Access College Early (ACE) Scholarship Program Evaluation

TECHNICAL DOCUMENTATION

2025



A Nebraska Statewide Workforce & Education Reporting System (NSWERS) evaluation prepared for the Nebraska Coordinating Commission for Postsecondary Education (CCPE)

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Acknowledgement

NSWERS wishes to acknowledge Dr. Jim Bovaird, Professor of Educational Psychology at the University of Nebraska-Lincoln, for his technical and methodological review of this study. His thoughtful feedback and recommendations improved the clarity and rigor of the analysis, and several of his suggestions were incorporated into the final report.



The Nebraska Statewide Workforce & Educational Reporting System, or NSWERS, is a one-of-a-kind research partnership among Nebraska's education and workforce systems designed to create a data-informed decision culture that supports pathways of learning and earning for the people of Nebraska. The NSWERS data system is the most comprehensive education-to-workforce longitudinal information source ever created in Nebraska.

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Propensity Score Matching

In this report, propensity score matching was used to estimate the treatment effects of ACE participation on the outcomes of interest while controlling pre-existing differences between the participant and non-participant groups which are measured by baseline covariates. The goal of matching is to produce covariate balance, that is, for the distribution of baseline covariates in the two groups to be approximately equal to each other, as they would be in a successful randomized experiment.

The choice of baseline covariates and the thresholds used to determine baseline equivalence follow the most recent What Works Clearinghouse (WWC) guidelines for analysis of Quasi-Experimental Designs (QED) (What Works Clearinghouse, 2022). To satisfy baseline equivalence for QED, there must be differences of less than or equal to 0.05 standard deviations between a set of relevant covariates. These covariates must include at least:

- 1. A broad, approximately continuous, and standardized measure of student academic readiness, knowledge, or skills, AND
- 2. Baseline measures of at least two of the following for learners in the analytic sample:
 - A measure of socioeconomic status, such as parental or caregiver level of education or eligibility for need-based assistance or financial aid
 - Race or ethnicity
 - Dual language or English learner student status
 - Disability status
 - Disciplinary measures such as frequency of suspensions or referrals
 - Grade level, for students between kindergarten and grade 12, or else age

To meet the first requirement, the 9th-10th grade GPA, 9th-10th grade course credits earned, and 9th-10th grade dual enrollment course credits earned were included as baseline covariates. To meet the second requirement, student race/ethnicity, homeless youth status (SES status), special education program participation status (disability status), and English language learner program participation status (ELL status) were included. Additional baseline covariates included student sex, indicators of whether the student is a single parent, whether the student is highly mobile, whether the student is an immigrant, whether the student participated in a highability learner program, school-level indicators (school neighborhood poverty index, community college service area), and the proportion of total enrolled days in which a student was absent between 9th and 10th grades. Information from 11th and 12th grades was not used because ACE participants were in 11th or 12th grade at the time of program participation, and their high school data could have been affected by the intervention. All student race/ethnicity categories except "White" were consolidated into an "Other" category to reduce model complexity.

To balance covariates, the Matchit R package was used to create matched or weighted analysis data sets using propensity scores as a distance (Ho et al., 2007, 2011). The cohort year was used as an exact matching variable so that subsequent estimates of the treatment effects of the intervention can be made specific to each cohort year. To estimate the propensity score, a series of generalized liner models with logit link was fitted. The models included the main effects of all the previously described baseline covariates on the treatment variable. The full logistic model specification was:

$$logit(P(treated = 1)) = \beta_0 + \beta_X X$$

- treated is the treatment indicator for ACE participation (0 or 1).
- *X* is the design matrix of covariate.
- β_0 is the intercept term.
- β_X is the vector of main effect estimates for the covariates.

Initially, nearest neighbor 1:1 matching was used but did not achieve adequate balance in baseline covariates. Next, generalized full matching was used to form a weighted sample (Sävje et al., 2017). This method uses propensity scores (PS) to form subclasses of different sizes which must contain at least one treatment and one control. The subclasses are formed to approximately minimize the largest within-subclass distance in PS. Matching weights are computed based on subclass membership, and these weights then function like propensity score weights and can be used to estimate a weighted treatment effect, ideally free of confounding by the measured covariates. Full matching method uses all treated and all control units, so no units were discarded by the matching. Furthermore, the expected graduation year was used as an exact matching variable so that subsequent estimation of the treatment effects can be made specific to each cohort year.

This approach was successful at reducing standardized mean differences between the ACE participant and non-participant groups to less than 0.05 standard deviations which is the threshold that satisfies WWC standards for baseline equivalence, indicating adequate balance. The baseline covariates were included in the effect estimation model as well to satisfy the baseline equivalence standard. Because baseline equivalence must be established separately for each analytic sample, seven distinct matched datasets were created. The matching process was designed to include the maximum number of ACE participants possible in each sample. Plots displaying covariate balance for each matched dataset are included in the Baseline Covariate Balance Assessment Section.

College Going Data

 Nebraska Public High School Graduates. This dataset is based on Nebraska public high school students who graduated within four years of entering ninth grade. Students from cohorts graduating between 2018 and 2023 were included.

Postsecondary Persistence Data

- Nebraska Public Four-year College Goers. This includes all college students that enrolled at a Nebraska public four-year postsecondary. This cohort is a subset of Nebraska public high school graduates which includes only students who were going to college. Students from the cohort years 2018-2022 were included.
- Nebraska Public Two-year College Goers. This includes all college students that enrolled at a Nebraska public two-year postsecondary. This cohort is a subset of Nebraska public high school graduates which includes only students who were going to college. Students from the cohort years 2018-2022 were included.
- Postsecondary Graduation and Time to Award Attainment Data
 - o Two cohorts used in postsecondary persistence. These cohorts are used to estimate the effect of ACE participation on postsecondary graduation excluding any effects of the program participation on college enrollment. For four-year college goers, students from the cohort years 2018-2019 were included. For two-year college goers, students from the cohort years 2018-2021 were included.

Cumulative College Credits and GPA Data

- Nebraska Public Four-year College Graduates. This includes all college students that graduated from a Nebraska public four-year postsecondary. This cohort is a subset of the Nebraska public high school graduates which includes only students who had a graduation record from a Nebraska public four-year postsecondary institution. Students from the cohort years 2018-2019 were included.
- Nebraska Public Two-year College Graduates. This includes all college students that graduated from a Nebraska public two-year postsecondary. This cohort is a subset of the Nebraska public high school graduates which includes only students who had a graduation from a Nebraska public two-year postsecondary institution. Students from the cohort years 2018-2021 were included.

Treatment Effect Estimation

To estimate the treatment effects and corresponding standard errors, a series of generalized linear models (GLMs) with a logit link were fitted for binary outcomes; linear regression models were used for continuous outcomes; and Weibull accelerated failure time (AFT) regression models were applied for time-to-event outcomes (e.g., time to award attainment). Full matching weights were applied to account for the matched sample design.

In addition, for binary and continuous outcomes, each model included main effects and interaction terms between the ACE participation indicator, cohort year, and other covariates used in the propensity score model. This inclusion of the propensity score model covariates in the regression model confers double-robustness to the estimation procedure. That is, the estimate is consistent if either the matching procedure sufficiently reduces covariate imbalance or if the outcome model is correct. For time-to-event outcomes, however, models included main effects and interaction terms between the ACE participation indicator and cohort year only due to model complexity. The full specification of linear regression models is:

$$Y = \beta_0 + \beta_{year} year + \beta_{treated} treated + \beta_X X + \beta_{year*treated} year * treated + \beta_{year*X} year * X + \beta_{treated*X} treated * X + \beta_{year*treated*X} year * treated * X + \varepsilon$$

- Y is the outcome (0 or 1).
- year is the cohort year indicator.
- treated is the treatment indicator for ACE participation (0 or 1).
- X is the design matrix of covariates.
- β_0 is the intercept term.
- β_{vear} is the cohort year main effect.
- $\beta_{treated}$ is the treatment main effect.
- β_X is the vector of main effect estimates for the covariates.
- $\beta_{year*treated}$ is the year × treatment interaction coefficient.
- β_{vear*X} is the vector of year × covariate interaction coefficients.
- $\beta_{treated*X}$ is the vector of treatment × covariate interaction coefficients.
- $\beta_{year*treated*X}$ is the vector of year × treatment × covariate interaction coefficients.
- $\epsilon \sim N(0, \sigma^2)$ is the random error.

