

NSWERS Brief on Talent Retention in Nebraska

by David Nguyen

Nebraska invests heavily in postsecondary education, which provides substantial benefits to the state's economy and residents¹⁻⁷. These returns on investment in higher education continue as long as alumni remain employed in the state. However, since the 1970s, Nebraska has consistently faced brain drain—the out-of-state migration of highly-educated individuals. This out-migration has accelerated in recent years^{8, 9}. Brain drain is problematic for Nebraska as it results in diminished professional expertise, impacting employee quality and reducing consumer spending and business revenue, leading to economic stagnation¹⁰. Improving the retention of Nebraska's college graduates is essential to maximize the return on the state's investment in higher education.

This NSWERS research brief focuses on the factors influencing talent retention, defined as: ***staying and working in Nebraska after graduating from college.***

KEY FINDINGS:

1. Social and economic ties:

- Social and economic ties to Nebraska are associated with higher talent retention rates.
- College students originating from Nebraska are more likely to remain in the state compared to their out-of-state peers.
- College graduates with prior work experience in Nebraska are also more likely to stay and work in Nebraska.
- This suggests that providing additional support for out-of-state students may be key to growing Nebraska's workforce.

2. Degree field impact:

- Talent retention rates differ based on a graduate's degree field.
- Substantial differences exist in talent retention rates across various degree fields. However, within each degree field, in-state students remain more likely to stay and work in Nebraska than out-of-state students.

3. Enhancing in-state work opportunities:

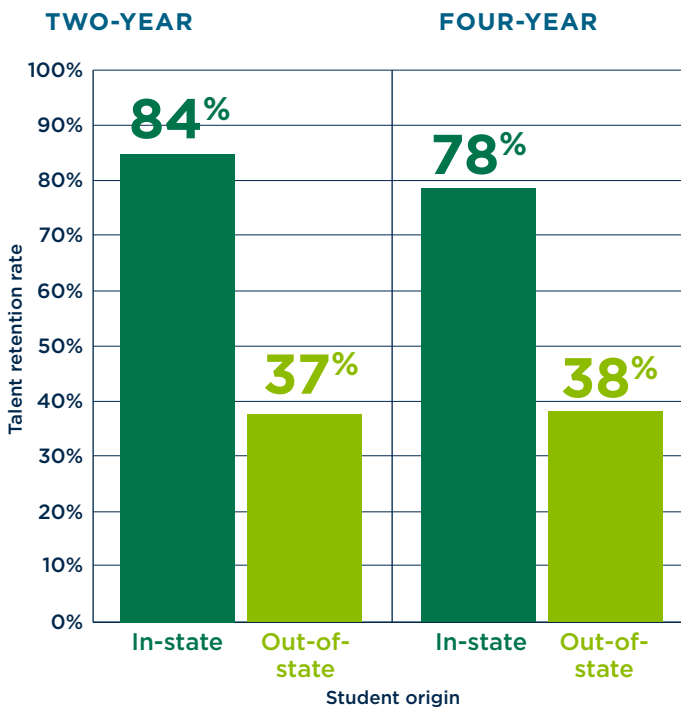
- Promoting opportunities to work in Nebraska during college can enhance talent retention.
- Evidence shows that working in Nebraska during college is associated with higher talent retention rates, with a stronger impact observed among out-of-state graduates compared to in-state graduates.
- This suggests that providing work experiences, such as internships, can boost talent retention rates among recent college graduates, particularly when these opportunities are targeted towards out-of-state students and degree fields that are in high demand in Nebraska's labor market.

These insights can be used to develop data-informed policies aimed at expanding Nebraska's workforce, thereby positioning the state for sustained economic growth.



Social and Economic Ties

The origin of students (in-state versus out-of-state) is predictive of whether they will work in Nebraska after graduating from a Nebraska public postsecondary institution. This difference may be because in-state students have stronger social ties (marriage, family, etc.) to Nebraska relative to out-of-state students. According to survey research, a lack of these social ties to the state are among the most common reasons for relocating from Nebraska^{9, 11}. These differences in talent retention due to student origin have implications for growing Nebraska's college educated workforce.



Talent retention rates of Nebraska public postsecondary graduates by in-state or out-of-state student status and postsecondary institution type.

