Gift-Aid Coverage and Fall-to-Fall Student Success:
A Comparison by Tuition Residency among First-Time and Transfer Full-Time Students

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Executive Summary

This study examined gift-aid coverage and fall-to-fall student success among first-time, full-time students and transfer full-time students at the University of Wyoming across Fall 2015 – Fall 2024 entering cohorts. Gift-aid coverage measures the percentage of first-semester tuition, fees, housing, and meal charges covered by gift aid. Official cohort comparisons included 22,877 students; financial descriptions and statistical analyses included 22,515 students after exclusions.

Key Findings

- Resident students had higher fall-to-fall student success rates. Among first-time, full-time students, retention was 79.2% for residents and 75.1% for non-residents. Among transfer full-time students, retention or graduation was 82.3% for residents and 74.2% for non-residents.
- Median gift-aid amounts among recipients were similar for residents and non-residents, but median coverage across all students was substantially higher for residents: 59.1% versus 24.4% among first-time students and 84.0% versus 9.4% among transfer students.
- Non-resident transfer students are a group UW should review more closely when planning financial aid. Their median first-semester charges were $9,316, compared with $2,922 for resident transfers. Only 58.3% received gift aid, compared with 84.7% of resident transfers.
- Higher gift-aid coverage was positively and statistically significantly associated with student success after accounting for other student characteristics. In the multivariable logistic regression models, each 10-percentage-point increase in coverage was associated with 5.8% higher odds of retention among first-time, full-time students and 4.6% higher odds of retention or graduation among transfer full-time students.
- Tuition residency was statistically significantly associated with student success only among transfers after accounting for the other predictors. Non-resident transfers had 15.5% lower odds of success than resident transfers. Tuition residency was not statistically significantly associated with retention in the first-time student model.

UW can use gift-aid coverage, the percentage of students receiving aid, aid amounts, and institutional charges to compare financial support across student groups. UW should look more closely at non-resident students, especially transfers, to understand whether their lower coverage reflects higher charges, differences in aid eligibility, or both. The 75% and 80% predicted-probability reference points can support planning discussions but should not determine scholarship targets, because factors not included in the models, such as financial need and work responsibilities, may also influence student success. Any changes to aid policies should be evaluated to see how they affect student costs and fall-to-fall student success.

Introduction

Fall-to-fall student success is an important measure of both student achievement and institutional effectiveness. In this study, fall-to-fall student success means being retained in the following fall or having graduated during the first academic year. For first-time students, it represents retention; for transfer students, it includes either retention or graduation. Student success is also related to college affordability. Students may receive gift aid but still be responsible for substantial charges billed by their institution. These charges typically include tuition, fees, housing and meals. When gift aid covers only a small share of these charges, students may experience financial stress and may need to work more hours, borrow more money, or use other resources to remain enrolled and return the following fall.

Research generally finds that grant aid has a positive, although often modest, relationship with college persistence and completion. A recent systematic review and meta-analysis found small but meaningful positive average effects of grant aid on college enrollment, credit accumulation, persistence, and completion (LaSota et al., 2025). Using a regression-discontinuity design, Castleman and Long (2016) found that eligibility for a need-based grant increased college attendance, particularly at public four-year institutions, as well as credit accumulation and bachelor's degree completion within six years among students near the eligibility cutoff. In a randomized experiment, students from low-income families who were offered additional grant aid were less likely to work and worked fewer hours per week (Broton et al., 2016). By easing the demands of student employment, grant aid may allow students to devote more time and energy to their studies, potentially supporting academic achievement and educational attainment (Broton et al., 2016).

However, aid receipt or award amount alone may not indicate whether the aid is sufficient. The same gift-aid amount may cover most charges for one student but leave a large balance for another student with higher charges. Dollar amounts are also difficult to compare across cohort years because educational costs and aid amounts change over time with inflation and institutional pricing. This study therefore measures gift-aid coverage as the percentage of first-semester tuition, fees, housing, and meal charges covered by gift aid. This measure indicates how much of these core charges was covered by aid that does not require repayment. It also provides a more comparable measure of financial support relative to these charges across students and cohort years than the nominal gift-aid amount alone.

The relationship between affordability and student success may differ across student populations. First-time, full-time students are beginning their college experience, whereas transfer full-time students enter with prior college experience and varying progress toward a degree. Transfer students may also have different financial needs, remaining educational costs, and timelines for degree completion. These differences support examining first-time, full-time students and transfer full-time students separately.

Institutional pricing also shapes the relationship between financial aid and affordability. As state appropriations have declined, public universities have become more dependent on tuition revenue and have greater incentives to enroll nonresident students who can generate additional revenue (Jaquette & Curs, 2015). At UW, tuition residency is an administrative classification based on the tuition rate charged rather than simply a student's geographic residence. Because students in the non-resident category generally face higher charges, an identical gift-aid award may cover a smaller share of these first-semester charges. Examining

gift-aid coverage by tuition residency may therefore provide a clearer understanding of how financial support and fall-to-fall student success are related within different pricing contexts.

Although previous research has examined financial aid and student success extensively, further research can clarify how aid relative to students' charges is associated with persistence. Nguyen et al. (2019) identified the literature's emphasis on dollar amount of aid rather than relative changes in net price as a limitation. Earlier studies examined net prices in relation to family income (Hill & Winston, 2006) and fall-to-fall persistence in relation to unmet financial need and the percentage of the total aid package consisting of gift aid (Bresciani & Carson, 2002). These approaches consider financial support and affordability but use different measures from the percentage of first-semester charges covered by gift aid. Building on this research, the present study examines how gift-aid coverage relates to fall-to-fall student success among first-time and transfer full-time students across tuition residency categories.