The full specification of logit regression models is:

$$logit(P(Y = 1))$$

$$= \beta_0 + \beta_{year} year + \beta_{treated} treated + \beta_X X + \beta_{year*treated} year * treated$$

$$+ \beta_{year*X} year * X + \beta_{treated*X} treated * X + \beta_{year*treated*X} year * treated * X + \varepsilon$$

The full specification of Weibull regression model is:

$$log(\tau) = \beta_0 + \beta_{vear} year + \beta_{treated} treated + \beta_{vear*treated} year * treated + \varepsilon$$

• τ is the time ($\tau \ge 0$).

For binary and continuous outcomes, model fitting was conducted using the glm() function. Standard errors for the model coefficients were calculated using a cluster-robust variance estimator, with matching stratum membership specified as the clustering variable. Then, g-computation was performed using the avg_comparisons() function from the marginaleffects package to estimate the average treatment effect on the treated (ATT) (Arel-Bundock et al., 2024). Standard errors of the marginal effect were calculated using the delta method. For time-to-event outcomes, model fitting was conducted using flexsurvreg() function from the flexsurv package (Jackson, 2016), and g-computation was performed manually because flexsurv currently do not provide limited functionality to compute cluster-robust standard errors. Thus, standard errors of the marginal effect were also calculated manually using the bootstrapping approach.

Effect sizes were reported as risk differences for binary outcomes, as mean differences for continuous outcomes, and difference in restricted mean survival time for time-to-event outcomes.

• Risk difference (RD): the difference in the estimated probability of success between treatment and control groups.

$$\widehat{RD} = \widehat{P}(y = 1|treated = 1) - \widehat{P}(y = 1|treated = 0)$$

• Mean difference (MD): the difference in the mean of estimated scores between treatment and control groups.

$$\widehat{MD} = \widehat{\mu}_{y|treated=1} - \widehat{\mu}_{y|treated=0}$$

 Difference in restricted mean survival time (DRMST): the difference in the restricted mean survival time (RMST) estimate between treatment and control groups.

$$D\widehat{RMST} = \int_{0}^{max(\tau)} \hat{S}_{treated=1}\left(\tau\right) \ d\tau - \int_{0}^{max(\tau)} \hat{S}_{treated=0}\left(\tau\right) \ d\tau$$

Outcome-specific Sample Sizes of ACE Participants

The cohort sizes of ACE participants do not apply uniformly across all outcome measures. Sample sizes vary by outcome type, as certain outcomes are only relevant to specific groups of students. The table below presents the outcome-specific sample sizes of ACE participants. The sample size decreased progressively as fewer students achieved later outcomes.

- The High School Seniors cohort serves as the base for high school data analysis. Students are grouped based on their expected high school graduation year, defined as four years after the student's initial ninthgrade start year (which corresponds to the year students become senior year). In cases where a student had more than one recorded expected graduation year, the latest year recorded was used.
- The High School Graduates cohort serves as the base for college going analysis.
- The Four-year College Goers and Two-year College Goers cohorts serve as the base for postsecondary persistence, postsecondary graduation, and time to award attainment analysis.
- The Four-year College Graduates and Two-year College Graduates cohorts serve as the base for cumulative college credits and GPA analysis.

| Cohort | Cohort Year | Cohort Size |
|---------------------|-------------|-------------|
| High School Seniors | | |
| | 2018 | 1,054 |
| | 2019 | 1,338 |
| | 2020 | 1,310 |
| | 2021 | 1,262 |
| | 2022 | 1,370 |
| | 2023 | 1,222 |

| Cohort | Cohort Year | Cohort Size |
|-----------------------------|-------------|-------------|
| High School Graduates | | |
| | 2018 | 1,043 |
| | 2019 | 1,314 |
| | 2020 | 1,282 |
| | 2021 | 1,244 |
| | 2022 | 1,347 |
| | 2023 | 1,196 |
| Four-year College Goers | | |
| | 2018 | 643 |
| | 2019 | 769 |
| | 2020 | 745 |
| | 2021 | 736 |
| | 2022 | 763 |
| Two-year College Goers | | |
| | 2018 | 281 |
| | 2019 | 378 |
| | 2020 | 385 |
| | 2021 | 359 |
| | 2022 | 399 |
| Four-year College Graduates | | |
| | 2018 | 425 |
| | 2019 | 480 |
| Two-year College Graduates | | |
| | 2018 | 142 |
| | 2019 | 148 |
| | 2020 | 200 |
| | 2021 | 184 |

Baseline Covariate Data Missingness

The tables below present the total sample size of ACE participants and the missing data counts for each baseline covariate to assess data completeness. Overall, there are low rates of missing data across the covariates. Student demographic data has no missing values or very few (fewer than 10 students). Other fields also exhibit low rates of missing data relative to the sample size. This ensures that, even though this report implemented complete case analysis (CCA), almost the entire sample is preserved and remains representative of the total participants, which leads to less biased estimates.

| Cohort Year | Cohort Size | Sex | Race | Single Parent | Homeless | Hi. Mobile | Immig. | HAL | ELL | SPED |
|----------------|----------------|-----|------|------------------|----------|---------------|--------|-----|-----|------|
| 2018 | 1,054 | 0 | 0 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| 2019 | 1,338 | 0 | 0 | 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| 2020 | 1,310 | Ο | Ο | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| 2021 | 1,262 | 0 | 0 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| 2022 | 1,370 | 0 | 0 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| 2023 | 1,222 | <10 | 0 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |

Abbreviations: Highly Mobile (Hi. Mobile), Immigrant (Immig.), High Ability Learner (HAL), English Language Learner (ELL), and Special Education (SPED)

| Cohort Year | SNPI | CC Service Area | Chronically Absent (Grade 9- 10) | HS Credits (Grade 9-10) | HS GPA (Grade 9- 10) | DE Credits (Grade 9-10) |
|----------------|------|-----------------------|--|----------------------------|----------------------------|----------------------------|
| 2018 | <10 | 14 | 20 | 23 | 23 | 19 |
| 2019 | <10 | 14 | 26 | 28 | 29 | 23 |
| 2020 | <10 | 13 | 26 | 27 | 27 | 22 |
| 2021 | <10 | 12 | 18 | 19 | 19 | 18 |
| 2022 | <10 | 15 | 19 | 20 | 31 | 18 |
| 2023 | <10 | <10 | 18 | 19 | 27 | 17 |

Abbreviations: School Neighborhood Poverty Index (SNPI), High School (HS), and Dual Enrollment (DE)

Miscellaneous Analysis Notes

The following subsections present notes regarding each data analysis section in the main report.

ACE Scholarship Applicants, Recipients, Scholarships Awarded

The counts of ACE scholarship applicants, recipients, and scholarships awarded over time are presented. Applicant and recipient counts are unduplicated within each academic year; this means that students who applied and received the scholarship multiple times in the same year are counted only once. However, if students applied and received the scholarship over multiple years, they are counted once each year. Scholarship award counts may include multiple scholarships per recipient within the same year, as the scholarship is granted per course.

Percentage of Scholarship Applicants Who Received Scholarship

The percentages of ACE scholarship applicants who received the scholarship over time are presented. The denominator used to calculate percentages is the applicant count from the previous section, and the numerator is the recipient count from the previous section.

High School Grade Level of ACE Scholarship Recipients

The percentages of ACE scholarship recipients grouped by high school grade level over time are presented. The denominator used to calculate percentages is the recipient count from the previous section, and the numerator is the recipient count at each high school grade level. If juniors receive the scholarship in two consecutive years, they are counted as juniors in the first year and as seniors in the next.

Percentage of Scholarship Recipients by Participating Postsecondary System

The percentages of ACE scholarship recipients grouped by postsecondary institutions participating in the program are presented. The counts in this section may include duplicates within an academic year and across years when calculating overall percentages because some students took dual enrollment courses through more than one postsecondary system. The denominator for calculating percentages is the sum of unique student counts in each postsecondary system within an academic year. For example, if students take dual enrollment courses at colleges in different systems in the same year, they are counted twice—once for each system where they were enrolled.

Number of Participating Postsecondary Institutions

The counts of postsecondary institutions participating in the program over time are presented. The counts in this section represent the total number of unique Nebraska postsecondary institutions participating in the ACE scholarship program during an academic year.

Top 10 Participating Postsecondary Institutions

The 10 postsecondary institutions with the highest numbers of ACE scholarship recipients are presented. The counts in this section may include duplicates within an academic year and across years when calculating overall percentages because some students took dual enrollment courses through more than one postsecondary institution. The denominator for calculating percentages is the sum of unique student counts in each postsecondary institution within an academic year. For example, if students take dual enrollment courses at multiple institutions in the same year, they are counted once for each institution where they were enrolled.

