



The Growth of Associate's Degrees in Montana

by William Connell,
Economist

Recessions are a popular time for people to go back to school.

Job losses in declining industries spur workers to seek employment in high-demand occupations, often in fields that require them to seek additional education and training. This may explain the considerable growth in Montana's two-year degree programs between 2008 and 2013. In these years, from the beginning of the recession to the recent past, the number of graduates awarded associate's degrees increased by a remarkable fifty percent.

Two-year degrees are attractive because they take less time to complete and are less expensive, yet they are more narrowly focused on preparation for specific employment. Two-year programs also present opportunities and flexibility for individuals who are already working and may have never taken college-level classes. Furthermore, two-year colleges tend to have closer ties with local and regional employers, and they allow those with a bachelor's degree to enter into a more focused course of study.

In the past year, Montana's total employment has reached its pre-recession level, but many of the exact jobs lost in the recession have not come back within their respective industries. However, growing industries such as healthcare and retail trade have picked up the slack. The hardest hit industry was construction, losing 9,600 jobs. While it has been estimated that it will take almost ten years for construction employment to reach pre-recession levels, the changing employment mix has driven overall employment growth to reach its pre-recession level.

The recession of 2007 caused a fairly large shake up in Montana’s labor market. However, after six years, Montana has regained more jobs than were lost in the recession. Throughout this same time period, the quantity of annual associate’s degree recipients in the Montana University System (MUS) has grown significantly. Furthermore, the healthcare and retail trade sectors are projected to add 1,300 and 1,000 jobs annually over the next decade, respectively. By tracking the employment patterns of recent two-year graduates in the year following graduation, prospective students can better gauge their likelihood of getting a job in certain industries. They can also get a rough estimate of what recent graduates were paid in the year following graduation.

Data description

The Office of the Commissioner of Higher Education (OCHE) and the Research and Analysis Bureau of the Montana Department of Labor and Industry have combined expertise and data to track graduates’ employment patterns in the year following graduation. Specifically, data from the MUS and Unemployment Insurance (UI) system are matched to reveal employment patterns of recent graduates. Data on these graduates depict their degree level, campus, major, age, gender, and residential status. If an MUS graduate works in Montana in any of the four

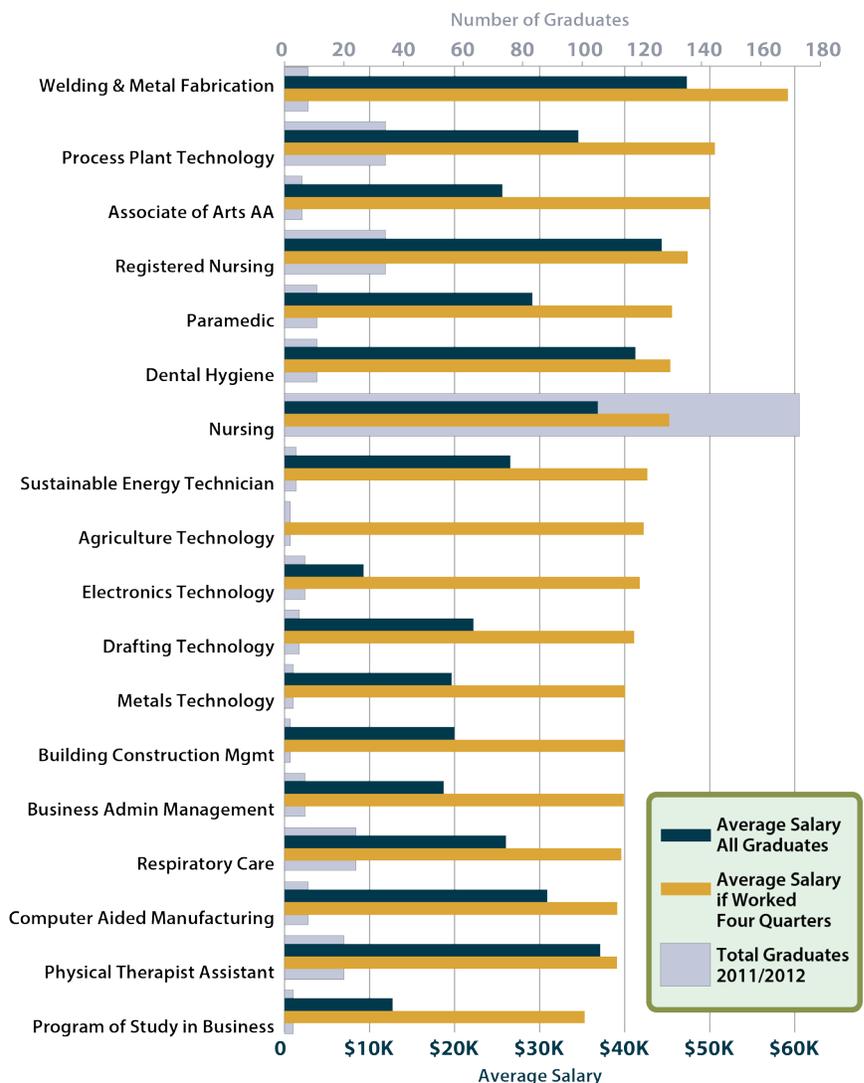
quarters following their graduation, beginning in the third quarter of the year (July 1st), the data is matched to their respective employment records. This allows education information to be coupled with employment information, such as the type of job and annual income.

