

Participating and comparison students receive scores based on their predicted persistence to the next semester. This score is based on historic data from Utah State University Students
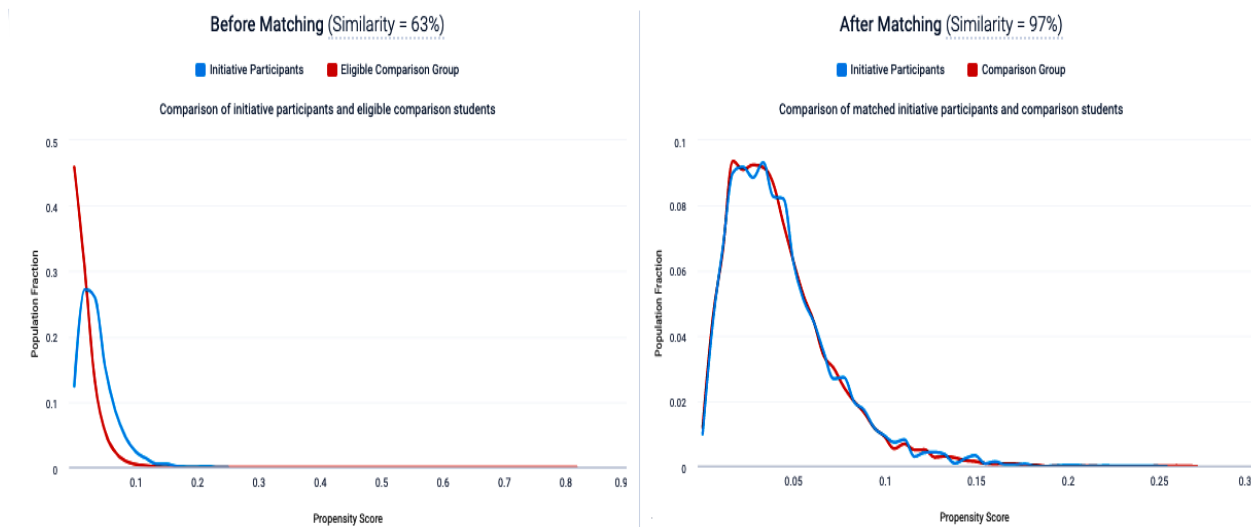
PROPENSITY TO PARTICIPATE BETWEEN PARTICIPATING & COMPARISON STUDENTS

Participating and comparison students receive scores based on their likelihood to participate in the initiative.
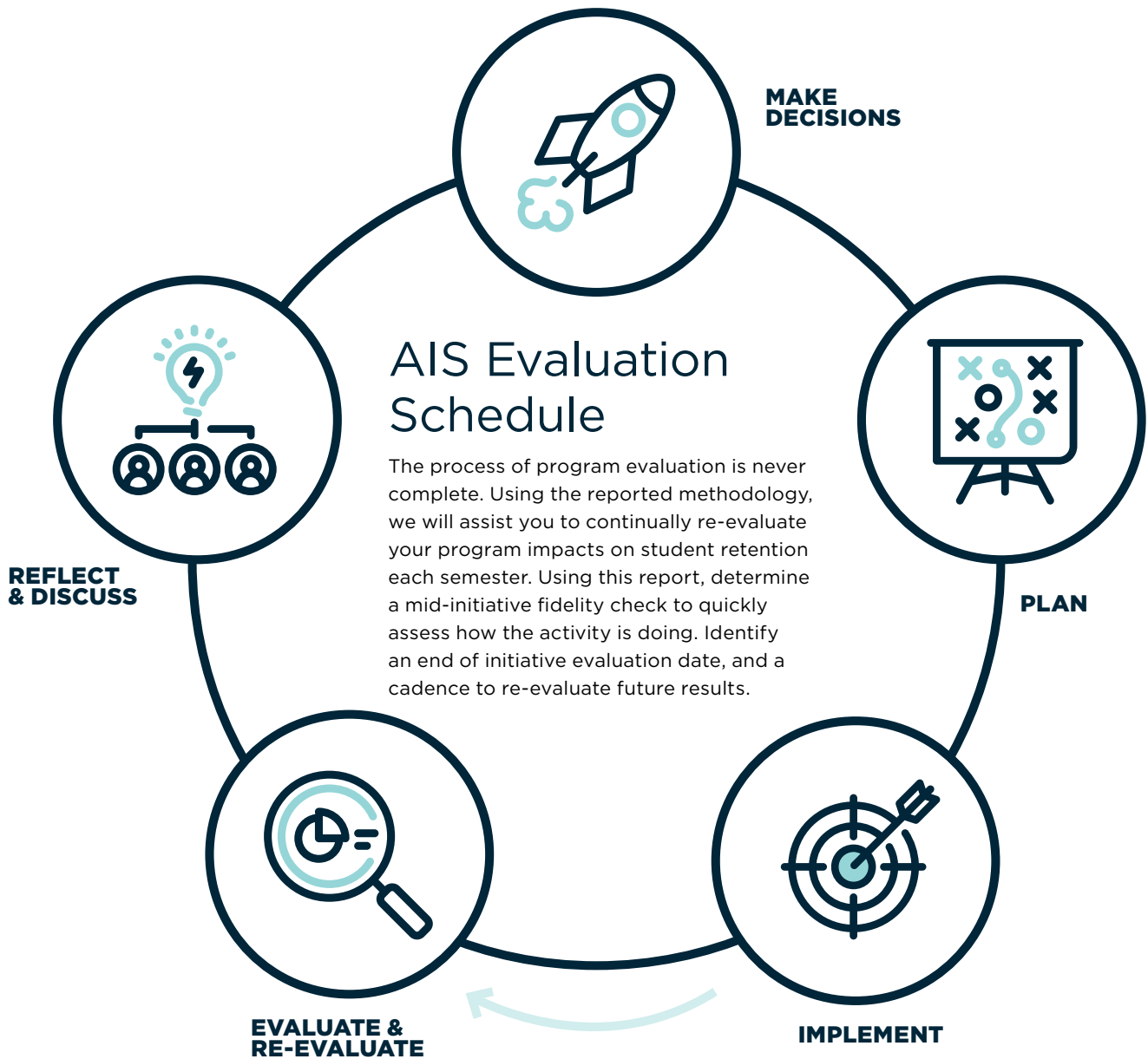
Appendix F

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.