Number of Participating School Districts/Communities and High Schools

The counts of public school districts/non-public school systems participating in the program over time are presented. The counts in this section represent the total number of unique Nebraska public school districts and non-public school systems and high schools participating in the ACE scholarship program during an academic year.

Top 10 Participating School Districts

The 10 public school districts/non-public school systems with the highest numbers of ACE scholarship recipients are presented. The counts in this section are unduplicated within an academic year because each student received the scholarship through a single public school district or non-public school system. The denominator for calculating percentages is the total number of unique students within an academic year, and the numerator is the total number of unique students in each public school district or non-public school system within that year.

Participation by Community College Service Area

The percentages of ACE scholarship recipients grouped by community college service area are presented. The counts in this section are unduplicated within an academic year because each student received the scholarship through a single public school district or non-public school system located in one community college service area. The denominator for calculating percentages is the total number of unique students within an academic year, and the numerator is the total number of unique students in each community college service area for that year.

Participation by Urban/Rural County

The percentages of ACE scholarship recipients grouped by urban and rural counties are presented. The counts in this section are unduplicated within an academic year because each student receives the scholarship through a single public school district or non-public school system located in one county. The denominator for calculating percentages is the total number of unique students within an academic year, and the numerator is the total number of unique students in each county for that year.

Participation by School Neighborhood Income Level

The percentages of ACE scholarship recipients grouped by school neighborhood income level are presented. The counts in this section may include duplicates within an academic year and across years when calculating overall percentages because some students attended different schools within a single year. The denominator for calculating percentages is the sum of unique student counts in each school within an academic year. For example, if students attend multiple schools in the same year, they are counted once for each school where they were enrolled. The numerator is the total number of unique students in each school for that year.

Course Enrollment and Completion

The counts of enrolled and completed courses across recipients over time and the distribution of these courses per recipient are presented. Enrolled and completed course counts include multiple courses per recipient within the same year, as the scholarship is granted per course.

Top 10 Course Subjects Enrolled by Scholarship Recipients

The 10 course subjects with the highest numbers of ACE scholarship recipients are presented. The counts in this section may include duplicates within an academic year and across years when calculating overall percentages because some students took multiple courses within a single year. The counts represent the number of unique students who took the course subject within an academic year.

Sex Distribution & Racial/Ethnic Distribution of ACE Participants

The percentages of ACE participants grouped by sex and race/ethnicity groups are presented. The counts in this section are unduplicated counts. This means that every individual can only contribute once across all cohort years. The denominator for calculating percentages is the total number of unique students within a cohort year (across the years for overall percentage), and the numerator is the total number of unique students in each category for that year.

High School Credit Hours Earned

The average of high school credit hours earned among ACE participants and comparison groups are presented. High school credit hours earned are summed across years and schools if a student attended multiple schools during high school. Because course durations vary by school, all credit hours were standardized to Carnegie units and then averaged for each student. Course hours were converted as follows:

- A year-long course = 1 Carnegie unit
- A semester course = 0.5 Carnegie unit
- A trimester course = 1/3 Carnegie unit
- A course lasting approximately 9 weeks = 0.25 Carnegie unit
- A course lasting approximately 6 weeks = 1/6 Carnegie unit

High School GPA

The averages of high school GPA among ACE participants and comparison groups are presented. High school GPA is averaged across years and schools if students attended multiple schools during high school. Because grading codes vary by school, all course grades were standardized to a 4.0 scale and then averaged for each student. Letter grades were converted as follows: A = 4 points, B = 3 points, C = 2 points, D = 1 point, and F = 0 points, with no consideration for plus or minus signs. Numeric grades from 0-100 were converted as follows: 90-100 = 4 points, 80-89 = 3 points, 70-79 = 2 points, 60-69 = 1 point, and below 60 = 0 points. Courses without a grade (e.g., pass/fail or audited) were excluded from GPA calculations. No extra points were given for Advanced Placement, International Baccalaureate, or other honors classes. Because course lengths vary by school, GPA calculations are weighted by credit hours, which are standardized in Carnegie units.

ACT Scores

The ACT composite and subject score averages among ACE participants and comparison groups are presented. Yearly averages were not included due to incomplete data submissions from the Nebraska Department of Education (NDE). For example, the regular ACT test was not administered in the 2020-21 school year because of the COVID-19 pandemic. Although NDE administered a supplementary test later that year, the data were not submitted to NSWERS.

Chronic Absenteeism

The percentages of students who missed 10% or more of school days during high school among ACE participants and comparison groups are presented. This approach—measuring the percentage of students who missed 10% or more of school days across the entire high school period—differs from the typical definition of chronic absenteeism, which measures this percentage on a single-year basis. The definition has been modified to reflect overall attendance during high school. The counts in this section are unduplicated counts. The denominator for calculating percentages is the total number of unique students within a cohort year (and across years for overall percentages), and the numerator is the total number of unique students who missed 10% or more of total school days during high school.

High School Graduation

The percentages of students who graduated high school on-time among ACE participants and comparison groups are presented.

College Going

Observed differences and matched-group differences in college-going rates between ACE participants and non-participants are presented. The estimated treatment effects of ACE participation are represented by the matched-group differences. In addition, observed differences among ACE participants and comparison groups are presented.

This section also includes the percentages of ACE participants by the sector of their enrolled college. 'NE' indicates Nebraska institutions, and 'OOS' indicates out-of-state institutions. 'Public' refers to public institutions, and 'Private' refers to private institutions. '2-year' indicates two-year institutions, and '4-year' indicates four-year institutions.

Postsecondary Persistence

Observed differences and matched-group differences in postsecondary persistence rates between ACE participants and non-participants are presented. In addition, observed differences among ACE participants and comparison groups are presented.

This section presents the results for students who enrolled in Nebraska public postsecondary institutions, as few ACE participants attended institutions outside Nebraska. Outcomes for four-year and two-year college students are presented separately because their patterns differ by institution type.

Postsecondary Graduation

Observed differences and matched-group differences in postsecondary graduation rates between ACE participants and non-participants are presented. In addition, observed differences among ACE participants and comparison groups are presented.

This section also includes the percentages of ACE participants by award type and program major of their earned awards. 'Bachelor's or higher' refers to bachelor's degrees and above offered at four-year institutions, while 'Associate' and 'Certificate' refer to associate degrees and short-term certificates offered at two-year institutions. Note that some four-year college-goers earned two-year degrees or certificates as their highest award, indicating they did not complete a bachelor's degree at the institution they initially enrolled in. Award program majors are aggregated at the two-digit Classification of Instructional Programs (CIP) code level.

This section also includes the cumulative probabilities of postsecondary graduation among ACE participants and comparison groups over time. These probabilities are obtained by treating the time between high school graduation and postsecondary graduation as time-to-event data and estimating the survival probability over time. For students who did not earn any award within the observation window, their time was treated as right-censored at the end of the window. The Kaplan-Meier estimator was used to calculate the survival function via the survfit function in the survival R package (source). Cohort (ACE, Non-ACE/DE, Non-ACE/Non-DE) was treated as a stratum variable. This non-parametric estimator was chosen because it accommodates right-censoring, which is common in award data, as students may earn awards outside the six-year observation window used in this report.

Time To Award Attainment

This section includes both observed differences and matched-group differences in the expected time to award attainment between ACE program participants and nonparticipants. In addition, observed differences among ACE participants and relevant comparison groups are presented.

The expected time to award attainment was quantified using the Restricted Mean Survival Time (RMST), which represents the average survival time (i.e., time to award attainment) over a pre-specified follow-up period. RMST was preferred over hazard ratios because it provides an absolute and interpretable measure of time, whereas hazard ratios are a relative measure of risk that assumes proportional hazards over time. In educational contexts, stakeholders often need to understand differences in expected completion time (e.g., "students finish 3 months sooner"), which RMST directly conveys. Hazard ratios can be misleading when the proportional hazards assumption does not hold—an issue frequently encountered in time-to-degree studies where completion patterns vary across subgroups and over time. RMST avoids this assumption and summarizes the entire survival curve up to a meaningful truncation point, making it more robust and practical for policy and program evaluation.

RMST was calculated as the area under the survival curve up to a chosen truncation point, reflecting typical completion windows: 76 months for students initially enrolled in four-year institutions and 40 months for students initially enrolled in two-year institutions.