After six years, Montana has regained more jobs than were lost in the recession.

There are some caveats and characteristics of this type of data that need to be understood.

One area of concern is that just because someone only worked one quarter, or zero quarters in the year following graduation does not necessarily mean they couldn’t find a job. It is more

Figure 1: 2011/2012 MUS Associate graduates by CIP Code



and more popular for some graduates to take time off between college and entering the workforce, particularly for bachelor’s graduates. Similarly, some graduates leave Montana for work or return to their home state to begin their professional careers. UI data does not track self-employed workers, which means graduates who become self-employed are not included in the data.

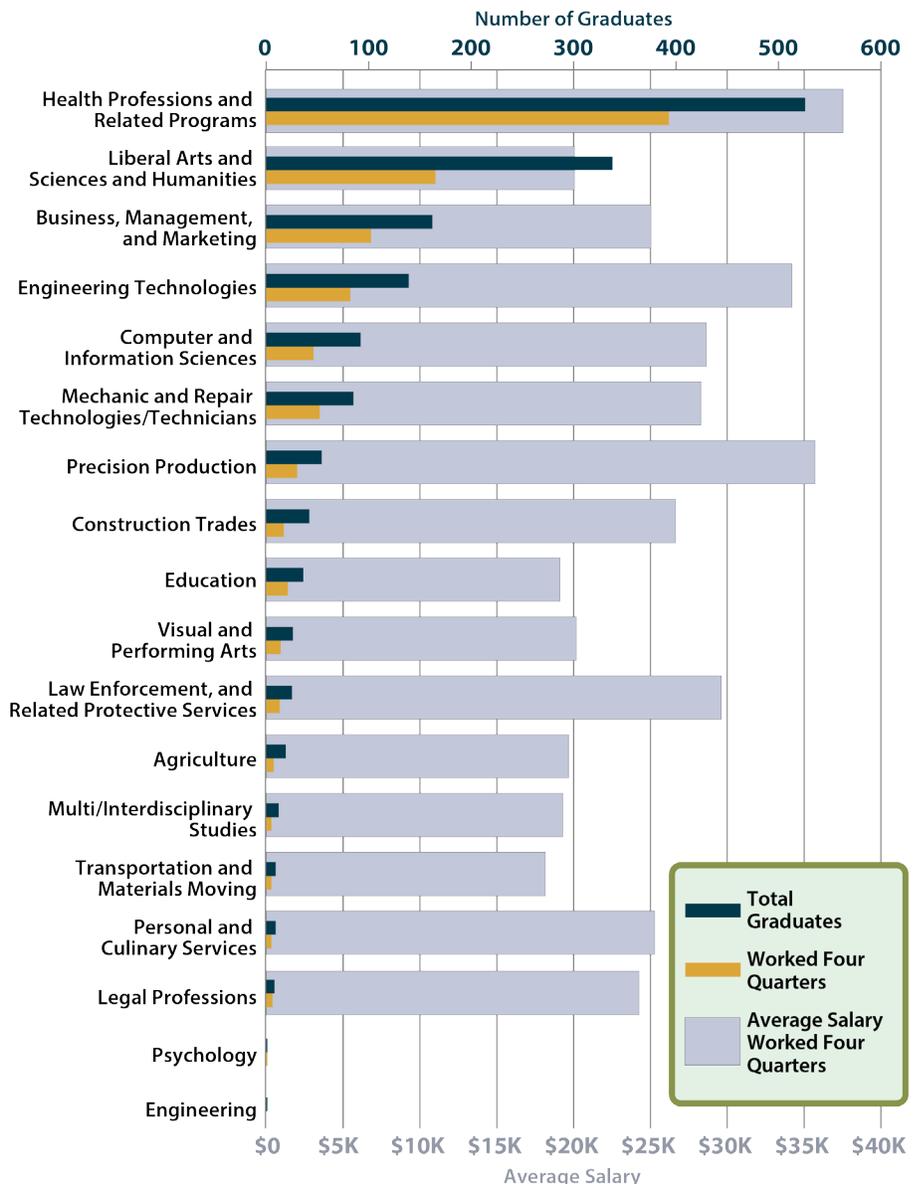
Montana associate’s degrees in demand

Figure 1 illustrates the number of graduates in 2011/2012 by their Classification of Instructional Programs (CIP) code, the number that worked four consecutive quarters following graduation by CIP code, and the average salary of those who worked four quarters by CIP code. The largest number of graduates is in healthcare, liberal arts, business, and engineering technologies. The healthcare industry has been one of Montana’s largest and fastest growing industries for the last decade, and there are many jobs for associate’s degree holders in this field. Furthermore, almost 400, or 75% of 2011/2012 associate’s healthcare graduates worked all four quarters following graduation. The number of associate’s degrees in healthcare is more than twice the quantity of graduates in any other field, and comprises 40% of associate’s degree-holders working four consecutive quarters following graduation. Since the healthcare industry has been

growing in Montana, graduates with healthcare related degrees are more likely to be captured by these data. Liberal arts graduates, on the other hand, may be more likely to leave the state and exit the data set.

Figure 2 depicts the 20 highest paid associate’s graduates by degree in the first year following graduation for all graduates and graduates that worked all four quarters. Four of the seven highest paid graduates have degrees in the healthcare sector, and all of the degree holders in the top 20 made over \$35,000 in their

Figure 2: Associate’s Degree Graduates By Degree, Ranked By Salary



first year following graduation. However, it is worth noting these data only capture an individual's starting salary, which is just one factor to consider when choosing a degree. Although welding and metal fabrication show the highest initial salary, it is possible that someone with a degree in business management may earn more over the course of their lifetime because of a greater ability to advance within that field.