TWO-YEAR

The talent retention rates among two-year college graduates is **84 percent for in-state graduates** and **37 percent for out-of-state graduates**. This implies that to grow an additional 100 college-educated workers*, Nebraska two-year public colleges would need to graduate, on average, an additional **120 in-state graduates** or an additional **275 out-of-state graduates**.

FOUR-YEAR

The talent retention rates among four-year college graduates is **78 percent for in-state graduates** and **38 percent for out-of-state graduates**. To grow an additional 100 college-educated workers, Nebraska four-year public colleges would need to graduate, on average, an additional **130 in-state graduates** or an additional **265 out-of-state graduates**.

Given the higher talent retention rates among in-state students, it is more efficient to grow Nebraska's labor force by producing college-educated workers from in-state college students.

However, this does not mean that Nebraska colleges should de-prioritize out-of-state students, as they still represent a valuable source of college-educated workers. To improve retention and encourage out-of-state students to stay and work in Nebraska, additional support could be provided. These supports could include promoting work opportunities in Nebraska during their college years, the effects of which are described in the following section.

*To estimate how many enrollments are needed to grow an additional 100 college-educated workers, this equation was calculated: (total recruits) = (100 college-educated workers) / (probability of talent retention), then rounded to the nearest five.

Prior Meaningful Work Experience

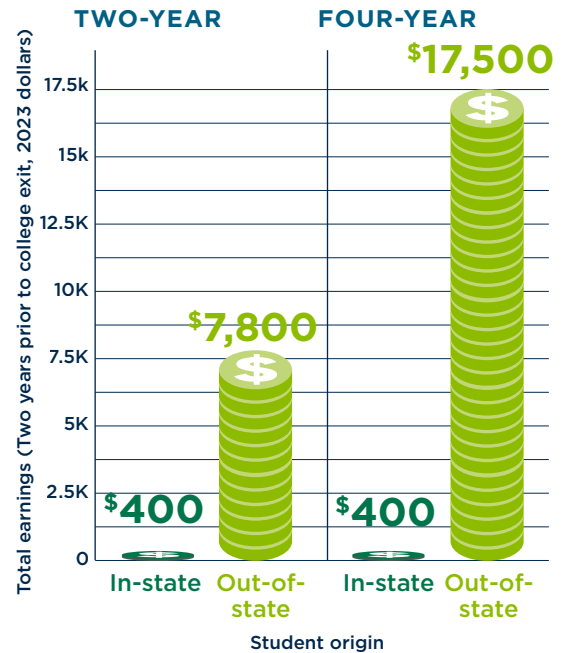
Providing meaningful in-state employment opportunities, such as internships and part-time jobs, during the two years leading up to college graduation is crucial for retaining talent in Nebraska. NSWERS has identified specific earning thresholds within this period that, when exceeded by a graduate, predict at least a 50 percent probability of talent retention.

These thresholds, adjusted to 2023 dollars, are:

- ≈ **\$400** for in-state students at two-year colleges
- ≈ **\$400** for in-state students at four-year colleges
- ≈ **\$7,800** for out-of-state students at two-year colleges
- ≈ **\$17,500** for out-of-state students at four-year colleges

The positive effect of work experience in Nebraska on talent retention may be attributed to the social and economic ties formed during employment in the state. Working in Nebraska allows students to build connections with co-workers, employers, and the community. These connections can lead to better career opportunities in Nebraska after graduation. Since career opportunities are the most common reason for relocation among young Nebraskan professionals, this could explain why in-state work opportunities increase talent retention rates¹¹.