This study addresses these questions by examining gift aid relative to students' first-semester tuition, fees, housing, and meal charges across 10 entering cohorts at UW. It analyzes first-time, full-time students and transfer full-time students separately and examines differences by resident and non-resident tuition residency. In addition to logistic regression odds ratios, the study presents model-estimated probabilities to help explain the relationship between gift-aid coverage and fall-to-fall student success. The study addresses the following research questions:

Research Questions

- RQ1. How do gift-aid coverage and fall-to-fall student success vary between first-time, full-time students and transfer full-time students and between resident and non-resident tuition residency categories?
- RQ2. Is gift-aid coverage associated with fall-to-fall student success for first-time, full-time students and transfer full-time students after accounting for tuition residency and other student characteristics?

Methods

This study used undergraduate student data from the University of Wyoming's Fall 2015 through Fall 2024 entering cohorts and examined first-time, full-time students and transfer full-time students separately. Descriptive statistics, Pearson correlations, and binary logistic regression models were used to examine gift-aid coverage and its relationship with fall-to-fall student success.

Data and Sample

The initial study population included 22,877 full-time students from UW's official Fall 2015 through Fall 2024 entering cohorts: 15,782 first-time, full-time students and 7,095 transfer full-time students. The following exclusion criteria were applied sequentially:

- Excluded students seeking a second bachelor's degree (n = 169).
- Excluded duplicate cohort records and preserved each student's earliest entering cohort (n = 20).

- Excluded students with a blank final first-semester registration indicator, meaning students were administratively dropped from the semester and registration does not appear on the student transcript (n = 36).
- Excluded students enrolled in certificate programs or with a blank program code (n = 2).
- Excluded students with missing, zero, negative, or refunded first-semester charges (n = 6).
- Excluded first-time, full-time students with missing or invalid high school GPA (n = 89).
- Excluded transfer full-time students with missing or invalid transfer GPA and transferred-credit information (n = 40).

After the exclusions (n = 362), the final analytic sample included 22,515 students: 15,666 first-time, full-time students and 6,849 transfer full-time students. The initial full-time cohort population (N = 22,877) was used only to report official headcounts and fall-to-fall student success trends. Descriptive analyses of financial measures, correlations, and logistic regression analyses used the final analytic sample (N = 22,515).

Variables and Coding

Table 1 defines the outcome, gift-aid coverage, and other student characteristics included in the analyses. Institutional charges and financial-aid payments reflected each student's financial record at the end of the first semester. Gift-aid coverage was calculated using first-semester tuition, fees, housing, and meal charges recorded by UW. Expenses paid separately and not recorded in these categories, such as off-campus rent, groceries, transportation, and independently purchased books, were not included.

Table 1

Definitions and Coding of Study Variables

Variable	Definition and coding
Fall-to-Fall Student Success	First-Time, Full-Time Students: 1 = retained the following fall (R); 0 = not retained the following fall (N). Transfer Full-Time Students: 1 = retained the following fall (R) or graduated during the first academic year (G); 0 = neither retained the following fall nor graduated during the first academic year (N).
Gift-Aid Coverage	Calculated as (gift aid paid ÷ first-semester tuition, fees, housing, and meal charges) × 100. Blank gift-aid values were coded as $0. Values above 100% were set to 100% in the main analyses. Coverage was modeled as a continuous percentage.
Tuition Residency	Non-resident = 1; resident = 0/reference.
Age at Entry	Age in years, modeled continuously.
First-Generation Status	First-generation = 1; not first-generation = 0/reference.
Pell Grant Recipient Status	Pell recipient = 1; not a Pell recipient = 0/reference.
High School GPA	Continuous 0-to-4 measure used for first-time, full-time students. Values outside this range were treated as missing.
Transfer GPA	Continuous 0-to-4 measure used for transfer full-time students. Values outside this range were treated as missing.
Transferred Credits	Number of credits accepted for transfer, modeled continuously.
Transfer Eligible Associates	Transfer eligible associate's degree = 1; Other types of associate's degree or no associate degree = 0/reference.
STEM Program Status	STEM program = 1; non-STEM program = 0/reference.

Note. Fee charges include StartRight+ book charges beginning in Fall 2024. Books purchased separately were not included.

Statistical Analysis

To answer RQ1, descriptive statistics were used to examine fall-to-fall student success and gift-aid coverage across the two student populations and tuition residency categories. The initial full-time cohort population ($N = 22,877$) was used to report official headcounts and observed fall-to-fall success rates. For first-time, full-time students, student success was defined as being retained in the following fall. For transfer full-time students, student success was defined as being retained in the following fall or having graduated during the first academic year. The final analytic sample ($N = 22,515$) was used to summarize first-semester tuition, fee, housing, and meal charges; the percentage of students who received gift aid; median gift aid paid among recipients; and median gift-aid coverage. These statistics were reported separately by student population and by resident and non-resident tuition residency categories.

To answer RQ2, Pearson correlations and binary logistic regression models were used to examine the relationship between gift-aid coverage and fall-to-fall student success. The correlations described the relationship between these two variables without accounting for other student characteristics. Observed success rates were also compared across six gift-aid coverage categories: 0%, >0%-25%, >25%-50%, >50%-75%, >75%-<100%, and 100% or more. Confidence intervals for Pearson correlations were calculated using Fisher's z transformation. Approximate 95% confidence intervals for observed success rates were calculated using the normal approximation.