Because healthcare is such a large and predictable component of employment growth in Montana, a more detailed look at graduates and their employment may be insightful. In figure 3, two-year healthcare graduates are listed first by the quantity of graduates in 2011/2012, the number of graduates who worked four quarters, and their respective salaries. The first notable feature is that three types of nursing degrees – nursing, practical nursing, and registered nursing – make up over 70% of the two-year healthcare graduates. Registered nurses are projected to add about 350 jobs annually through 2020; in this context, the quantity of nursing graduates is relatively close to projected demand. Dental hygienists, radiologic technologists, surgical technologists, respiratory caregivers, and physical therapist assistants are expected to add the greatest number of jobs over the next ten years, and they are also being produced in the greatest quantities in two-year associate's degrees.

Figure 3: Healthcare Associate's Graduates 2011/2012

Major	Total Grads	Grads Employed Four Qtrs	Avg salary worked Four Qtrs	Avg Salary All Grads
Nursing	173	133	\$45,223	\$36,820
Practical Nursing	135	99	\$28,355	\$22,341
Registered Nursing	34	31	\$47,405	\$44,363
Radiologic Technology	32	23	\$32,230	\$24,395
Surgical Technology	29	20	\$33,138	\$23,919
Respiratory Care	24	15	\$39,621	\$26,066
Physical Therapist Assistant	20	19	\$39,098	\$37,143
Medical Assistant	18	13	\$24,035	\$18,514
Health Information Technology	14	6	\$33,159	\$16,405
Dental Hygiene	11	10	\$45,365	\$41,272
Paramedic	11	7	\$45,575	\$29,150
Medical Information Technology	8	5	\$18,852	\$13,491
EMS – EMT – Paramedic	4	4	\$41,773	\$41,773
Medical Billing & Coding	4	3	\$16,887	\$12,665
Rehabilitation & Related Serv	4	2	ND	\$11,635
Chemical Dependency Counseling	2	1	ND	ND
Health Care Informatics Tech	1	1	ND	ND
Medical Assisting	1	0	ND	ND
Medical Transcription AAS	1	1	ND	ND

ND = Not Discloseable

Conclusion

The recent recession caused thousands of lost jobs in Montana. Some of those jobs will take years to come back, but currently Montana's total employment has reached pre-recession levels thanks to growing industries such as healthcare and retail trade. Many folks have responded to changing economic conditions by pursuing associate's degrees, many in the healthcare sector, following a shift away from declining employment in construction. Two-year associate's degrees have been able to provide another option for people to re-train in fields that are expected to have the greatest demand currently and in the future. The combination of benefits that associate degrees offer, such as a fairly quick turnaround, narrow focus, and strong ties to local employers, has helped total employment reach pre-recession levels.