

RESEARCH BRIEF

Relationship between Levels of Education
and Labor Market Outcomes

Introduction

Students believe that going to college will lead to a better job with a higher paying salary. Indeed, earning a degree can be a critical step toward economic mobility. Research shows that, on average, individuals with an associate degree earn more than those with a high school diploma, and four-year degrees can yield more earnings than two-year degrees. With each additional step up the educational ladder, the opportunity for economic mobility improves.

Community colleges are uniquely positioned to help students enter the labor market in two ways: through the attainment of a two-year credential and/or by offering lower-cost transfer credits toward a four-year degree. Some community college students intend to earn both a two-year *and* a four-year degree, while others seek only a two-year program of study. Both types of students share the expectation that the path they choose will result in a stable, well-paying job after graduation. Therefore, it is in NOVA's best interest to guide students toward programs of study and degrees or credentials which will meet or exceed these expectations.

In This Brief

This Brief presents national data on median wages and unemployment rates by degree level, calling particular attention to differences between bachelor's degrees and associate degrees. Information is also presented regarding high-growth careers for associate and bachelor's degree graduates, as well as strategies to reduce barriers to transfer to a four-year institution.

Summary of Findings

This Brief shows that, in the current economy, it is in the best interest of students to transfer to a four-year institution and earn a bachelor's degree after attending NOVA.

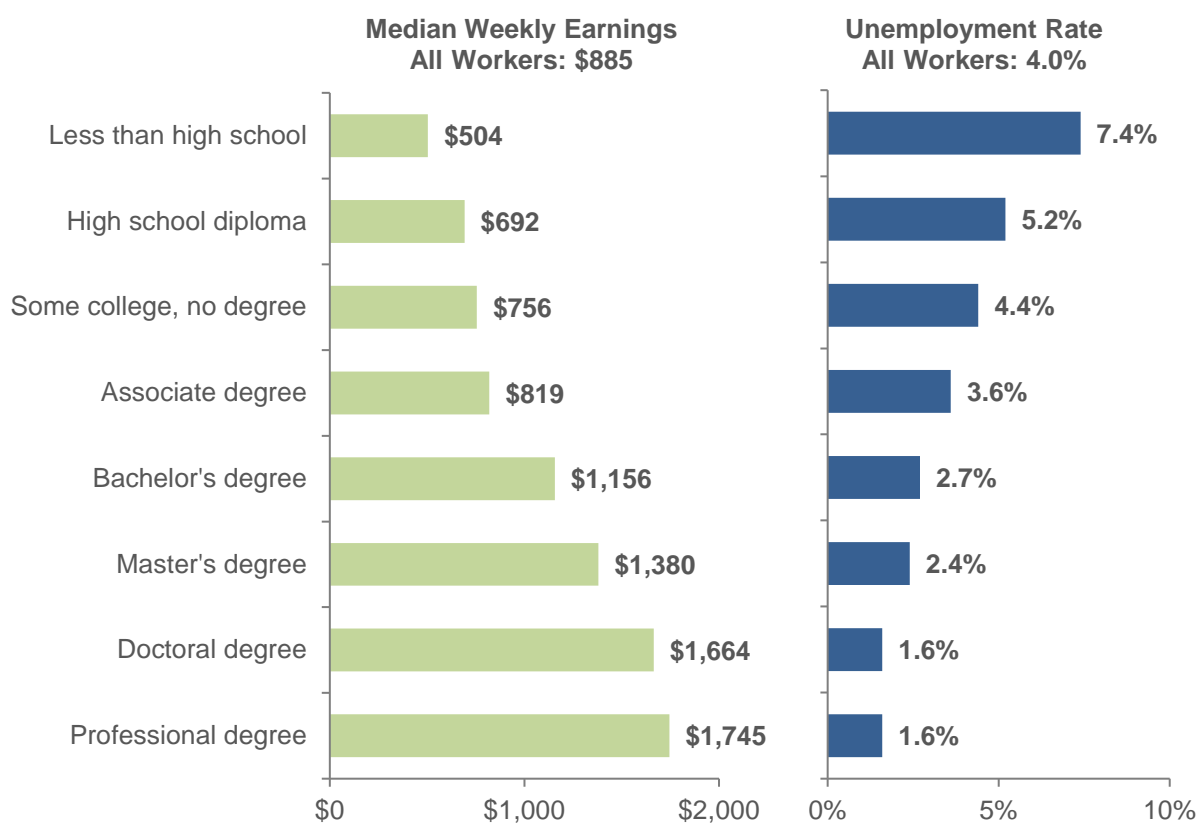
- On average, four-year degrees yield higher salaries and have more diverse and faster growing employment options than two-year degrees.
- However, for students who only wish to pursue a two-year degree, the most marketable programs are in occupational and technical fields, which have faster growing careers and higher median salaries than general education degrees.