Separate binary logistic regression analyses were conducted for first-time, full-time students ($n = 15,666$) and transfer full-time students ($n = 6,849$). Gift-aid coverage was capped at 100% and included as a continuous predictor. Both analyses also included tuition residency, age, first-generation status, Pell-recipient status, and STEM program status. The first-time student analysis included high school GPA, while the transfer student analysis included transfer GPA, transferred credits, and transfer eligible associate's degree status. Resident students served as the reference group, meaning that the results for non-resident students were interpreted in comparison with resident students. Results were reported as adjusted odds ratios, 95% confidence intervals, and two-sided p values. Statistical significance was evaluated at $p < .05$, while interpretation also considered the size and precision of the estimated relationships. The odds ratio for gift-aid coverage was reported for a 10-percentage-point increase to make the result easier to interpret. The same logistic regression models were used to identify the gift-aid coverage percentages corresponding to 75% and 80% predicted probabilities of fall-to-fall student success. Predictions accounted for the other characteristics in each model and were averaged separately for resident and non-resident students within each population.

Sensitivity analysis can assess whether findings change when variable definitions or modeling assumptions are changed (Delaney & Seeger, 2013). In this study, the logistic regression models were repeated using the original gift-aid coverage percentages, including values above 100%, to determine whether capping coverage at 100% affected the findings.

Results

RQ1. How do gift-aid coverage and fall-to-fall student success vary between first-time, full-time students and transfer full-time students and between resident and non-resident tuition residency categories?

To answer RQ1, fall-to-fall student success rates, first-semester charges, gift aid, and gift-aid coverage were analyzed by student population and tuition residency. Official headcounts and success rates were calculated using the initial full-time cohort population (N = 22,877), while financial characteristics were summarized using the final analytic sample (N = 22,515). Table 2 presents the official headcounts and success rates, Figure 1 shows annual cohort trends, and Table 3 summarizes the financial characteristics.

Fall-to-Fall Student Success

The initial full-time cohort population included 15,782 first-time, full-time students. Overall, 77.4% were retained in the following fall. The retention rate was 79.2% among resident students (n = 8,769) and 75.1% among non-resident students (n = 7,013), representing a difference of 4.1 percentage points.

The initial population also included 7,095 transfer full-time students. Overall, 76.6% were retained in the following fall and 3.3% graduated during the first academic year, resulting in a combined fall-to-fall student success rate of 80.0%. Among resident transfer students (n = 5,054), 79.8% were retained and 2.5% graduated, for a combined rate of 82.3%. Among non-resident transfer students (n = 2,041), 68.9% were retained and 5.3% graduated, for a combined rate of 74.2%. The combined success rate was therefore 8.1 percentage points higher among resident transfer students than among non-resident transfer students.

Table 2

Official Full-Time Cohort Headcounts and Fall-to-Fall Student Success by Tuition Residency

Student population	Tuition residency	Headcount	Retained	Graduated	Fall-to-Fall Success Rate
First-Time, Full-Time Students	All categories	15,782	77.4%	0.0%	77.4%
	Resident	8,769	79.2%	0.0%	79.2%
	Non-Resident	7,013	75.1%	0.0%	75.1%
Transfer Full-Time Students	All categories	7,095	76.6%	3.3%	80.0%
	Resident	5,054	79.8%	2.5%	82.3%
	Non-Resident	2,041	68.9%	5.3%	74.2%

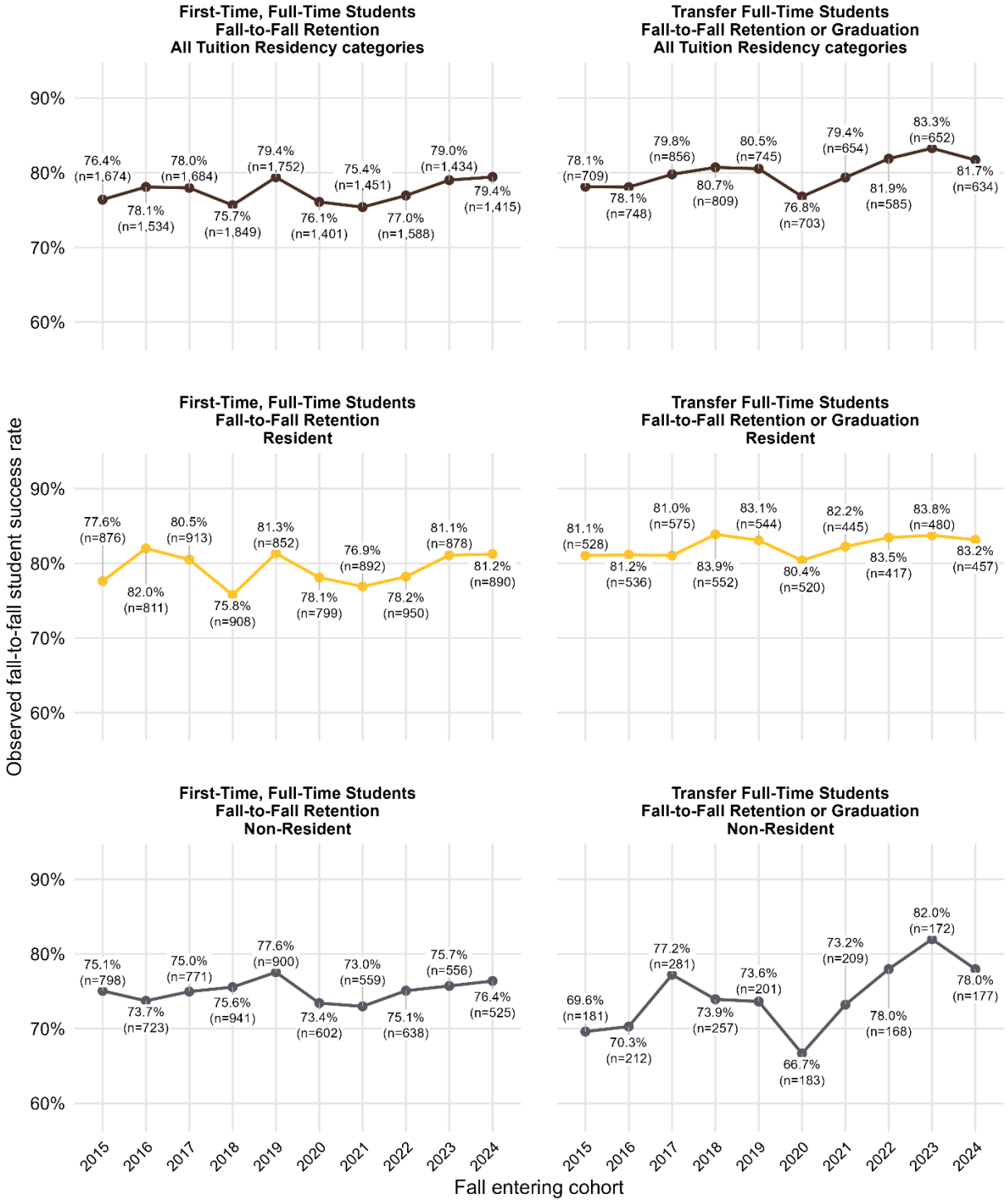
Note. Results are based on the initial full-time fall cohorts before analytic exclusions (N = 22,877). Retained, graduated, and fall-to-fall success values are percentages of each row's headcount. No first-time, full-time students graduated during the first academic year (0.0%), so their success rate equals their retention rate. Component percentages may not sum exactly to the success rate because of rounding.