For unadjusted comparisons, RMST was derived from the survival function estimated using the Kaplan-Meier estimator, which provides a non-parametric estimate of time-to-event distributions. For matched-group comparisons, RMST was estimated from survival functions predicted by a Weibull Accelerated Failure Time (AFT) regression model applied to propensity-score matched samples. This approach adjusts for confounding and yields a more robust estimate of program impact by accounting for baseline differences between ACE participants and non-participants.

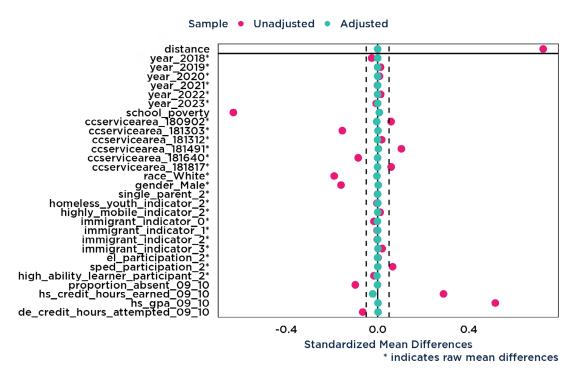
Observed differences reflect raw disparities in completion time, while matched-group differences approximate causal effects by balancing covariates between groups. Positive RMST differences indicate longer expected time to award attainment, whereas negative differences suggest accelerated completion.

Cumulative College Credits & GPA

Observed differences and matched-group differences in cumulative college credits and GPA between ACE participants and non-participants are presented. In addition, observed differences among ACE participants and comparison groups are presented.

Baseline Covariate Balance Assessment College Going Data

COVARIATE BALANCE



Covariate Balance - College Going Data

| | | | | | | Var. | |
|-------------------------|----------|-----------|-------------|--------|------------|--------|---------|
| | Variable | Diff. Un. | Var. Ratio. | | Diff. Adj. | Ratio. | |
| Variable | Type | (sd) | Un. | KS Un. | (sd) | Adj. | KS Adj. |
| distance | Distance | 0.725 | 2.467 | 0.394 | 0.000 | 0.999 | 0.001 |
| year 2018 | Binary | -0.026 | NA | 0.026 | 0.000 | NA | 0.000 |
| year 2019 | Binary | 0.013 | NA | 0.013 | 0.000 | NA | 0.000 |
| year 2020 | Binary | 0.008 | NA | 0.008 | 0.000 | NA | 0.000 |
| year 2021 | Binary | -0.001 | NA | 0.001 | 0.000 | NA | 0.000 |
| year 2022 | Binary | 0.013 | NA | 0.013 | 0.000 | NA | 0.000 |
| year 2023 | Binary | -0.006 | NA | 0.006 | 0.000 | NA | 0.000 |
| school poverty | Contin. | -0.632 | 0.444 | 0.244 | 0.007 | 0.931 | 0.050 |
| ccservicearea 180902 | Binary | 0.059 | NA | 0.059 | -0.004 | NA | 0.004 |
| ccservicearea 181303 | Binary | -0.155 | NA | 0.155 | 0.002 | NA | 0.002 |
| ccservicearea 181312 | Binary | 0.018 | NA | 0.018 | 0.000 | NA | 0.000 |
| ccservicearea | Binary | 0.104 | NA | 0.104 | 0.003 | NA | 0.003 |

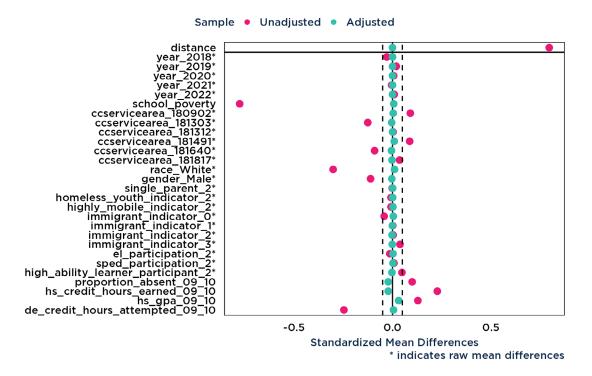
| | | | | | | Var. | |
|--|----------|-----------|-------------|---------|------------|--------|---------|
| A7. 2.1.1. | Variable | Diff. Un. | Var. Ratio. | 146.11. | Diff. Adj. | Ratio. | LCC A J |
| Variable 181491 | Type | (sd) | Un. | KS Un. | (sd) | Adj. | KS Adj. |
| ccservicearea | Binary | -0.085 | NA | 0.085 | 0.000 | NA | 0.000 |
| 181640 | - | | | | | | |
| ccservicearea 181817 | Binary | 0.059 | NA | 0.059 | 0.000 | NA | 0.000 |
| race White | Binary | -0.190 | NA | 0.190 | -0.003 | NA | 0.003 |
| gender Male | Binary | -0.161 | NA | 0.161 | 0.003 | NA | 0.003 |
| single parent 2 | Binary | 0.000 | NA | 0.000 | 0.000 | NA | 0.000 |
| homeless youth indicator 2 | Binary | -0.003 | NA | 0.003 | 0.000 | NA | 0.000 |
| highly mobile indicator 2 | Binary | 0.011 | NA | 0.011 | 0.000 | NA | 0.000 |
| immigrant indicator 0 | Binary | -0.016 | NA | 0.016 | -0.001 | NA | 0.001 |
| immigrant indicator 1 | Binary | -0.002 | NA | 0.002 | 0.000 | NA | 0.000 |
| immigrant indicator 2 | Binary | -0.002 | NA | 0.002 | 0.000 | NA | 0.000 |
| immigrant indicator 3 | Binary | 0.020 | NA | 0.020 | 0.001 | NA | 0.001 |
| el participation 2 | Binary | 0.002 | NA | 0.002 | 0.000 | NA | 0.000 |
| sped participation 2 | Binary | 0.066 | NA | 0.066 | 0.001 | NA | 0.001 |
| high ability learner participant 2 | Binary | -0.016 | NA | 0.016 | -0.003 | NA | 0.003 |
| proportion absent 09 10 | Contin. | -0.098 | 0.658 | 0.024 | -0.001 | 0.850 | 0.029 |
| hs credit hours earned 09 10 | Contin. | 0.289 | 0.939 | 0.185 | -0.021 | 0.665 | 0.063 |
| hs gpa 09 10 | Contin. | 0.516 | 0.567 | 0.180 | 0.002 | 0.846 | 0.041 |
| de credit hours attempted 09 10 | Contin. | -0.065 | 0.271 | 0.019 | 0.002 | 0.549 | 0.017 |

Sample Size - College Going Data

| Observations | Control | Treated |
|----------------------|----------|---------|
| All (ESS) | 115552.0 | 7248 |
| All (Unweighted) | 115552.0 | 7248 |
| Matched (ESS) | 24726.7 | 7248 |
| Matched (Unweighted) | 115552.0 | 7248 |
| Unmatched | 0.0 | 0 |

Postsecondary Persistence Data (Nebraska Public Four-year College Goers)

COVARIATE BALANCE



Covariate balance - Postsecondary Persistence Data

| | | | Var. | | | Var. | |
|----------------------|----------|-----------|--------|-------|------------|--------|---------|
| | Variable | Diff. Un. | Ratio. | KS | Diff. Adj. | Ratio. | |
| Variable | Type | (sd) | Un. | Un. | (sd) | Adj. | KS Adj. |
| distance | Distanc | 0.796 | 2.232 | 0.396 | 0.000 | 0.998 | 0.004 |
| | е | | | | | | |
| year 2018 | Binary | -0.029 | NA | 0.029 | 0.000 | NA | 0.000 |
| year 2019 | Binary | 0.019 | NA | 0.019 | 0.000 | NA | 0.000 |
| year 2020 | Binary | 0.006 | NA | 0.00 | 0.000 | NA | 0.000 |
| | | | | 6 | | | |
| year 2021 | Binary | -0.005 | NA | 0.005 | 0.000 | NA | 0.000 |
| year 2022 | Binary | 0.009 | NA | 0.00 | 0.000 | NA | 0.000 |
| | | | | 9 | | | |
| school poverty | Contin. | -0.777 | 0.521 | 0.324 | 0.006 | 1.066 | 0.072 |
| ccservicearea 180902 | Binary | 0.091 | NA | 0.091 | 0.004 | NA | 0.004 |
| ccservicearea 181303 | Binary | -0.126 | NA | 0.126 | -0.004 | NA | 0.004 |
| ccservicearea 181312 | Binary | 0.003 | NA | 0.003 | 0.000 | NA | 0.000 |
| ccservicearea 181491 | Binary | 0.087 | NA | 0.087 | 0.009 | NA | 0.009 |
| ccservicearea 181640 | Binary | -0.091 | NA | 0.091 | -0.005 | NA | 0.005 |
| ccservicearea 181817 | Binary | 0.036 | NA | 0.036 | -0.003 | NA | 0.003 |

