



INDUSTRY PLACEMENT is important for understanding successful job pathways in the state.

Obtaining a job following college graduation influences short- and long-term earning and employment outcomes. Of college graduates whose first job closely aligns with their educational qualifications, nearly 90 percent remain in qualification-aligned jobs five years later and experience long-term financial benefits.¹ However, an estimated one in three Americans are overqualified for their job, and are therefore considered “underemployed.”¹ Those who begin their careers underemployed are five times more likely to stay underemployed five years later and earn \$10k less per year than those whose qualifications match their jobs.

Successful job placement following college graduation depends not only on educational qualifications, but also on job availability in a given occupational field. In Nebraska, three industries represent the top occupations with greatest projected job availability from 2016 to 2026: education, health, and trades. The following sections provide an overview of top high-wage, high-demand, and high-skill (H3) occupations in these three industries in Nebraska and factors that may influence students in pursuing these occupations.

In Nebraska, three industries represent the top occupations with greatest projected job availability.



Education



Health



Trades



Education

The education industry includes two of the top ten H3 projected occupations in Nebraska with elementary school teachers ranked number seven and secondary school teachers ranked number ten.² Teaching occupations have an estimated job growth of 6.3 percent in Nebraska through 2026.³ Compounding the increasing need for qualified teachers in the future, Nebraska is currently experiencing a teacher shortage. As of 2022, 27 percent of teaching positions in Nebraska were vacant.⁴ To address teacher shortage concerns, the Nebraska legislature passed three bills to alleviate burdens associated with pursuing a teaching career (e.g., eliminating certificate fees, increasing maximum loans, and providing retention grants: Legislative Bills 519, 603, and 385).⁵

Several factors influence students to pursue a teaching career and/or major in education.



CHOOSING TEACHING AS A CAREER IS LARGELY INFLUENCED BY INTRINSIC AND ALTRUISTIC MOTIVATIONS.⁶ Motivating factors to pursue a teaching career include a desire to help and support students, passion for teaching, and dedication to contributing to society. Those choosing a teaching career also report enjoying teaching youth and feeling they can make a difference in youth lives.^{7,8} Although having a strong interest in the teaching content area motivates students to pursue a teaching career, according to one study, only 40 percent of students majoring in STEM indicated they would consider a teaching career.



EXTRINSIC MOTIVATORS INFLUENCE SOME STUDENTS TO PURSUE A TEACHING CAREER. These include, for example, having more time for family with a nine-month teaching schedule, the teaching work environment, and job satisfaction.⁷ Job security was less of an influence for those pursuing teaching careers in the United States compared with other countries in one research review, and men were more motivated than women by pay and job status.⁶



SELF-EFFICACY ABOUT TEACHING, ENCOURAGEMENT TO BE A TEACHER FROM FAMILY AND FRIENDS, AND PERCEIVED COMMUNITY SUPPORT FOR TEACHERS were all motivating factors to become a teacher in a study of high school students.⁹



Health

The health industry is also among the top ten H3 occupations in Nebraska with registered nurses listed as the second highest projected occupation from 2016 to 2026.² The number of registered nurses has increased in Nebraska from 2017 to 2021 (27,922 to 29,681 nurses, respectively).¹⁰ However, Nebraska is expected to experience a shortage of 5,435 nurses by 2025.¹¹ The COVID-19 pandemic exacerbated preexisting working conditions that impact nursing shortages: burnout, staff demands, and lack of clinicians to educate and train future nurses. Given projected job availability in the nursing field and extant shortages, attracting and retaining high school and college students in a health-science or STEM pipeline is imperative to meet Nebraska's future needs.

Several factors influence students in pursuing a health- or STEM-related credential, college major, or career.