Section I. Impact of Educational Attainment on Earnings and Unemployment

The Current Population Survey, administered by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics, provides data on national employment trends. Figure 1, below, shows the impact of educational degree attainment on median weekly earnings and unemployment rates. Overall, earnings increase and unemployment rates decrease for each step up the educational ladder—suggesting a bachelor’s degree may result in a better, higher-paying job after graduation than a two-year degree.

- **On average, bachelor’s degree graduates earn \$337 more per week than associate degree graduates.** The median weekly earnings for associate degree graduates is \$819, while the median weekly earnings for bachelor’s degree graduates is nearly \$1,200.
- **Unemployment rates are highest among individuals without a college degree.** Both associate and bachelor’s degree graduates have unemployment rates below the national average of four percent. However, the unemployment rate is the lowest among individuals with a bachelor’s degree or higher.

Figure 1. Median Weekly Earnings and Unemployment Rates by Educational Degree Level, 2016¹



Source: Current Population Survey; U.S. Bureau of Labor Statistics²

¹ Data includes a surveyed sample of individuals who were 25 and older and employed as full-time wage or salary workers.

² Allen Chen, "More education: Lower unemployment, higher earnings," *Career Outlook*, U.S. Bureau of Labor Statistics, April 2017.

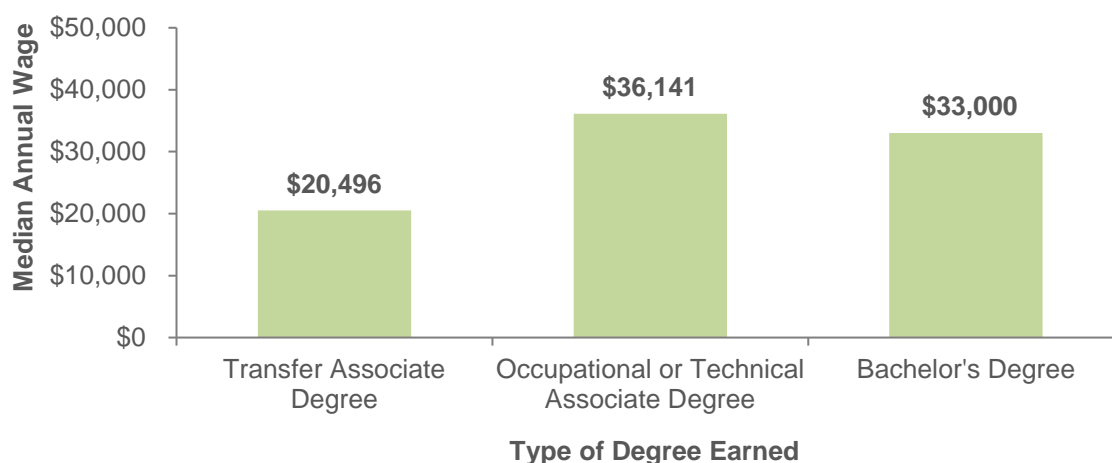
Section II. Wage Differential for Associate Degree Graduates

Data presented in the previous section shows that a bachelor's degree can yield higher wages than an associate degree. However, recent research challenges the notion that what degree you earn matters more than what you study—in fact, some two-year degrees have the potential for wages that are comparable to those of four-year graduates.³

The State Council of Higher Education for Virginia (SCHEV) distinguishes between associate degrees in occupational or technical fields and transfer associate degrees (Figure 2, below). Transfer associate degrees include fields of study that primarily serve to provide students with transfer credits toward a bachelor's degree, such as General Studies or Liberal Arts.

