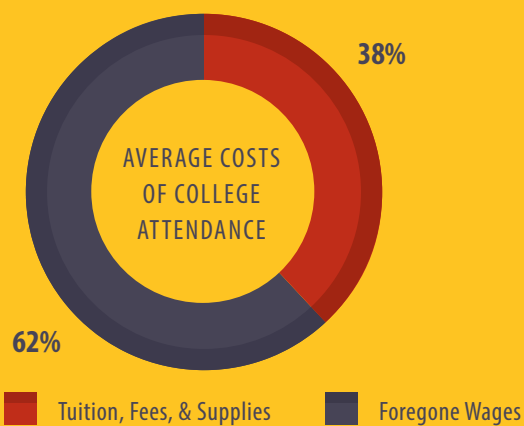


Cost and Benefits of 2-Year College Credentials

This report assesses the returns to public 2-year college education for students across six colleges in the state of Montana while accounting for the differential benefits and costs – including foregone wages – associated with varying certificate levels. For each type of 2-year college credential, we calculate the payback period, or how many years it will

take to recover student investment. We also calculate the average return in the first 10 years after graduating for each credential to determine how the costs of educational attainment compare to the benefits associated with each credential level. These measures provide performance indicators for students choosing to invest in 2-year college credentials.



Costs of 2-Year College Attendance

The total costs of attending college include:

- 1 the costs of tuition, fees, and supplies that are paid directly, and
- 2 foregone wages, or the money you could have made by working fulltime instead.

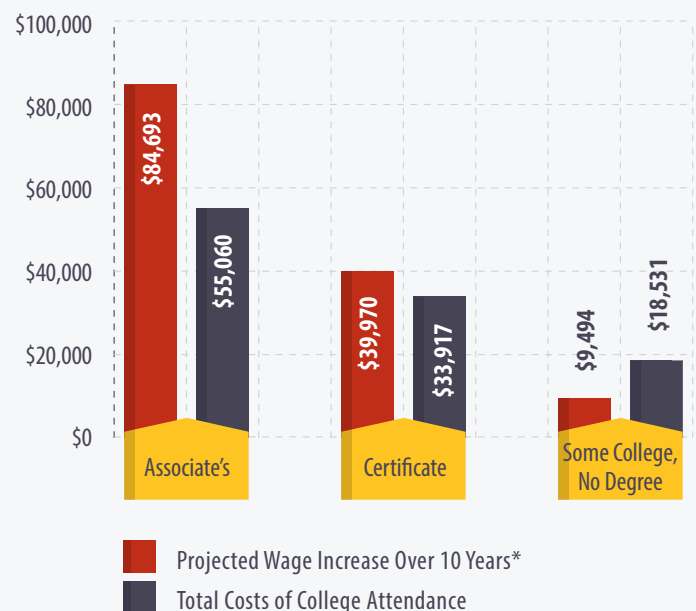
Foregone wages make up 62% of the costs of attending 2-year college in Montana. It is important to make sure that attending college is worth the costs of tuition, fees, and supplies as well as the time that it takes away from working full-time.

Returns to 2-Year College Attendance

We find strong, positive returns to attending a 2-year college in Montana. Those completing 2-year college credentials have projected wage increases over the first ten years after graduation that are higher than the total costs associated with attending college. Despite having the highest average cost of completion, Associate’s degrees provide the strongest returns, with a yearly wage increase of approximately \$7,600.¹ While the average cost of obtaining a certificate are lower, the returns from that credential are lower as well, with an average yearly wage increase of approximately \$3,600.²

Attending some college, but not completing a degree is associated with the lowest returns. The wage increases over the first ten years are less than half of the costs for those who attend without completing a degree. The average yearly wage increase is approximately \$1,200.³

COSTS AND BENEFITS OF 2-YEAR COLLEGE CREDENTIALS



¹ 95% Confidence Interval: [\$5,934.54 – \$9,404.99]

² 95% Confidence Interval: [\$1,539.86 – \$5,801.3]

³ 95% Confidence Interval: [\$650.13 - \$1,690.91]

*Projected wages increases are in comparison to each person’s wages before attending college or to the average wages in Montana for those with a high school diploma or GED, whichever amount is higher.