From Fall 2015 through Fall 2024 cohorts, the overall fall-to-fall retention rate for first-time, full-time students ranged from 75.4% to 79.4%, and resident students generally had higher retention rates than non-resident students (Figure 1). Among transfer full-time students, the fall-to-fall success rate (retained or graduated) ranged from 76.8% to 83.3%. Resident transfer

students had comparatively stable success rates, whereas the rates for non-resident transfer students varied more across cohorts (Figure 1).

Figure 1

Official Fall-to-Fall Student Success by Cohort and Tuition Residency



Gift-Aid Coverage

The final analytic sample included 15,666 first-time, full-time students (Table 3). Their median first-semester tuition, fee, housing, and meal charges were $9,561, and 90.5% received gift aid. Among recipients, the median amount of gift aid paid was $4,000. Median gift-aid coverage was 39.7%. The final analytic sample also included 6,849 transfer full-time students. Their median first-semester charges were $3,345, and 77.2% received gift aid. Among recipients, the median amount of gift aid paid was $3,233. Median gift-aid coverage was 59.9%.

Financial characteristics differed by tuition residency. Resident first-time students (n = 8,704) had median first-semester charges of $7,618, compared with $13,648 among non-resident first-time students (n = 6,962). Gift aid was received by 96.3% of resident students and 83.3% of non-resident students. Among recipients, median gift aid was similar ($3,971 for residents and $4,027 for non-residents) but median gift-aid coverage was 59.1% for residents and 24.4% for non-residents. Resident transfer students (n = 4,919) had median first-semester charges of $2,922, compared with $9,316 among non-resident transfer students (n = 1,930). Gift aid was received by 84.7% of resident transfer students and 58.3% of non-resident transfer students. Although median gift aid among recipients was similar ($3,144 for residents and $3,460 for non-residents), median gift-aid coverage was 84.0% for resident transfer students but only 9.4% for non-resident transfer students.

Table 3

First-Semester Charges, Gift Aid, and Gift-Aid Coverage by Tuition Rate

Student population	Tuition residency	*n*	Gift-aid recipients %	Median charges	Median gift aid	Median coverage %
First-Time, Full-Time Students	All categories	15,666	90.5%	$9,561	$4,000	39.7%
	Resident	8,704	96.3%	$7,618	$3,971	59.1%
	Non-Resident	6,962	83.3%	$13,648	$4,027	24.4%
Transfer Full-Time Students	All categories	6,849	77.2%	$3,345	$3,233	59.9%
	Resident	4,919	84.7%	$2,922	$3,144	84.0%
	Non-Resident	1,930	58.3%	$9,316	$3,460	9.4%

Note. The final analytic sample after exclusions (N = 22,515). Charges include first-semester tuition, fees, housing, and meals. Gift-aid recipient percentages use each row's n as the denominator. Median gift aid is based only on students who received gift aid; median coverage includes all students in each row and is capped at 100%.

Summary of RQ1

Overall, the results for RQ1 show differences in gift-aid coverage and fall-to-fall student success by student population and tuition residency. Transfer full-time students had higher median gift-aid coverage than first-time, full-time students despite having a lower percentage of students who received gift aid. Within both populations, resident students had lower median charges, higher rates of gift-aid receipt, and substantially higher median gift-aid coverage than non-resident students. Resident students also had higher observed fall-to-fall student success rates in both populations.

RQ2. Is gift-aid coverage associated with fall-to-fall student success for first-time, full-time students and transfer full-time students after accounting for tuition residency and other student characteristics?

To answer RQ2, Pearson correlations, observed success rates across gift-aid coverage categories, and separate binary logistic regression models were examined for first-time, full-time students and transfer full-time students. The correlations and category comparisons described the relationship between gift-aid coverage and fall-to-fall student success without accounting for other student characteristics. The logistic regression models then estimated this relationship after accounting for tuition residency and the population-specific student characteristics described in the Methods section.

Correlations and Observed Gift-Aid Coverage Patterns

Gift-aid coverage had a small positive correlation with fall-to-fall student success in both populations (Table 4). Among first-time, full-time students, the correlation was $r = .128$, 95% CI [.112, .143], $p < .001$. Among transfer full-time students, the correlation was $r = .118$, 95% CI [.095, .141], $p < .001$. Thus, higher gift-aid coverage was associated with higher observed student success in both populations, although the strength of each two-variable relationship was small.