- **Two-year degrees in occupational or technical fields yield higher wages in the 18 months after graduation than transfer associate degrees.** In the initial months after graduation, individuals with an occupational or technical associate degree earned a median wage of over \$15,000 more than individuals with a transfer associate degree.
- **Occupational or technical associate degrees also yield higher annual wages after graduation than bachelor's degrees.** In the 18 months after graduation, bachelor's degree graduates earned a median annual wage that was \$3,000 less than associate degree graduates in occupational or technical fields.
- These trends suggest that NOVA should emphasize the value and marketability of occupational and technical careers for students who only wish to pursue a two-year degree and do not aim to transfer to a four-year institution.

Figure 2. Median Annual Wages 18 Months after Graduation by Type of Degree Earned, Graduates from 2011-12 to 2014-15



Source: State Council of Higher Education for Virginia⁴

³ Schneider, M. (2016). Degrees of Value: Differences in the Wages of Graduates from Minnesota's Colleges and Universities. American Institutes for Research.

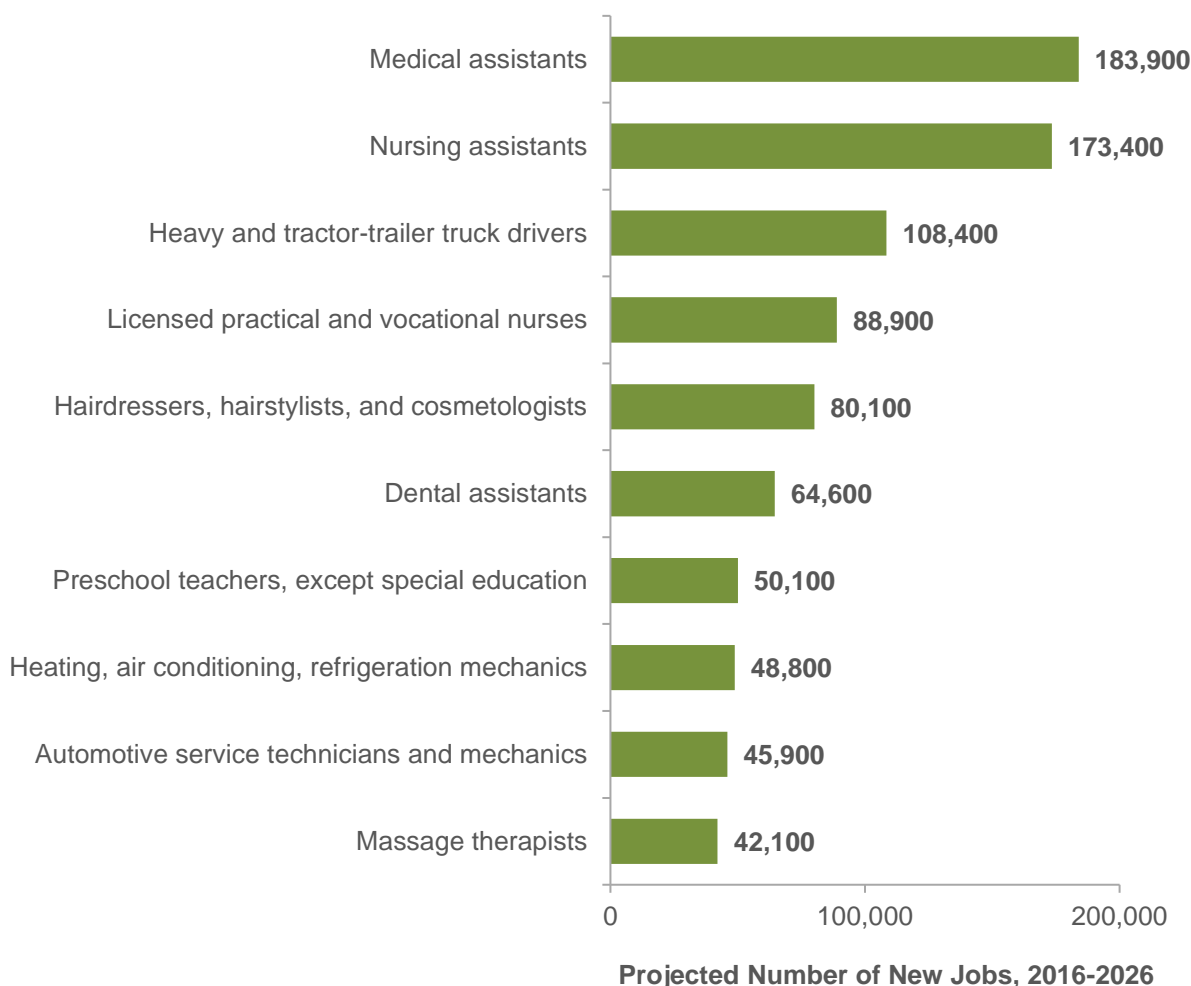
⁴ "WG01: Wages of Graduates, Degree Levels by Institution." State Council of Higher Education for Virginia.