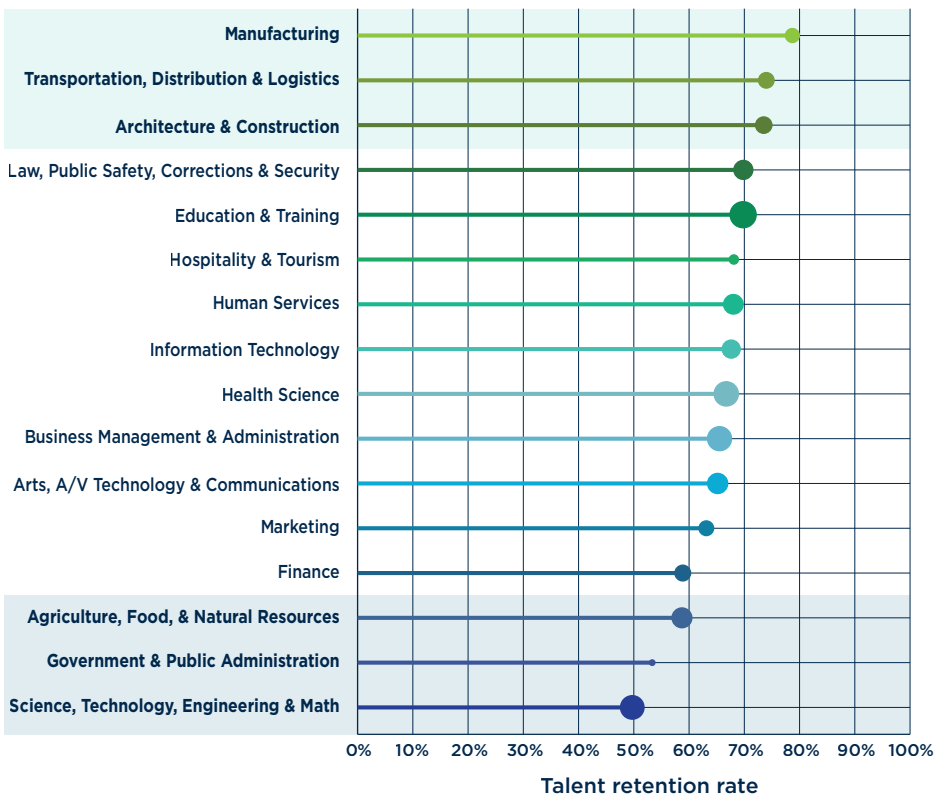
EARNINGS THRESHOLDS



Earnings thresholds to achieve at least a 50 percent chance of talent retention by student origin and postsecondary institution type

Degree Field Impact

TALENT RETENTION BY CAREER CLUSTER OF DEGREE 2015-2020 COLLEGE GRADUATES



Talent retention rates by degree area. The size of the bubble is relative to the total number of graduates in each degree area.

Talent retention rates differ depending on a graduate's degree field[^].

The three degree areas with the *highest* talent retention rates are:

1. Manufacturing (79%)
2. Transportation, Distribution, and Logistics (74%)
3. Architecture and Construction (74%)

The three degree fields with the *lowest* rates of talent retention are:

1. Science, Technology, Engineering, and Mathematics [STEM] (50%)
2. Government and Public Administration (53%)
3. Agriculture, Food, & Natural Resources (59%)

[^] Degree fields of recent graduates are categorized into career clusters based on a CIP code to career cluster crosswalk (<https://careertech.org/what-we-do/career-clusters/crosswalks/>).

Notably, two degree areas designated as high importance to Nebraska¹², STEM and Agriculture, have graduates with the lowest rates of talent retention. In contrast, another high-priority field, Manufacturing, boasts the highest rate of talent retention. These differences may be due to varying demands in Nebraska’s labor market for graduates from these fields.

Some of the variation in talent retention by degree area can be explained by differing proportions of in-state versus out-of-state graduates, who have distinct talent retention rates, as previously discussed. In-state graduates generally have talent retention rates above 75 percent. However, within this group, STEM (66 percent) and Agriculture (68 percent) graduates continue to have the lowest talent retention rates. Out-of-state students tend to have talent retention rates below 45 percent, which further emphasizes the potential workforce gains Nebraska could make by improving talent retention rates for out-of-state students.