Table 4

Pearson Correlations Between Gift-Aid Coverage and Fall-to-Fall Student Success

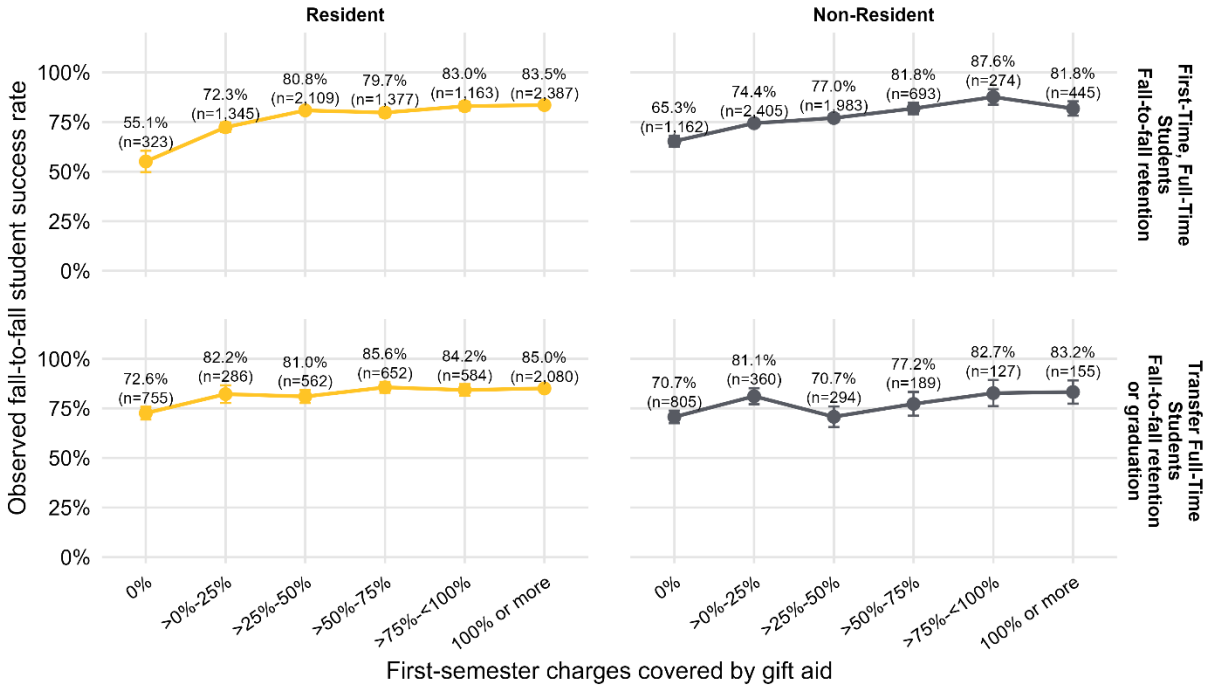
Student population	*n*	*r*	95% CI	*p*
First-Time, Full-Time Students	15,666	.128	[.112, .143]	< .001
Transfer Full-Time Students	6,849	.118	[.095, .141]	< .001

Note. Fall-to-fall student success was coded 1 = success and 0 = no success. Pearson's r describes its correlation with gift-aid coverage capped at 100%. Success represents retention for first-time, full-time students and retention or graduation for transfer full-time students.

Observed success rates generally increased across gift-aid coverage categories, but the pattern was not perfectly ordered (Figure 2). For resident first-time, full-time students, the observed retention rate increased from 55.1% in the 0% coverage category to 83.5% in the 100% or more category. Among non-resident first-time students, the rate increased from 65.3% to 81.8%, although the highest observed rate was 87.6% in the >75%-<100% category. Among resident transfer full-time students, observed success rate increased from 72.6% at 0% coverage to 85.0% at 100% or more. Among non-resident transfer full-time students, success rates increased from 70.7% at 0% coverage to 81.1% in the >0%-25% category, decreased to 70.7% in the >25%-50% category, and then increased across the higher coverage categories. Note that these category differences describe the students observed in each group and do not indicate that a particular level of gift aid caused the observed success rate.

Figure 2

Observed Fall-to-Fall Student Success by Gift-Aid Coverage Category and Tuition Rate



Note. The figure uses the final analytic sample ($N = 22{,}515$). Labels show observed success rates and group sizes (n); error bars show approximate 95% confidence intervals. "100% or more" includes students whose gift aid covered at least all first-semester charges.

Multivariable Logistic Regression

Gift-aid coverage was positively and statistically significantly associated with fall-to-fall student success in both populations after accounting for tuition residency and the other student characteristics (Table 5). Each odds ratio (OR) is adjusted for the other predictors included in the applicable model. For every 10-percentage-point increase in gift-aid coverage, the odds of retention the following fall were 5.8% higher among first-time, full-time students (OR = 1.058, 95% CI [1.042, 1.074], $p < .001$), and the odds of being retained the following fall or having graduated during the first academic year were 4.6% higher among transfer full-time students (OR = 1.046, 95% CI [1.025, 1.067], $p < .001$). Percentage differences in odds were calculated from the odds ratios (see Table 5 note).

Tuition residency was not statistically significantly associated with retention among first-time, full-time students after accounting for the other predictors (OR = 1.058, 95% CI [0.969, 1.155], $p = .211$). Among transfer full-time students, non-resident students had 15.5% lower odds of being retained in the following fall or having graduated during the first academic year than resident students (OR = 0.845, 95% CI [0.727, 0.981], $p = .027$). Resident students served as the reference group in both models.