Section III. High-Growth Careers for Associate and Bachelor’s Degrees

Figure 3, below, shows high-growth occupations for **associate degree** graduates. These are the occupations typically requiring an associate degree that are projected to have the most number of new jobs added to the national workforce between 2016 and 2026.

- The high-growth occupations for associate degree graduates are mostly in occupational and technical fields, including medical assistants, nursing assistants, and heavy and tractor-trailer truck drivers. These three occupations alone are projected to add more than 100,000 new jobs each across the next decade.
- Of the high-growth careers for associate degree graduates, many have median annual salaries exceeding \$40,000, but few rise above \$50,000 (see Table A1 in the Appendix).

Figure 3. Occupations Typically Requiring an Associate Degree with Highest Projected Number of New Jobs, 2016-2026



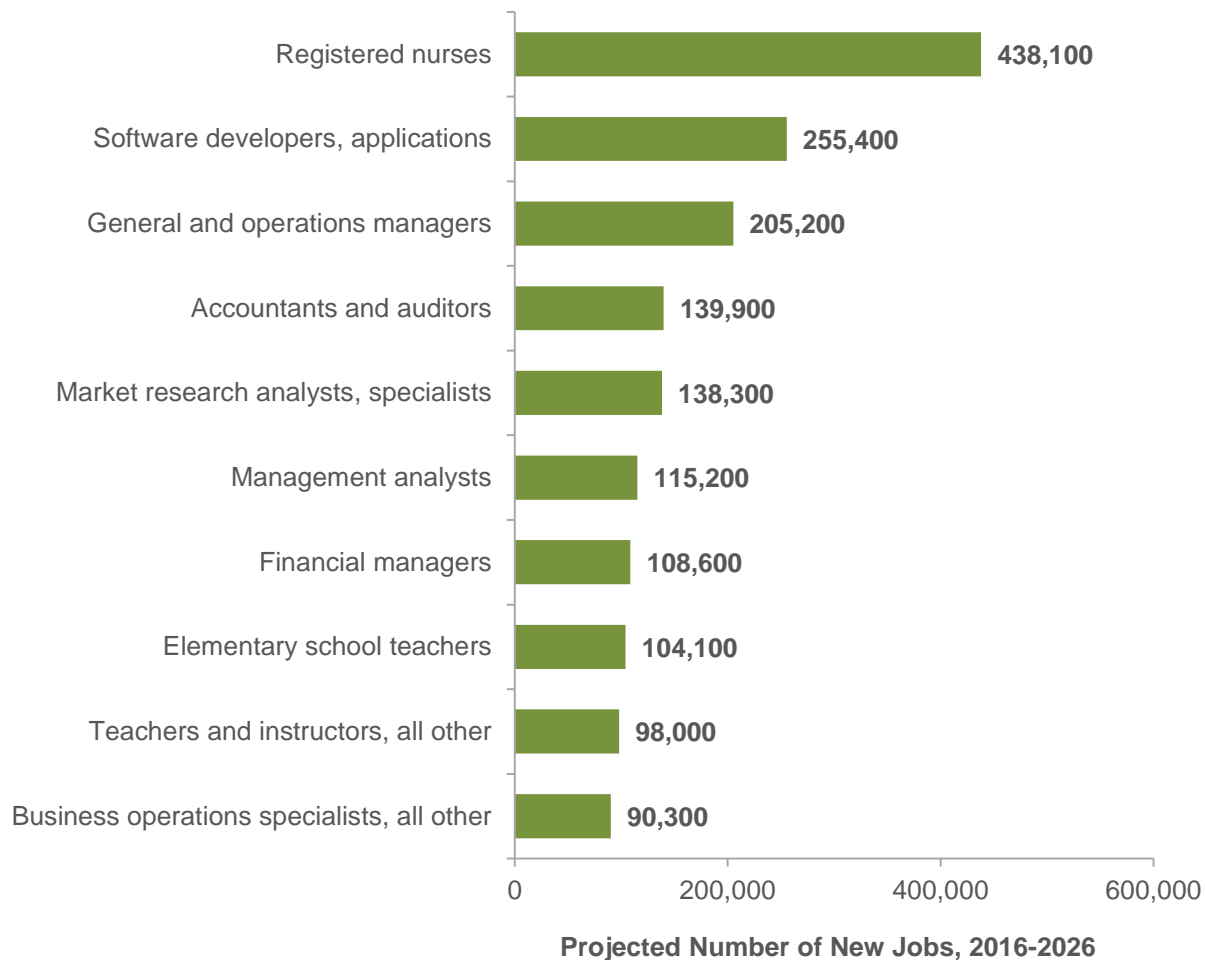
Source: U.S. Bureau of Labor Statistics⁵

⁵ "Projections of occupational employment, 2016–26," *Career Outlook*, U.S. Bureau of Labor Statistics, October 2017.

Figure 4, below, shows high-growth occupations for **bachelor's degree** graduates. These are the occupations typically requiring a bachelor's degree that are projected to have the most number of new jobs added to the national workforce between 2016 and 2026.

- It is estimated that over 400,000 new registered nursing jobs will be added to the national workforce across the next decade, significantly more than the number of new nursing jobs for associate degree graduates (e.g., licensed practical and vocational nurses; see Figure 3). This suggests that while nursing is a high-growth career for both types of graduates, there will be more opportunities for individuals with a four-year credential.
- The list of high-growth jobs for bachelor's degree graduates is diverse and spans multiple industries, including health care, education, computer and software, business, and construction. These occupations will have more new jobs and higher median salaries than high-growth occupations for associate degree graduates (see Table A2 in the Appendix).

Figure 4. Occupations Typically Requiring a Bachelor's Degree with Highest Projected Number of New Jobs, 2016-2026



Source: U.S. Bureau of Labor Statistics⁶

⁶ "Projections of occupational employment, 2016–26," *Career Outlook*, U.S. Bureau of Labor Statistics, October 2017.