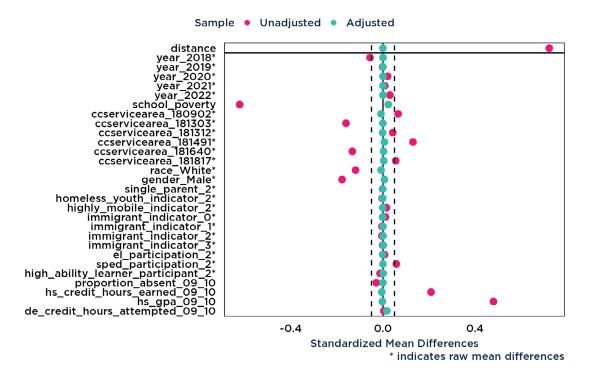
| | | | Var. | | | Var. | |
|---------------------------------------|---------------|-----------|--------|-------|------------|--------|---------|
| | Variable – | Diff. Un. | Ratio. | KS | Diff. Adj. | Ratio. | |
| Variable | Type | (sd) | Un. | Un. | (sd) | Adj. | KS Adj. |
| race White | Binary | -0.302 | NA | 0.302 | 0.010 | NA | 0.010 |
| gender Male | Binary | -0.112 | NA | 0.112 | -0.004 | NA | 0.004 |
| single parent 2 | Binary | -0.002 | NA | 0.002 | 0.001 | NA | 0.001 |
| homeless youth indicator 2 | Binary | -0.008 | NA | 0.008 | 0.001 | NA | 0.001 |
| highly mobile indicator 2 | Binary | -0.008 | NA | 0.008 | 0.002 | NA | 0.002 |
| immigrant indicator 0 | Binary | -0.042 | NA | 0.042 | 0.004 | NA | 0.004 |
| immigrant indicator 1 | Binary | 0.001 | NA | 0.001 | -0.001 | NA | 0.001 |
| immigrant indicator 2 | Binary | 0.003 | NA | 0.003 | -0.002 | NA | 0.002 |
| immigrant indicator 3 | Binary | 0.038 | NA | 0.038 | -0.001 | NA | 0.001 |
| el participation 2 | Binary | -0.014 | NA | 0.014 | 0.002 | NA | 0.002 |
| sped participation 2 | Binary | 0.007 | NA | 0.007 | 0.002 | NA | 0.002 |
| high ability learner participant 2 | Binary | 0.048 | NA | 0.048 | -0.003 | NA | 0.003 |
| proportion absent 09 10 | Contin. | 0.100 | 1.237 | 0.055 | -0.022 | 0.899 | 0.021 |
| hs credit hours earned 09 10 | Contin. | 0.228 | 1.042 | 0.172 | -0.022 | 0.785 | 0.067 |
| hs gpa 09 10 | Contin. | 0.129 | 0.751 | 0.053 | 0.031 | 0.825 | 0.036 |
| de credit hours attempted 09 10 | Contin. | -0.247 | 0.122 | 0.013 | 0.005 | 0.467 | 0.016 |

Sample size - Postsecondary Persistence Data

| Observations | Control | Treated |
|----------------------|---------|---------|
| All (ESS) | 31214.0 | 3115 |
| All (Unweighted) | 31214.0 | 3115 |
| Matched (ESS) | 6266.8 | 3115 |
| Matched (Unweighted) | 31214.0 | 3115 |
| Unmatched | 0.0 | 0 |

Postsecondary Persistence Data (Nebraska Public Two-year College Goers)

COVARIATE BALANCE



Covariate balance - Postsecondary Persistence Data

| | | | Var. | | | Var. | |
|----------------------|----------|-----------|--------|--------|------------|--------|---------|
| | Variable | Diff. Un. | Ratio. | | Diff. Adj. | Ratio. | |
| Variable | Type | (sd) | Un. | KS Un. | (sd) | Adj. | KS Adj. |
| distance | Distanc | 0.723 | 2.270 | 0.382 | 0.000 | 0.999 | 0.004 |
| | е | | | | | | |
| year 2018 | Binary | -0.056 | NA | 0.056 | 0.000 | NA | 0.000 |
| year 2019 | Binary | -0.002 | NA | 0.002 | 0.000 | NA | 0.000 |
| year 2020 | Binary | 0.020 | NA | 0.020 | 0.000 | NA | 0.000 |
| year 2021 | Binary | 0.008 | NA | 0.008 | 0.000 | NA | 0.000 |
| year 2022 | Binary | 0.030 | NA | 0.030 | 0.000 | NA | 0.000 |
| school poverty | Contin. | -0.623 | 0.346 | 0.239 | 0.023 | 0.818 | 0.055 |
| ccservicearea 180902 | Binary | 0.066 | NA | 0.066 | -0.009 | NA | 0.009 |
| ccservicearea 181303 | Binary | -0.161 | NA | 0.161 | -0.001 | NA | 0.001 |
| ccservicearea 181312 | Binary | 0.043 | NA | 0.043 | -0.002 | NA | 0.002 |
| ccservicearea 181491 | Binary | 0.130 | NA | 0.130 | 0.006 | NA | 0.006 |
| ccservicearea 181640 | Binary | -0.133 | NA | 0.133 | 0.002 | NA | 0.002 |
| ccservicearea 181817 | Binary | 0.055 | NA | 0.055 | 0.003 | NA | 0.003 |
| race White | Binary | -0.119 | NA | 0.119 | -0.008 | NA | 0.008 |

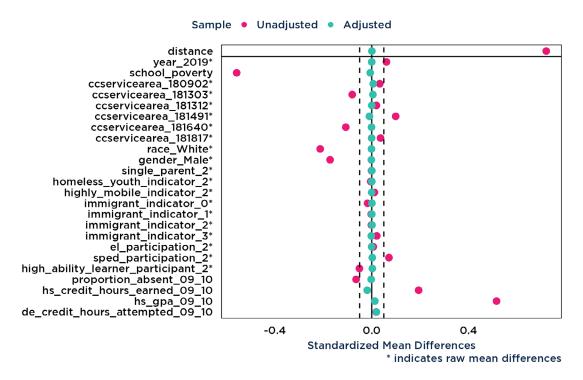
| | | | Var. | | | Var. | |
|---------------------------------------|---------------|-----------|--------|--------|------------|--------|----------|
| | Variable - | Diff. Un. | Ratio. | 146.11 | Diff. Adj. | Ratio. | 14C A !! |
| Variable | Type | (sd) | Un. | KS Un. | (sd) | Adj. | KS Adj. |
| gender Male | Binary | -0.178 | NA | 0.178 | 0.006 | NA | 0.006 |
| single parent 2 | Binary | -0.002 | NA | 0.002 | -0.001 | NA | 0.001 |
| homeless youth indicator 2 | Binary | -0.004 | NA | 0.004 | -0.001 | NA | 0.001 |
| highly mobile indicator 2 | Binary | 0.015 | NA | 0.015 | -0.001 | NA | 0.001 |
| immigrant indicator 0 | Binary | 0.011 | NA | 0.011 | -0.002 | NA | 0.002 |
| immigrant indicator 1 | Binary | -0.005 | NA | 0.005 | 0.000 | NA | 0.000 |
| immigrant indicator 2 | Binary | -0.005 | NA | 0.005 | 0.000 | NA | 0.000 |
| immigrant indicator 3 | Binary | -0.001 | NA | 0.001 | 0.001 | NA | 0.001 |
| el participation 2 | Binary | 0.007 | NA | 0.007 | -0.002 | NA | 0.002 |
| sped participation 2 | Binary | 0.058 | NA | 0.058 | 0.000 | NA | 0.000 |
| high ability learner participant 2 | Binary | -0.013 | NA | 0.013 | 0.001 | NA | 0.001 |
| proportion absent 09 10 | Contin. | -0.029 | 0.682 | 0.038 | 0.000 | 0.769 | 0.036 |
| hs credit hours earned 09 10 | Contin. | 0.209 | 1.021 | 0.156 | -0.006 | 0.790 | 0.051 |
| hs gpa 09 10 | Contin. | 0.480 | 0.731 | 0.183 | -0.003 | 0.912 | 0.035 |
| de credit hours attempted 09 10 | Contin. | 0.004 | 0.544 | 0.013 | 0.017 | 0.805 | 0.010 |