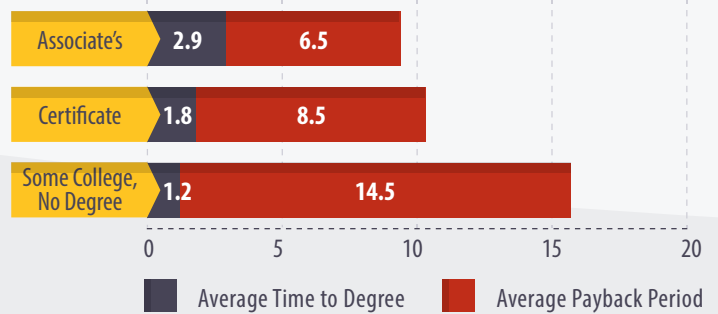
Average Time-to-Degree and Payback Period

Higher-level credentials take longer to earn but are also associated with shorter payback periods once they are complete. Earning an Associate's degree takes an average of about 3 years but has a relatively short payback period of 6.5 years⁴. Earning a certificate only takes about 2 years on average, but has a slightly longer payback period of 8.5 years⁵. Students who attend some college but earn no credential are typically enrolled for a little over 1 year and the average payback period for this educational time is 14.5 years⁶.

⁴ 95% Confidence Interval: [5.5 - 8.5]
⁵ 95% Confidence Interval: [5.5 - 20.5]

⁶ 95% Confidence Interval: [9.5 - 28.5]

AVERAGE TIME-TO-DEGREE AND PAYBACK PERIOD OF 2-YEAR COLLEGE CREDENTIALS (YEARS)

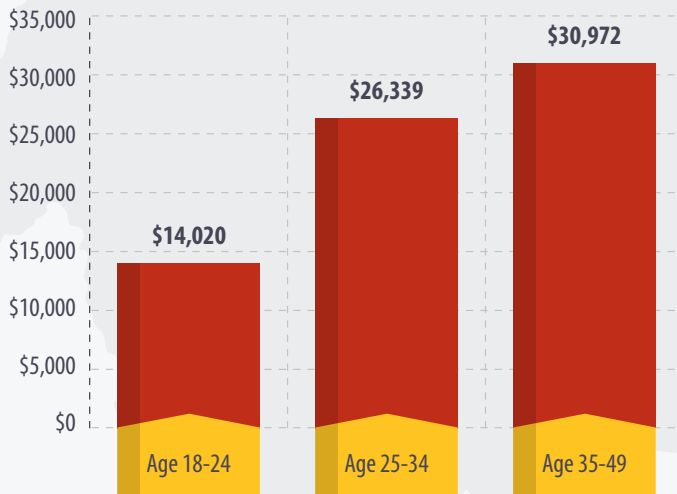


Returns by Age Group

Students in all age groups experience positive returns on average to earning an Associate's degree. However, the returns to 2-year college education are highest for younger students. Older, more experienced workers generally earn

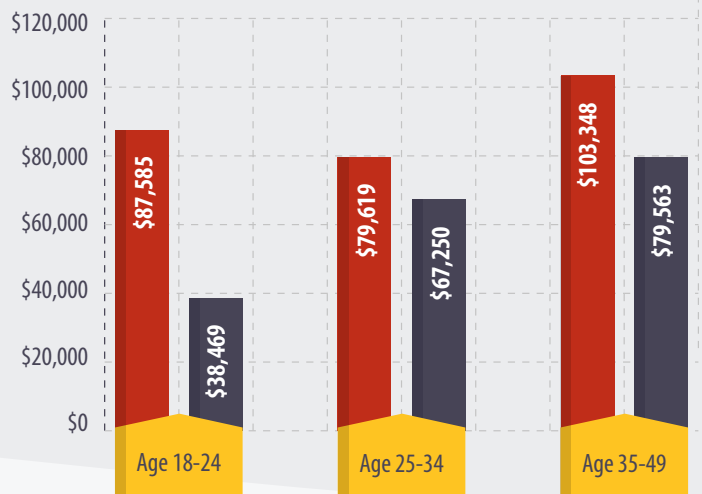
higher wages than their younger counterparts, and so give up more in foregone wages when attending college. To realize the highest returns, students should attend college early, while their foregone wages are lowest.

AVERAGE YEARLY WAGES IN MONTANA WITH HIGH SCHOOL DIPLOMA OR GED BY AGE*



* Calculations based on the U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates and the U.S. Census Bureau, Current Population Survey, 2016 Annual Social and Economic Supplement.

COSTS AND BENEFITS OF EARNING AN ASSOCIATE'S DEGREE BY AGE GROUP



* Projected wages increases are in comparison to each person's wages before attending college or to the average wages in Montana for those with a high school diploma or GED, whichever amount is higher.

Methods

We assess quarterly wage data from the Montana department of labor for students who attended college between 2003 and 2010. The data cover student wages two years before beginning enrollment to five years after ending enrollment. The data also include student-level education data like credential obtained, terms enrolled, GPA, and personal demographics. We supplement student-level education data with annual tuition and supplies costs reports from each college.

We estimate the change in each student's earnings after he/she stops attending college to calculate the benefits associated with varying credential levels. The payback period is the amount of time it takes for a student's increase in wages after college to cover the costs associated with obtaining his/her college education. A shorter payback period is better. See the full report for more details on how the returns to 2-year college education are calculated.