TALENT RETENTION BY CAREER CLUSTER OF DEGREE

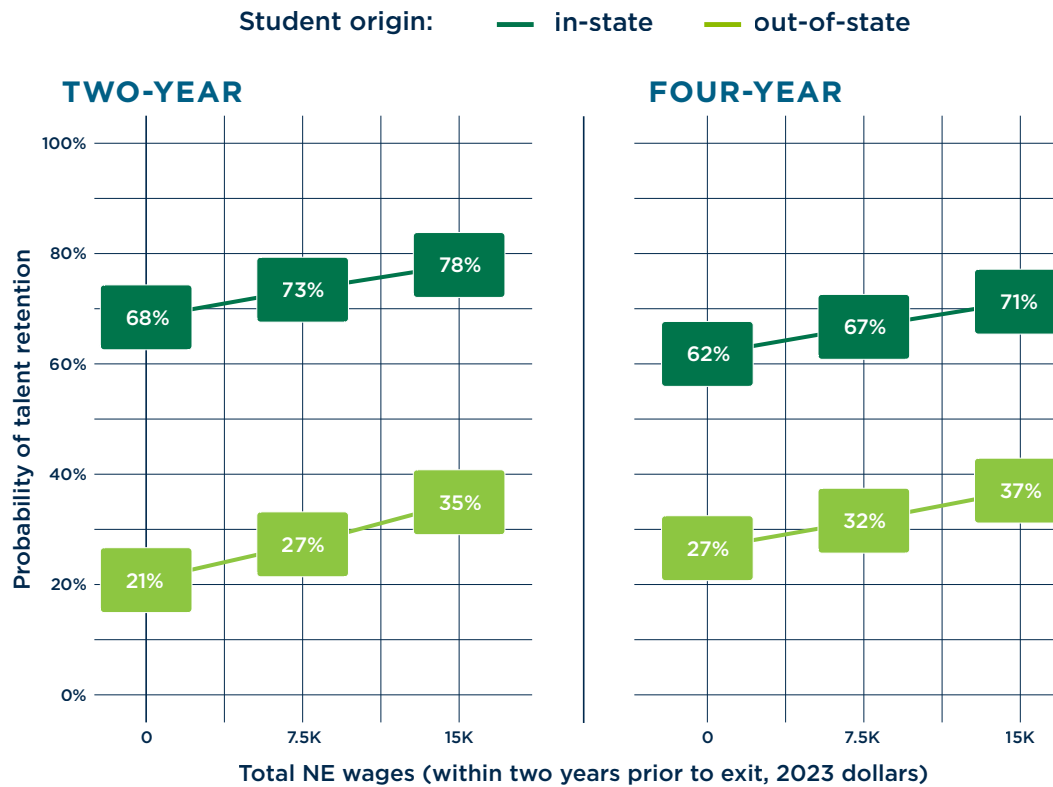
2015-2020 COLLEGE GRADUATES



Talent retention rates by degree area and student origin. The size of the bubbles are relative to the total number of graduates in each degree area. The percentages shown indicate increase in talent retention between in-state compared to out-of-state graduates.

Impact of Working in Nebraska During College

PREDICTED EFFECT OF WORKING IN NEBRASKA ON TALENT RETENTION RATES 2015-2020 COLLEGE GRADUATES



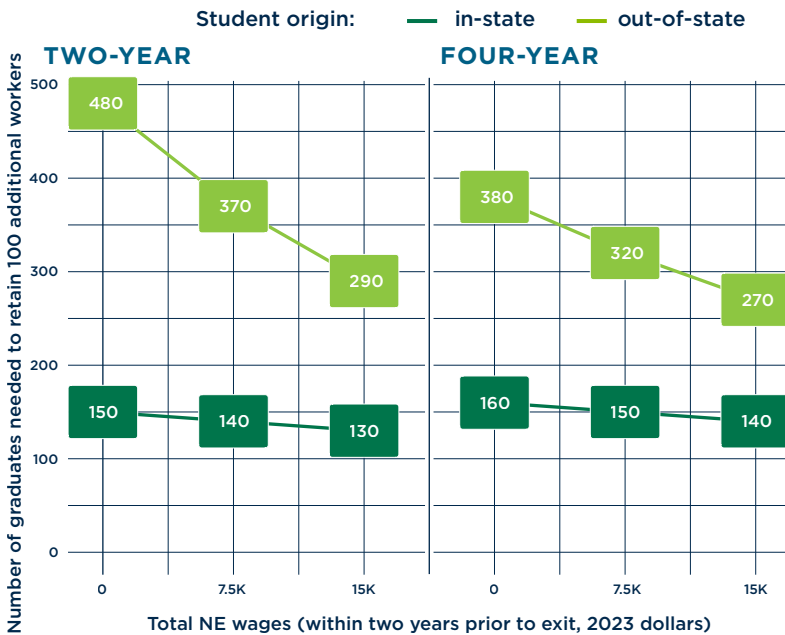
Talent retention rates by earning amounts from working in Nebraska in the two years prior to college graduation.