Table 5

Multivariable Logistic Regression Results for Fall-to-Fall Student Success

Student Population	Predictor	OR	95% CI	*p*
First-Time, Full-Time	Gift-Aid Coverage (10-percentage-point increase)	1.058	[1.042, 1.074]	< .001
	Tuition Residency: Non-Resident vs. Resident	1.058	[0.969, 1.155]	.211
	Age at Entry	1.008	[0.970, 1.047]	.700
	First-Generation vs. Not First-Generation	0.706	[0.644, 0.775]	< .001
	Pell Recipient vs. Nonrecipient	0.656	[0.589, 0.731]	< .001
	High School GPA	3.960	[3.588, 4.370]	< .001
	STEM vs. Non-STEM	0.922	[0.849, 1.001]	.054
Transfer Full-Time	Gift-Aid Coverage (10-percentage-point increase)	1.046	[1.025, 1.067]	< .001
	Tuition Residency: Non-Resident vs. Resident	0.845	[0.727, 0.981]	.027
	Age at Entry	0.992	[0.979, 1.005]	.214
	First-Generation vs. Not First-Generation	0.823	[0.721, 0.938]	.004
	Pell Recipient vs. Nonrecipient	0.718	[0.611, 0.843]	< .001
	Transfer GPA	1.889	[1.702, 2.098]	< .001
	Transferred Credits	1.005	[1.002, 1.008]	< .001
	Transfer Eligible Associates vs. All Other Transfers	1.315	[1.130, 1.532]	< .001
	STEM vs. Non-STEM	1.040	[0.910, 1.189]	.563

Note. First-Time, Full-Time Students: n = 15,666; Transfer Full-Time Students: n = 6,849. OR = odds ratio; CI = confidence interval. ORs are adjusted for the other predictors in each model. Percentage differences in odds were calculated as (OR − 1) × 100; positive values indicate higher odds, and negative values indicate lower odds.

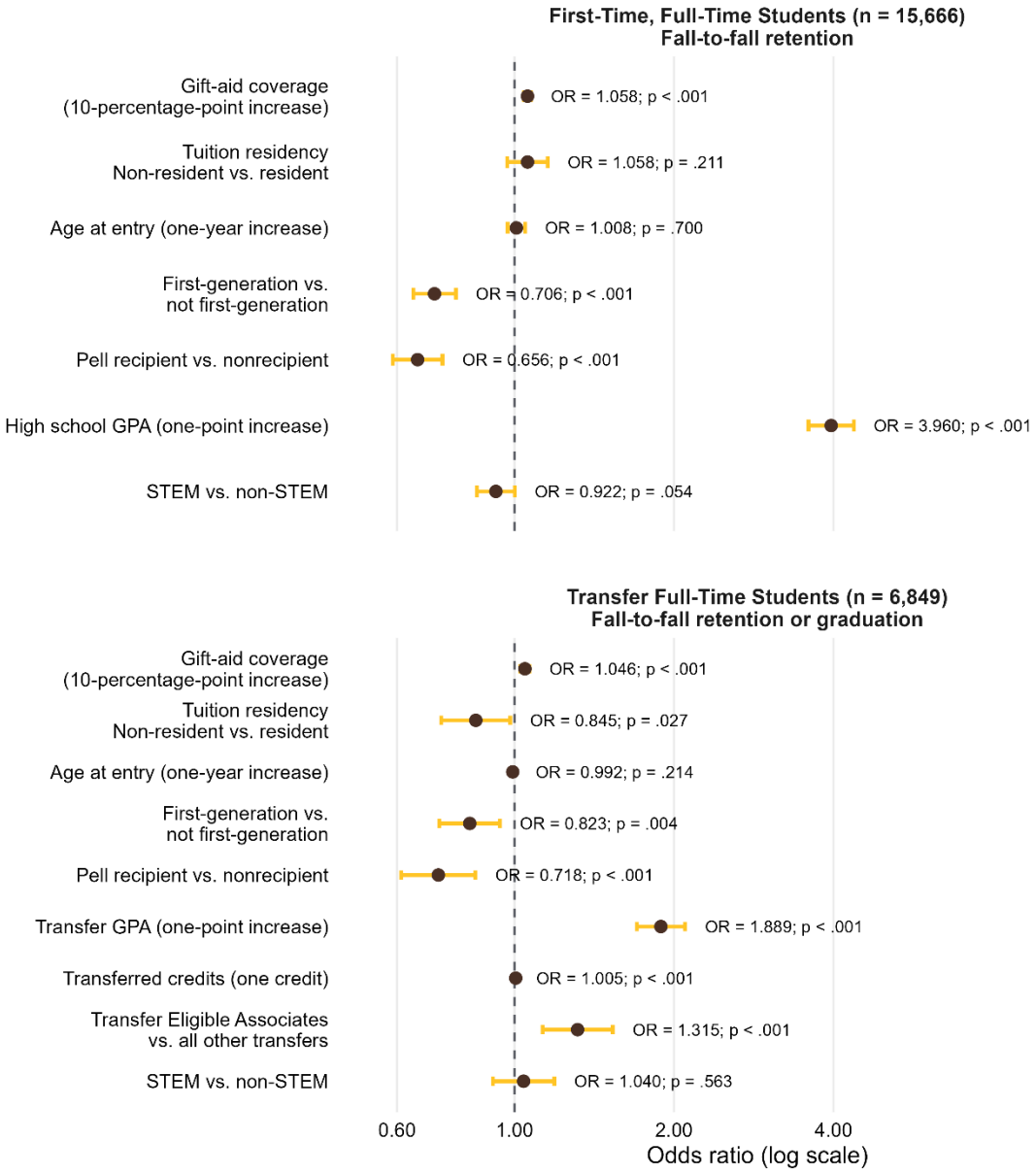
Figure 3 visually summarizes the adjusted odds ratios in Table 5. The reference line at 1.00 represents no association after accounting for the other predictors. Odds ratios above 1.00 indicate higher odds of fall-to-fall student success, whereas values below 1.00 indicate lower odds. Bars represent 95% confidence intervals. Statistical significance was assessed using $p < .05$, as reported in Table 5.