Sample size - Postsecondary Persistence Data

| Observations | Control | Treated |
|----------------------|---------|---------|
| All (ESS) | 22069.0 | 1629 |
| All (Unweighted) | 22069.0 | 1629 |
| Matched (ESS) | 4773.7 | 1629 |
| Matched (Unweighted) | 22069.0 | 1629 |
| Unmatched | 0.0 | 0 |

Postsecondary Graduation Data (Nebraska Public High School Graduates)

COVARIATE BALANCE



Covariate Balance - Postsecondary Graduation Data

| | | | Var. | | | Var. | |
|----------------------|----------|-----------|--------|-------|------------|--------|-------|
| | Variable | Diff. Un. | Ratio. | KS | Diff. Adj. | Ratio. | KS |
| Variable | Type | (sd) | Un. | Un. | (sd) | Adj. | Adj. |
| distance | Distanc | 0.721 | 2.792 | 0.396 | 0.001 | 1.006 | 0.002 |
| | е | | | | | | |
| year 2019 | Binary | 0.061 | NA | 0.061 | 0.000 | NA | 0.00 |
| school poverty | Contin. | -0.558 | 0.556 | 0.252 | -0.006 | 0.966 | 0.055 |
| ccservicearea 180902 | Binary | 0.033 | NA | 0.033 | 0.006 | NA | 0.006 |
| ccservicearea 181303 | Binary | -0.081 | NA | 0.081 | 0.005 | NA | 0.005 |
| ccservicearea 181312 | Binary | 0.019 | NA | 0.019 | 0.000 | NA | 0.00 |
| | | | | | | | 0 |
| ccservicearea 181491 | Binary | 0.099 | NA | 0.099 | -0.010 | NA | 0.010 |
| ccservicearea 181640 | Binary | -0.107 | NA | 0.107 | -0.001 | NA | 0.001 |
| ccservicearea 181817 | Binary | 0.036 | NA | 0.036 | 0.000 | NA | 0.00 |
| | | | | | | | 0 |
| race White | Binary | -0.213 | NA | 0.213 | -0.001 | NA | 0.001 |
| gender Male | Binary | -0.172 | NA | 0.172 | -0.002 | NA | 0.002 |
| single parent 2 | Binary | -0.001 | NA | 0.001 | 0.001 | NA | 0.001 |

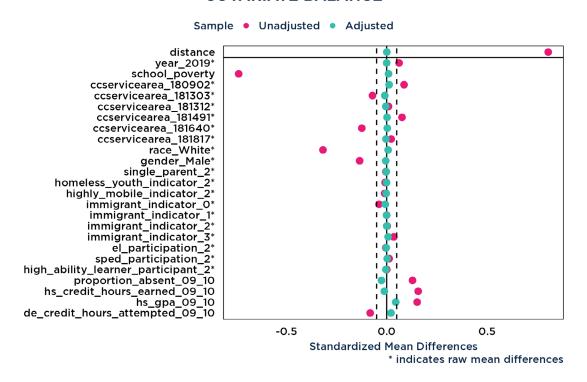
| | | | Var. | | | Var. | |
|---------------------------------------|----------|-----------|--------|-------|------------|--------|-----------|
| | Variable | Diff. Un. | Ratio. | KS | Diff. Adj. | Ratio. | KS |
| Variable | Type | (sd) | Un. | Un. | (sd) | Adj. | Adj. |
| homeless youth | Binary | -0.004 | NA | 0.00 | 0.000 | NA | 0.00 |
| indicator 2 | | | | 4 | | | 0 |
| highly mobile indicator 2 | Binary | 0.011 | NA | 0.011 | 0.000 | NA | 0.00 |
| immigrant indicator 0 | Binary | -0.017 | NA | 0.017 | 0.001 | NA | 0.001 |
| immigrant indicator 1 | Binary | -0.002 | NA | 0.002 | 0.000 | NA | 0.00 |
| immigrant indicator 2 | Binary | -0.001 | NA | 0.001 | 0.001 | NA | 0.001 |
| immigrant indicator 3 | Binary | 0.021 | NA | 0.021 | -0.002 | NA | 0.002 |
| el participation 2 | Binary | 0.006 | NA | 0.00 | 0.000 | NA | 0.00 |
| | | | | 6 | | | 0 |
| sped participation 2 | Binary | 0.071 | NA | 0.071 | 0.002 | NA | 0.002 |
| high ability learner participant 2 | Binary | -0.051 | NA | 0.051 | 0.002 | NA | 0.002 |
| proportion absent 09 10 | Contin. | -0.065 | 0.702 | 0.019 | -0.002 | 0.735 | 0.052 |
| hs credit hours earned 09 10 | Contin. | 0.194 | 1.409 | 0.207 | -0.019 | 0.797 | 0.090 |
| hs gpa 09 10 | Contin. | 0.516 | 0.603 | 0.184 | 0.013 | 0.832 | 0.04 0 |
| de credit hours attempted 09 10 | Contin. | 0.018 | 0.339 | 0.032 | 0.019 | 0.378 | 0.028 |

Sample Size - Postsecondary Graduation Data

| Observations | Control | Treated |
|----------------------|---------|---------|
| All (ESS) | 38223.0 | 2299 |
| All (Unweighted) | 38223.0 | 2299 |
| Matched (ESS) | 7516.3 | 2299 |
| Matched (Unweighted) | 38223.0 | 2299 |
| Unmatched | 0.0 | 0 |

Postsecondary Graduation Data (Nebraska Public Four-year College Goers)

COVARIATE BALANCE



Covariate Balance - Postsecondary Graduation Data

| | | | Var. | | | Var. | |
|----------------------------|----------|-----------|--------|--------|------------|--------|-------|
| | Variable | Diff. Un. | Ratio. | | Diff. Adj. | Ratio. | KS |
| Variable | Type | (sd) | Un. | KS Un. | (sd) | Adj. | Adj. |
| distance | Distanc | 0.805 | 2.438 | 0.397 | 0.001 | 1.007 | 0.005 |
| | е | | | | | | |
| year 2019 | Binary | 0.062 | NA | 0.062 | 0.000 | NA | 0.000 |
| school poverty | Contin. | -0.737 | 0.60 | 0.346 | 0.009 | 1.117 | 0.091 |
| | | | 0 | | | | |
| ccservicearea 180902 | Binary | 0.087 | NA | 0.087 | 0.012 | NA | 0.012 |
| ccservicearea 181303 | Binary | -0.071 | NA | 0.071 | -0.009 | NA | 0.009 |
| ccservicearea 181312 | Binary | 0.009 | NA | 0.009 | -0.005 | NA | 0.005 |
| ccservicearea 181491 | Binary | 0.076 | NA | 0.076 | 0.002 | NA | 0.002 |
| ccservicearea 181640 | Binary | -0.124 | NA | 0.124 | 0.003 | NA | 0.003 |
| ccservicearea 181817 | Binary | 0.022 | NA | 0.022 | -0.004 | NA | 0.004 |
| race White | Binary | -0.317 | NA | 0.317 | 0.007 | NA | 0.007 |
| gender Male | Binary | -0.135 | NA | 0.135 | -0.005 | NA | 0.005 |
| single parent 2 | Binary | -0.004 | NA | 0.004 | -0.002 | NA | 0.002 |
| homeless youth indicator 2 | Binary | -0.008 | NA | 0.008 | -0.001 | NA | 0.001 |