Earning wages in Nebraska during college is associated with higher talent retention rates. This section extends previous findings by modeling a hypothetical scenario to compare the effects of different wage amounts earned in Nebraska on talent retention. The earning amounts of \$0, \$7,500, \$15,000 are used for comparison, representing the approximate total earnings of a student working zero, one, or two full-time summer jobs/internships at a \$15 per hour.

The effects of working in Nebraska during college increase talent retention rates for both in-state and out-of-state college graduates. Among graduates from two-year colleges, in-state student talent retention rates increase by about 5 percentage points per \$7,500 earned whereas out-of-state student talent retention rates increase by 6-8 percentage points per \$7,500 total wages earned in Nebraska. Among graduates from four-year colleges, in-state student talent retention rates increase by about 4-5 percentage points per \$7,500 earned whereas out-of-state student talent retention rates increase by about 5 percentage points per \$7,500 total wages earned in Nebraska. However, a key finding is that prior work experiences have a relatively larger impact on out-of-state graduates compared to in-state graduates. This is most obvious when considering the number of graduates needed to grow an additional 100 workers.

PREDICTED EFFECT OF WORKING IN NEBRASKA ON GRADUATE-TO-WORKER CONVERSIONS

2015-2020 COLLEGE GRADUATES



The number of graduates needed to for an additional 100 college educated workers to join Nebraska's workforce, by earning amounts from working in Nebraska in the two years prior to college graduation.

For example, among graduates from two-year colleges, the number of out-of-state graduates needed to retain an additional 100 workers in Nebraska decreases from 480 graduates (with \$0 prior wages) to 290 graduates (with \$15,000 prior wages) a reduction of 190 graduates. In comparison, the number of in-state graduates needed decreases from 150 (\$0) to 130 (\$15,000), a reduction of 20 graduates. Similarly, for four-year colleges, the number of out-of-state graduates needed to retain an additional 100 workers in Nebraska decreases from 380 (with \$0 prior wages) to 270 graduates (with \$15,000 prior wages), a reduction of 110 total. For in-state graduates, the number decreases from 160 (with \$0 prior wages) to 140 (with \$15,000 prior wages), a reduction of 20 total graduates.

This smaller decrease in the number of in-state graduates needed is due to their already high baseline rates of talent retention. This finding suggests that targeting out-of-state students for prior work opportunities, such as internships, may have a disproportionately large effect on improving talent retention rates for this group.

Terms:

Brain Drain:

The out-migration of highly-trained or educated people from Nebraska to another state, region, or country.

Career Cluster:

A group of occupations with similar features. There are 16 Career Clusters in Nebraska.

Degree Field:

The area of work or study in which a student earns their degree. Also called Career Cluster.

Earnings Threshold:

The total wages earned in Nebraska, within two years prior to graduation, that predicts at least a 50 percent chance of talent retention.

Student Origin:

The place of residence for a student; either in-state or out-of-state.

Talent Retention:

Staying and working in Nebraska after graduating from college.

Note:

The population under consideration are college graduates from Nebraska public colleges. This includes anyone who was degree seeking at a Nebraska public postsecondary institution and has graduated. NSWERS considers a person to be working in the state if there is evidence of Nebraska employment for at least one year within the two years following exit from a Nebraska postsecondary institution. The “talent retention rate” is defined by college graduates working in Nebraska (per previous definition) divided by the total number of college graduates. Data is for all students who exited a Nebraska public postsecondary institution between 2015 and 2020.

Source:

Source: Nebraska Statewide Workforce & Educational Reporting System analysis of data from NSWERS Data System, 2015-2023. These data include records for public high schools and public postsecondary institutions in Nebraska. Data not provided by Central Community College. Employment information sourced from Nebraska’s Unemployment Insurance quarterly wage reports. These provisional results are based on certified NSWERS data as of July 30, 2024. The provisional results in this brief may change because of data resubmissions by NSWERS Partners and/or Affiliates. For updated results, please contact support@nswers.org.

Disclaimer:

The data in this report is based on information provided to NSWERS by our partner agencies and institutions. While NSWERS strives for accuracy and reliability, official estimates should be obtained directly from the respective partners.

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