Among first-time, full-time students, gift-aid coverage (OR = 1.058) and high school GPA (OR = 3.960) had odds ratios above 1.00 and were statistically significantly associated with higher odds of retention. First-generation students (OR = 0.706) and Pell recipients (OR = 0.656) had odds ratios below 1.00 and statistically significantly lower odds of retention than non-first-generation students and Pell nonrecipients, respectively. Age at entry, STEM program status, and tuition residency were not statistically significant.

Among transfer full-time students, gift-aid coverage (OR = 1.046), transfer GPA (OR = 1.889), transferred credits (OR = 1.005), and transfer eligible associate's degree status (OR = 1.315) had odds ratios above 1.00 and were statistically significantly associated with higher odds of being retained the following fall or having graduated during the first academic year. First-generation students (OR = 0.823), Pell recipients (OR = 0.718), and non-resident students (OR = 0.845) had odds ratios below 1.00 and statistically significantly lower odds of success than non-first-generation students, Pell nonrecipients, and resident students, respectively. Age at entry and STEM program status were not statistically significant.

Figure 3

Multivariable Logistic Regression Odds Ratios

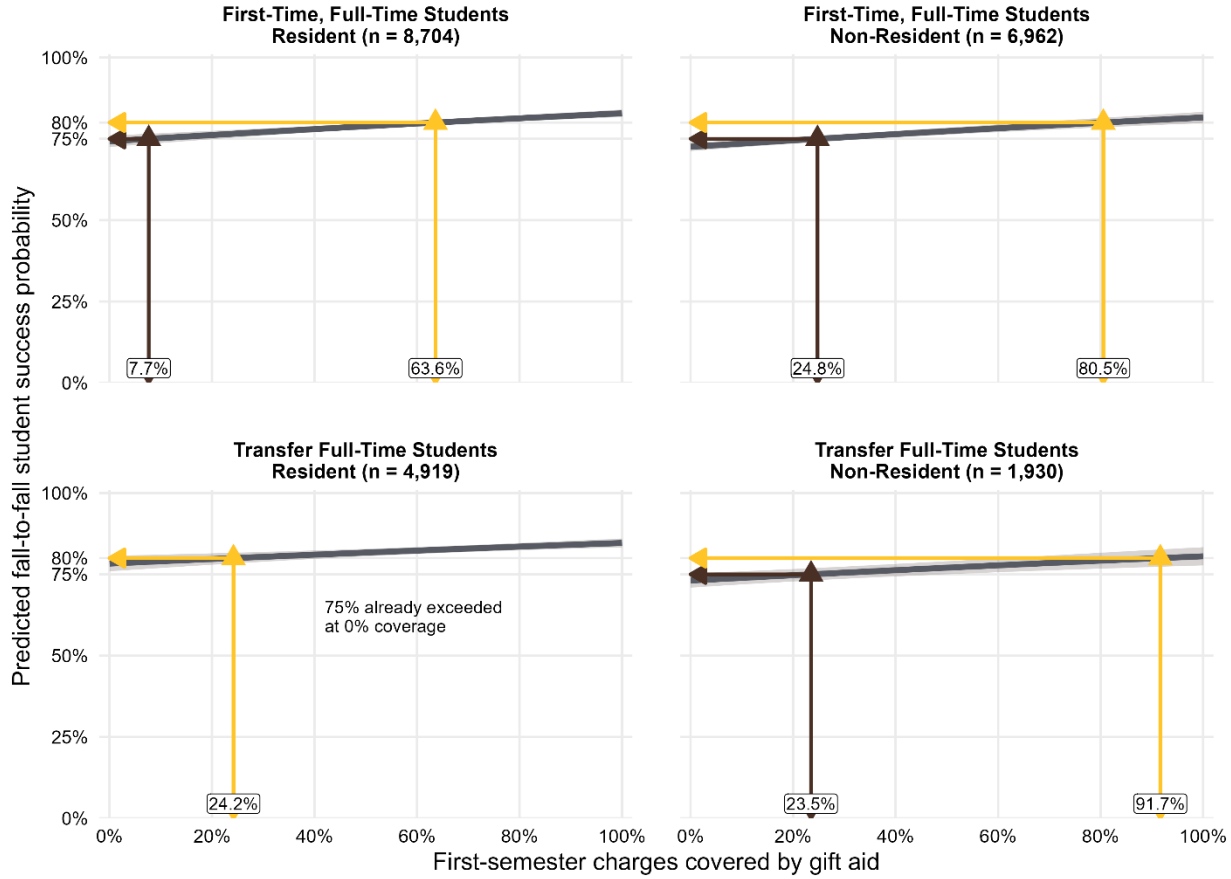


Note. Points represent adjusted odds ratios (ORs), and horizontal bars represent 95% confidence intervals (CIs). The dashed line at OR = 1.00 indicates no association.

Figure 4 presents predicted probabilities of fall-to-fall student success from the same multivariable logistic regression models reported in Table 5, with predictions shown separately by tuition residency. Among first-time, full-time students, a 75% predicted probability of retention corresponded to 7.7% gift-aid coverage for resident students and 24.8% for non-resident students. An 80% probability corresponded to 63.6% and 80.5% coverage, respectively. Among transfer full-time students, the predicted probability of retention or graduation for resident students was already above 75% at 0% coverage and reached 80% at 24.2% coverage. For non-resident transfer students, the predicted probability reached 75% at 23.5% coverage and 80% at 91.7% coverage.