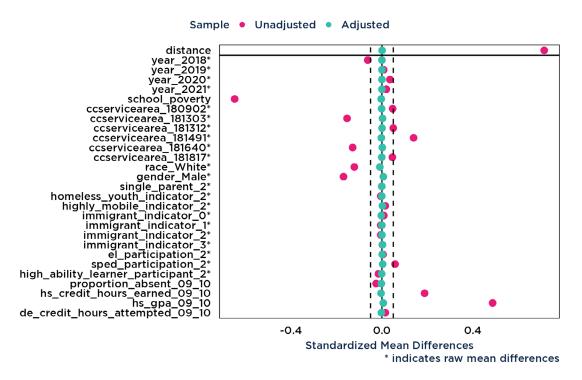
| | | | Var. | | | Var. | |
|---------------------------------------|----------|-----------|--------|--------|------------|--------|-------|
| | Variable | Diff. Un. | Ratio. | | Diff. Adj. | Ratio. | KS |
| Variable | Type | (sd) | Un. | KS Un. | (sd) | Adj. | Adj. |
| highly mobile indicator 2 | Binary | -0.010 | NA | 0.010 | -0.002 | NA | 0.002 |
| immigrant indicator 0 | Binary | -0.038 | NA | 0.038 | -0.007 | NA | 0.007 |
| immigrant indicator 1 | Binary | 0.000 | NA | 0.000 | -0.001 | NA | 0.001 |
| immigrant indicator 2 | Binary | 0.003 | NA | 0.003 | 0.000 | NA | 0.000 |
| immigrant indicator 3 | Binary | 0.035 | NA | 0.035 | 0.007 | NA | 0.007 |
| el participation 2 | Binary | -0.004 | NA | 0.004 | -0.002 | NA | 0.002 |
| sped participation 2 | Binary | 0.012 | NA | 0.012 | 0.003 | NA | 0.003 |
| high ability learner participant 2 | Binary | 0.001 | NA | 0.001 | -0.004 | NA | 0.004 |
| proportion absent 09 10 | Contin. | 0.129 | 1.183 | 0.075 | -0.026 | 0.640 | 0.029 |
| hs credit hours earned 09 10 | Contin. | 0.157 | 1.624 | 0.189 | -0.012 | 0.875 | 0.090 |
| hs gpa 09 10 | Contin. | 0.152 | 0.754 | 0.061 | 0.045 | 0.807 | 0.024 |
| de credit hours attempted 09 10 | Contin. | -0.082 | 0.237 | 0.014 | 0.022 | 0.553 | 0.020 |

Sample Size - Postsecondary Graduation Data

| Observations | Control | Treated |
|----------------------|---------|---------|
| All (ESS) | 12432.0 | 1209 |
| All (Unweighted) | 12432.0 | 1209 |
| Matched (ESS) | 2376.9 | 1209 |
| Matched (Unweighted) | 12432.0 | 1209 |
| Unmatched | 0.0 | 0 |

Postsecondary Graduation Data (Nebraska Public Two-year College Goers)

COVARIATE BALANCE



Covariate Balance - Postsecondary Graduation Data

| | | | Var. | | | | |
|----------------------|----------|-----------|------|--------|------------|--------|-------|
| | | | Rati | | | Var. | |
| | Variable | Diff. Un. | Ο. | | Diff. Adj. | Ratio. | KS |
| Variable | Type | (sd) | Un. | KS Un. | (sd) | Adj. | Adj. |
| distance | Distanc | 0.714 | 2.44 | 0.386 | 0.001 | 1.005 | 0.004 |
| | е | | 4 | | | | |
| year 2018 | Binary | -0.062 | NA | 0.062 | 0.000 | NA | 0.000 |
| year 2019 | Binary | 0.008 | NA | 0.008 | 0.000 | NA | 0.000 |
| year 2020 | Binary | 0.035 | NA | 0.035 | 0.000 | NA | 0.000 |
| year 2021 | Binary | 0.019 | NA | 0.019 | 0.000 | NA | 0.000 |
| school poverty | Contin. | -0.648 | 0.34 | 0.244 | -0.003 | 0.787 | 0.062 |
| | | | 7 | | | | |
| ccservicearea 180902 | Binary | 0.047 | NA | 0.047 | -0.001 | NA | 0.001 |
| ccservicearea 181303 | Binary | -0.153 | NA | 0.153 | 0.003 | NA | 0.003 |
| ccservicearea 181312 | Binary | 0.050 | NA | 0.050 | 0.000 | NA | 0.000 |
| ccservicearea 181491 | Binary | 0.139 | NA | 0.139 | -0.003 | NA | 0.003 |
| ccservicearea 181640 | Binary | -0.129 | NA | 0.129 | 0.002 | NA | 0.002 |
| ccservicearea 181817 | Binary | 0.046 | NA | 0.046 | -0.001 | NA | 0.001 |
| race White | Binary | -0.121 | NA | 0.121 | -0.009 | NA | 0.009 |

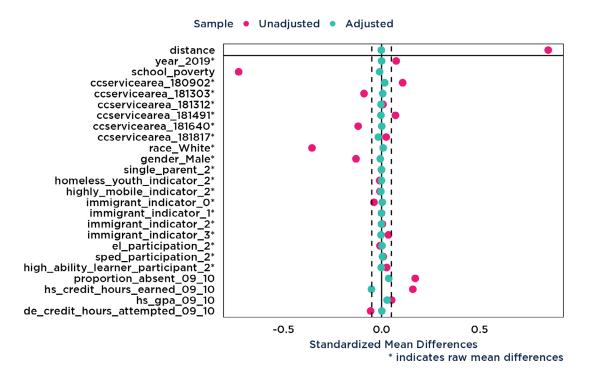
| | | | Var. | | | | |
|---------------------------------------|----------|-----------|-----------|-----------|------------|--------|-------|
| | | - 166 | Rati | | - 166 | Var. | |
| Manialala | Variable | Diff. Un. | 0. | I/C I II- | Diff. Adj. | Ratio. | KS |
| Variable | Type | (sd) | Un. | KS Un. | (sd) | Adj. | Adj. |
| gender Male | Binary | -0.169 | NA | 0.169 | 0.006 | NA | 0.006 |
| single parent 2 | Binary | -0.001 | NA | 0.001 | -0.001 | NA | 0.001 |
| homeless youth indicator 2 | Binary | -0.005 | NA | 0.005 | -0.001 | NA | 0.001 |
| highly mobile indicator 2 | Binary | 0.015 | NA | 0.015 | 0.002 | NA | 0.002 |
| immigrant indicator 0 | Binary | 0.008 | NA | 0.008 | -0.003 | NA | 0.003 |
| immigrant indicator 1 | Binary | -0.005 | NA | 0.005 | 0.000 | NA | 0.000 |
| immigrant indicator 2 | Binary | -0.005 | NA | 0.005 | 0.000 | NA | 0.000 |
| immigrant indicator 3 | Binary | 0.002 | NA | 0.002 | 0.003 | NA | 0.003 |
| el participation 2 | Binary | 0.005 | NA | 0.005 | 0.001 | NA | 0.001 |
| sped participation 2 | Binary | 0.058 | NA | 0.058 | 0.003 | NA | 0.003 |
| high ability learner participant 2 | Binary | -0.015 | NA | 0.015 | -0.001 | NA | 0.001 |
| proportion absent 09 10 | Contin. | -0.026 | 0.64 | 0.048 | -0.002 | 0.702 | 0.054 |
| hs credit hours earned 09 10 | Contin. | 0.188 | 1.134 | 0.167 | -0.004 | 0.862 | 0.058 |
| hs gpa 09 10 | Contin. | 0.487 | 0.73 2 | 0.184 | 0.006 | 0.875 | 0.045 |
| de credit hours attempted 09 10 | Contin. | 0.015 | 0.74 6 | 0.013 | -0.002 | 0.791 | 0.004 |

Sample Size - Postsecondary Graduation Data

| Observations | Control | Treated |
|----------------------|---------|---------|
| All (ESS) | 17856.0 | 1269 |
| All (Unweighted) | 17856.0 | 1269 |
| Matched (ESS) | 4140.2 | 1269 |
| Matched (Unweighted) | 17856.0 | 1269 |
| Unmatched | 0.0 | 0 |

Cumulative College Course Credit & GPA Data (Nebraska Public Four-year College Graduates)