EARNING CAREER CREDENTIALS IN HIGH SCHOOL CAN INFLUENCE STUDENTS' CHOICE TO MAJOR IN HEALTH SCIENCE IN COLLEGE. Among students who earned an industry-recognized credential (IRC) in health science, 78.4 percent concentrated in the health science career and technical education (CTE) field while the remainder either concentrated in a different CTE field (11.1 percent) or did not participate in CTE (10.6 percent).¹² One-third of students who earned an IRC in health science in high school majored in health science in college.¹²



SAT SCORES AND STEM SELF-EFFICACY RELATE TO STUDENTS' INTENTION TO MAJOR IN A STEM DISCIPLINE. SAT math scores are negatively associated with students' intent to major in biology, a core subject area for nursing and the health field. This relationship is even stronger for men than women.¹³ In a large-scale study, females demonstrated lower perceived abilities in math and science compared with males and were less than half as likely as males to major in STEM.¹⁴ However, females were twice as likely as males to major in STEM disciplines related to the social and behavioral sciences.



LIVING IN AN AREA WHERE HEALTHCARE PROFESSIONALS ARE NEEDED CAN INFLUENCE HIGH SCHOOL STUDENTS' DECISION TO EARN A CERTIFICATION IN HEALTH SCIENCE (e.g., nursing assistant). Research shows that students who live in an area with a high demand for jobs in the health field are more likely to earn a certification in health than those who do not live in a high demand area.¹⁵



CAREER FIT IS A PRIMARY REASON STUDENTS CHOOSE TO PURSUE A NURSING CAREER. Students entering nursing programs perceive nurses as caring, kind, compassionate, trustworthy, helpful, and hardworking.¹⁶ Nursing students in the United States report high levels of vocational congruency, which represents the extent in which a profession fits an individual's personality and/or professional desires.¹⁷



Trades

Occupations in the trades industry make up four of the top ten H3 occupations in Nebraska with heavy and tractor-trailer truck drivers ranked number one; carpenters ranked number four; electricians ranked number eight; and plumbers, pipe fitters, and steamfitters ranked number nine.² Nebraska is among the top five states in the country with the highest concentration of jobs for heavy and tractor-trailer truck drivers (26.86 per thousand jobs).¹⁸ Carpentry makes up the largest construction and extraction occupation in Nebraska with an estimated 7,470 employed carpenters as of 2020.¹⁹ Electricians in Nebraska make up the second largest group in construction and extraction occupations with 5,550 employed electricians as of 2020.¹⁹ An estimated 2,920 individuals are employed as plumbers, pipefitters, or steamfitters.¹⁹ Given the prominence of these high-wage, high-skill occupations in Nebraska and projected demand, building and expanding high school and postsecondary career pathways in the trades industry is critical.

Trades industries can offer promising career pathways for those interested in more immediate employment.



STUDENTS WHO PARTICIPATE IN CAREER AND TECHNICAL EDUCATION (CTE) CONCENTRATIONS IN THE TRADES, SUCH AS TRANSPORTATION, ARE MORE LIKELY TO ENTER THE WORKFORCE FOLLOWING HIGH SCHOOL GRADUATION compared with other CTE concentrations where students pursue additional postsecondary education (e.g., healthcare and education).²⁰ The pathway from CTE concentrations in trades to the workforce is often more direct than those in fields that typically require further postsecondary education.



STUDENTS WHO PARTICIPATE IN A TRADES CTE CONCENTRATION EXPERIENCE POSITIVE ECONOMIC RETURNS through entering the workforce with increasing annual earnings up to seven years after high school.²⁰

The preparation and successful placement of students in high-wage, high-demand, and high-skill occupations in Nebraska depends on education and career development opportunities starting in high school. Understanding whether students successfully attain employment in a job that matches their education qualifications requires longitudinal data across the education and workforce systems in Nebraska. There is a dearth of longitudinal research tracking long-term outcomes for students after they graduate and enter different fields of employment.²¹ NSWERS is uniquely positioned to fill this research gap using longitudinal data and addressing imperative questions about the interconnections between Nebraska's education and workforce systems.

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This is an NSWERS **EXPLORE** product, an overview and background of the current state of knowledge surrounding the factors that contribute to **Industry Placement** in Nebraska.