Figure 4

Gift-Aid Coverage at Selected Model-Estimated Success Probabilities



Note. Reference lines indicate the gift-aid coverage percentages corresponding to 75% and 80% predicted probabilities of fall-to-fall student success. Predictions account for other student characteristics and represent average predicted probabilities for each group. Shaded bands represent 95% confidence intervals. Coverage percentages are model-based reference points, not recommended aid levels.

A sensitivity analysis compared models using gift-aid coverage capped at 100% with models retaining coverage values above 100% (Table 6). When uncapped coverage was used, gift-aid coverage remained statistically significantly associated with retention among first-time,

full-time students (OR = 1.022, 95% CI [1.013, 1.032], $p < .001$) but was not statistically significantly associated with retention or graduation among transfer full-time students (OR = 1.002, 95% CI [0.994, 1.010], $p = .609$). Therefore, the association for transfer full-time students should be interpreted cautiously because its statistical significance depended on capping gift-aid coverage at 100%.

Table 6

Sensitivity Analysis Comparing Capped and Uncapped Gift-Aid Coverage

Student population	Gift-aid Coverage Measure	OR	95% CI	*p*
First-Time, Full-Time Students	Capped at 100%	1.058	[1.042, 1.074]	< .001
	Uncapped	1.022	[1.013, 1.032]	< .001
Transfer Full-Time Students	Capped at 100%	1.046	[1.025, 1.067]	< .001
	Uncapped	1.002	[0.994, 1.010]	.609

Note. OR = odds ratio; CI = confidence interval. ORs represent a 10-percentage-point increase in gift-aid coverage and account for the other predictors in each model. Capped coverage sets values above 100% to 100%; uncapped coverage retains those values.

Summary of RQ2

Higher gift-aid coverage capped at 100% was statistically significantly associated with greater fall-to-fall student success in both populations after accounting for tuition residency and other student characteristics. Non-resident transfer students had statistically significantly lower odds of success than resident transfer students, whereas tuition residency was not statistically significant among first-time students. The transfer coverage finding depended on whether coverage was capped at 100%, while the first-time student association remained statistically significant with either measure.

Conclusion

This study found differences in gift-aid coverage and fall-to-fall student success between first-time, full-time students and transfer full-time students and across tuition residency groups. In the initial cohorts, 77.4% of first-time, full-time students were retained the following fall, and 80.0% of transfer full-time students were either retained the following fall or had graduated during the first academic year. Resident students had higher observed success rates in both populations. In the final analytic sample, transfer students had higher median gift-aid coverage than first-time students despite being less likely to receive gift aid. Within both populations, residents had lower median charges, higher percentages receiving gift aid, and substantially higher median coverage than non-residents. Median coverage was 59.1% versus 24.4% among first-time students and 84.0% versus 9.4% among transfer students. These descriptive differences show why gift-aid amounts should be considered alongside students' charges.

Gift-aid coverage was positively and statistically significantly associated with fall-to-fall student success in both populations after accounting for tuition residency and other student characteristics. Each 10-percentage-point increase in coverage was associated with 5.8% higher odds of retention among first-time, full-time students and 4.6% higher odds of retention or

graduation among transfer full-time students. Non-resident transfer students had statistically significantly lower odds of success than resident transfer students, whereas tuition residency was not statistically significant among first-time students. These findings are consistent with previous research showing that grant aid can support college persistence and completion (Castleman & Long, 2016; LaSota et al., 2025). This study adds to existing research by examining how the percentage of first-semester charges covered by gift aid relates to student success for first-time, full-time students and transfer full-time students separately.

Practical Implications

For UW financial planning, gift-aid coverage provides information beyond whether students received gift aid and how much they received by showing the percentage of their first-semester charges covered by that aid. Reporting coverage alongside charges and success rates by student population and tuition residency can help identify groups for closer review, particularly students whose aid covers a small share of first-semester charges. UW could examine whether those gaps reflect tuition and fee levels, housing and meal charges, or differences in aid eligibility, and then evaluate appropriate financial-support options.

Housing and meal arrangements are important when interpreting gift-aid coverage. For the same amount of gift aid and the same tuition and fees, students without UW housing or meal charges would have higher coverage, even if they pay for housing and food elsewhere. Financial-aid planning should consider these expenses rather than assume that students with higher coverage have fewer financial needs. Reviewing tuition, fees, housing, and meals separately would help UW understand what contributes to coverage differences across groups.

The 75% and 80% probability reference lines in Figure 4 can support financial-planning discussions, but the corresponding coverage percentages should not determine scholarship targets. The models describe relationships among students with different coverage levels; they do not show that increasing aid to the indicated level would produce a 75% or 80% success rate. Any changes to aid policies should be evaluated for their effects on student costs and fall-to-fall student success.

Limitations and Future Research

This observational study cannot establish causal relationships, and factors not included in the models, such as financial need and work hours, may partly explain the findings. Results from one university's full-time students with complete model information may not generalize to other populations. Coverage measures UW-recorded charges rather than total student expenses. The transfer association was statistically significant with capped coverage but not with uncapped coverage.

Future research should examine housing and meal expenses, investigate why the transfer finding changes with the coverage measure, and assess consistency across cohorts and institutions. Experimental or quasi-experimental studies could help determine whether additional gift aid improves student success.

Significance of the Study

This study contributes to the literature by examining gift aid relative to students' first-semester charges and relating this coverage to fall-to-fall student success. The findings show that similar gift-aid amounts can accompany substantial differences in coverage, demonstrating the value of considering both financial support and student charges. Separate analyses of first-time, full-time students and transfer full-time students provide evidence specific to each population, while comparisons by tuition residency show how coverage varies across tuition rates. For institutional researchers, this approach offers a way to use administrative data to examine financial support and student success together. Other institutions can apply the approach to identify differences among their student groups and inform questions for financial aid planning and further research.

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