COVARIATE BALANCE



Covariate balance - Cumulative College Course Credit & GPA Data

| | | | Var. | | | Var. | |
|----------------------------|----------|-----------|--------|--------|------------|--------|-------|
| | Variable | Diff. Un. | Ratio. | | Diff. Adj. | Ratio. | KS |
| Variable | Type | (sd) | Un. | KS Un. | (sd) | Adj. | Adj. |
| distance | Distanc | 0.850 | 2.568 | 0.430 | -0.001 | 0.992 | 0.009 |
| | е | | | | | | |
| year 2019 | Binary | 0.074 | NA | 0.074 | 0.000 | NA | 0.000 |
| school poverty | Contin. | -0.729 | 0.635 | 0.353 | -0.010 | 1.224 | 0.092 |
| ccservicearea 180902 | Binary | 0.107 | NA | 0.107 | 0.016 | NA | 0.016 |
| ccservicearea 181303 | Binary | -0.090 | NA | 0.090 | 0.006 | NA | 0.006 |
| ccservicearea 181312 | Binary | 0.007 | NA | 0.007 | -0.003 | NA | 0.003 |
| ccservicearea 181491 | Binary | 0.071 | NA | 0.071 | -0.003 | NA | 0.003 |
| ccservicearea 181640 | Binary | -0.120 | NA | 0.120 | 0.001 | NA | 0.001 |
| ccservicearea 181817 | Binary | 0.024 | NA | 0.024 | -0.017 | NA | 0.017 |
| race White | Binary | -0.355 | NA | 0.355 | 0.008 | NA | 0.008 |
| gender Male | Binary | -0.131 | NA | 0.131 | -0.007 | NA | 0.007 |
| single parent 2 | Binary | -0.001 | NA | 0.001 | 0.000 | NA | 0.000 |
| homeless youth indicator 2 | Binary | -0.010 | NA | 0.010 | -0.001 | NA | 0.001 |

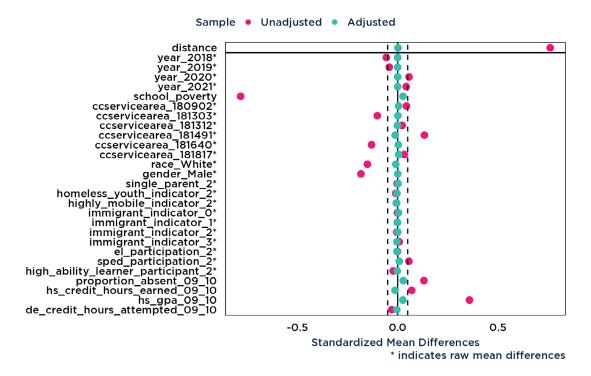
| | | | Var. | | | Var. | |
|---------------------------------------|----------|-----------|--------|--------|------------|--------|-------|
| | Variable | Diff. Un. | Ratio. | | Diff. Adj. | Ratio. | KS |
| Variable | Type | (sd) | Un. | KS Un. | (sd) | Adj. | Adj. |
| highly mobile indicator 2 | Binary | -0.009 | NA | 0.009 | -0.004 | NA | 0.004 |
| immigrant indicator 0 | Binary | -0.039 | NA | 0.039 | 0.004 | NA | 0.004 |
| immigrant indicator 1 | Binary | 0.000 | NA | 0.000 | 0.000 | NA | 0.000 |
| immigrant indicator 2 | Binary | 0.004 | NA | 0.004 | -0.001 | NA | 0.001 |
| immigrant indicator 3 | Binary | 0.035 | NA | 0.035 | -0.003 | NA | 0.003 |
| el participation 2 | Binary | -0.008 | NA | 0.008 | 0.002 | NA | 0.002 |
| sped participation 2 | Binary | 0.008 | NA | 0.008 | 0.004 | NA | 0.004 |
| high ability learner participant 2 | Binary | 0.026 | NA | 0.026 | -0.002 | NA | 0.002 |
| proportion absent 09 10 | Contin. | 0.172 | 1.311 | 0.101 | 0.036 | 0.902 | 0.048 |
| hs credit hours earned 09 10 | Contin. | 0.159 | 2.154 | 0.176 | -0.052 | 0.841 | 0.067 |
| hs gpa 09 10 | Contin. | 0.051 | 0.868 | 0.030 | 0.028 | 0.866 | 0.025 |
| de credit hours attempted 09 10 | Contin. | -0.056 | 0.289 | 0.015 | 0.001 | 0.419 | 0.019 |

Sample size - Cumulative College Course Credit & GPA Data

| Observations | Control | Treated |
|----------------------|---------|---------|
| All (ESS) | 8140.0 | 813 |
| All (Unweighted) | 8140.0 | 813 |
| Matched (ESS) | 1232.6 | 813 |
| Matched (Unweighted) | 8140.0 | 813 |
| Unmatched | 0.0 | 0 |

Cumulative College Course Credit & GPA Data (Nebraska Public Two-year College Graduates)

COVARIATE BALANCE



Covariate balance - Cumulative College Course Credit & GPA Data

| | | | Var. | | | Var. | |
|----------------------|----------|-----------|--------|--------|------------|--------|---------|
| | Variable | Diff. Un. | Ratio. | | Diff. Adj. | Ratio | |
| Variable | Type | (sd) | Un. | KS Un. | (sd) | . Adj. | KS Adj. |
| distance | Distanc | 0.761 | 1.983 | 0.408 | 0.002 | 1.005 | 0.008 |
| | е | | | | | | |
| year 2018 | Binary | -0.057 | NA | 0.057 | 0.000 | NA | 0.000 |
| year 2019 | Binary | -0.042 | NA | 0.042 | 0.000 | NA | 0.000 |
| year 2020 | Binary | 0.056 | NA | 0.056 | 0.000 | NA | 0.000 |
| year 2021 | Binary | 0.042 | NA | 0.042 | 0.000 | NA | 0.000 |
| school poverty | Contin. | -0.783 | 0.336 | 0.275 | 0.027 | 0.79 | 0.055 |
| | | | | | | 8 | |
| ccservicearea 180902 | Binary | 0.044 | NA | 0.044 | 0.004 | NA | 0.004 |
| ccservicearea 181303 | Binary | -0.102 | NA | 0.102 | 0.001 | NA | 0.001 |
| ccservicearea 181312 | Binary | 0.023 | NA | 0.023 | -0.001 | NA | 0.001 |
| ccservicearea 181491 | Binary | 0.133 | NA | 0.133 | -0.012 | NA | 0.012 |
| ccservicearea 181640 | Binary | -0.130 | NA | 0.130 | 0.003 | NA | 0.003 |
| ccservicearea 181817 | Binary | 0.033 | NA | 0.033 | 0.005 | NA | 0.005 |
| race White | Binary | -0.151 | NA | 0.151 | -0.010 | NA | 0.010 |

| | | | Var. | | | Var. | |
|---------------------------------------|---------------|-----------|--------|--------|------------|-----------|---------|
| | Variable _ | Diff. Un. | Ratio. | | Diff. Adj. | Ratio | |
| Variable | Type | (sd) | Un. | KS Un. | (sd) | . Adj. | KS Adj. |
| gender Male | Binary | -0.183 | NA | 0.183 | 0.000 | NA | 0.000 |
| single parent 2 | Binary | -0.003 | NA | 0.003 | 0.002 | NA | 0.002 |
| homeless youth indicator 2 | Binary | -0.010 | NA | 0.010 | -0.004 | NA | 0.004 |
| highly mobile indicator 2 | Binary | -0.007 | NA | 0.007 | -0.005 | NA | 0.005 |
| immigrant indicator 0 | Binary | -0.001 | NA | 0.001 | 0.004 | NA | 0.004 |
| immigrant indicator 1 | Binary | -0.002 | NA | 0.002 | -0.001 | NA | 0.001 |
| immigrant indicator 2 | Binary | -0.005 | NA | 0.005 | 0.000 | NA | 0.000 |
| immigrant indicator 3 | Binary | 0.008 | NA | 0.008 | -0.004 | NA | 0.004 |
| el participation 2 | Binary | -0.001 | NA | 0.001 | -0.004 | NA | 0.004 |
| sped participation 2 | Binary | 0.056 | NA | 0.056 | 0.008 | NA | 0.008 |
| high ability learner participant 2 | Binary | -0.022 | NA | 0.022 | -0.002 | NA | 0.002 |
| proportion absent 09 10 | Contin. | 0.131 | 1.062 | 0.096 | 0.028 | 0.86 0 | 0.059 |
| hs credit hours earned 09 10 | Contin. | 0.070 | 0.787 | 0.098 | -0.013 | 0.725 | 0.037 |
| hs gpa 09 10 | Contin. | 0.358 | 0.834 | 0.154 | 0.026 | 1.033 | 0.049 |
| de credit hours attempted 09 10 | Contin. | -0.030 | 0.524 | 0.010 | -0.004 | 0.97 4 | 0.007 |

Sample size - Cumulative College Course Credit & GPA Data

| Observations | Control | Treated |
|----------------------|---------|---------|
| All (ESS) | 6292 | 605 |
| All (Unweighted) | 6292 | 605 |
| Matched (ESS) | 1302 | 605 |
| Matched (Unweighted) | 6292 | 605 |
| Unmatched | 0 | 0 |

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