Section IV. Strategies for Improving Upward Transfer

With the exception of occupational and technical fields, students may find better success in the labor market if they earn a four-year degree after graduating from community college. Therefore, it is in NOVA's best interest to implement strategies that will improve transfer rates for associate degree graduates. Research from the American Council on Education (ACE) posits that the best way to improve "upward transfer"—the term used to describe the transition from community college to a four-year institution—is to reduce common barriers:⁷

- **Academic Advising and Planning:** Students who declared a major while enrolled in community college were more likely to transfer to a four-year institution. Therefore, academic advising and planning can not only help students navigate their program options, but also help to guide them on the path toward transferring to a four-year school. One critical aspect of the planning process is the quality and frequency of a student's interactions with a college or career counselor on campus.
- **Federal Financial Aid:** Students who received Pell Grants and federal loans were more likely to transfer than students who did not receive federal financial aid. Therefore, services to assist students with the process of understanding their payment options and applying for financial aid may positively influence the decision to continue their education after receiving an associate degree.
- **Student Demographics:** Demographic characteristics—such as gender, race or ethnicity, and/or first-generation status—had a measurable effect on transfer rates. In general, underrepresented and minority groups were less likely to transfer than their counterparts. Therefore, targeted support services for these groups may improve the college experience and, thus, their likelihood of transferring to a four-year school.

⁷ Turk, J. M. and Chen, W-L. (2017). *Improving the Odds: An Empirical Look at the Factors That Influence Upward Transfer*. American Council on Education. Available at: <http://www.acenet.edu/news-room/Documents/Improving-the-Odds.pdf>

Appendix: Data Tables

**Table A1. Occupations Typically Requiring an Associate Degree
with Highest Projected Number of New Jobs, 2016-2026**

Occupations	Projected Number of New Jobs, 2016-2026	Median Annual Wage as of May 2016
Medical assistants	183,900	\$31,540
Nursing assistants	173,400	\$26,590
Heavy and tractor-trailer truck drivers	108,400	\$41,340
Licensed practical and licensed vocational nurses	88,900	\$44,090
Hairdressers, hairstylists, and cosmetologists	80,100	\$24,260
Dental assistants	64,600	\$36,940
Preschool teachers, except special education	50,100	\$28,790
Heating, air conditioning, refrigeration mechanics/installers	48,800	\$45,910
Automotive service technicians and mechanics	45,900	\$38,470
Massage therapists	42,100	\$39,860
Paralegals and legal assistants	41,800	\$49,500
Dental hygienists	40,900	\$72,910
Emergency medical technicians and paramedics	37,400	\$32,670
Respiratory therapists	30,500	\$58,670
Phlebotomists	30,100	\$32,710
Medical records and health information technicians	27,800	\$38,040
Physical therapist assistants	27,400	\$56,610
Radiologic technologists	25,300	\$57,450
Health technologists and technicians, all other	25,100	\$41,070
Web developers	24,400	\$66,130

Source: U.S. Bureau of Labor Statistics⁸

⁸ "Projections of occupational employment, 2016–26," *Career Outlook*, U.S. Bureau of Labor Statistics, October 2017.

**Table A2. Occupations Typically Requiring a Bachelor's Degree
with Highest Projected Number of New Jobs, 2016-2026**

Occupation	Projected Number of New Jobs, 2016-2026	Median Annual Wage as of May 2016
Registered nurses	438,100	\$68,450
Software developers, applications	255,400	\$100,080
General and operations managers	205,200	\$99,310
Accountants and auditors	139,900	\$68,150
Market research analysts and marketing specialists	138,300	\$62,560
Management analysts	115,200	\$81,330
Financial managers	108,600	\$121,750
Elementary school teachers, except special education	104,100	\$55,800
Teachers and instructors, all other	98,000	\$30,110
Business operations specialists, all other	90,300	\$69,040
Managers, all other	79,500	\$104,970
Secondary school teachers, except special education	76,800	\$58,030
Medical and health services managers	72,100	\$96,540
Computer systems analysts	54,400	\$87,220
Middle school teachers, except special education	47,300	\$56,720
Software developers, systems software	47,100	\$106,860
Child, family, and school social workers	45,000	\$43,250
Construction managers	44,800	\$89,300
Computer and information systems managers	44,200	\$135,800
Personal financial advisors	40,400	\$90,530

Source: U.S. Bureau of Labor Statistics⁹

⁹ "Projections of occupational employment, 2016–26," *Career Outlook*, U.S. Bureau of Labor Statistics, October 2017.