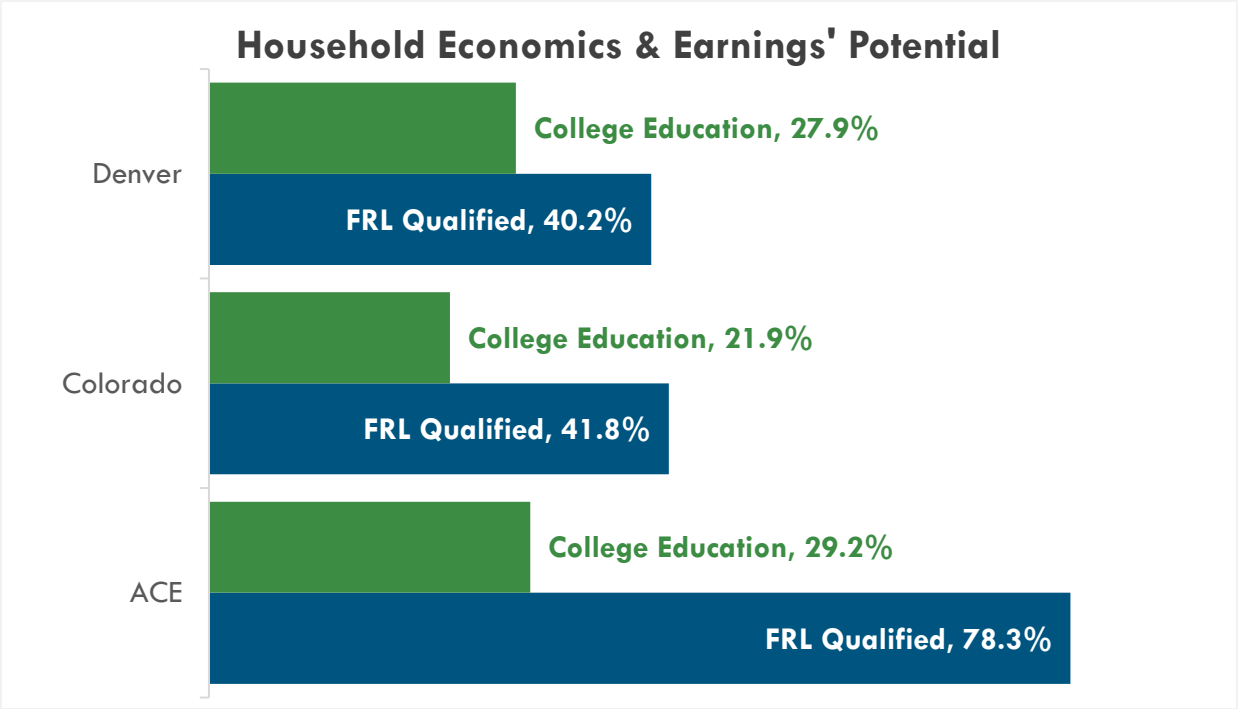


ACE Scholarship Brief



ACE serves students from low income households: More than 78% of students receiving ACE scholarships qualify for the FRL program¹ – which serves as a proxy for low-income status in education. This is higher than the rate of students in Colorado and Denver who qualify for this program. In addition, only a slightly higher rate of ACE families possess at least a four-year degree compared to their peers in Denver and Colorado (Current Population Survey, 2017; Colorado Department of Education, 2018).

Research has shown that low household income has a negative effect on student achievement. Children raised in homes with lower incomes tend to perform worse on standardized tests, have higher rates of non-attendance, and graduate at lower rates (Morrissey, Hutchinson, and Winsler, 2013; Putnam, 2015). In his most recent book, *Our Kids*, Robert Putnam (2015) compared two schools, one with a high proportion of students benefitting from the FRL program (84%) and another with just a 23% FRL rate. Students from the school with the lower FRL rate performed better academically and on fitness tests than students from the school with the higher FRL rate. Research has shown that high income students attend highly selective colleges and universities in disproportionately large numbers as well (Reardon, 2013).

¹ A low proportion of students, 21.7% --live in households where income exceeds the FRL qualification line. Because families begin to earn more, the longer their children remain at their private school, ACE extends the scholarship on a case-by-case basis for the remainder of the school year. On average, families who would not qualify for the FRL program earn \$22,000.00 more each year or slightly more than \$5100.00 more *per capita*.

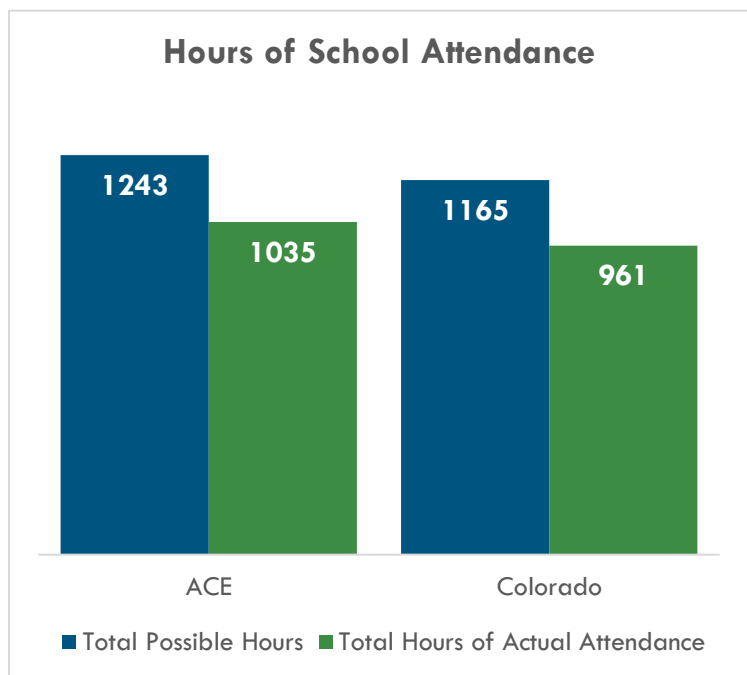
Household income is a predictor of student school success: On average, ACE families make about \$28,000 less than the median income of all households in Colorado and approximately \$21,500 less than the income of Denver households. ACE households have two more people per household than the average for Denver and Colorado as well. This translates to fewer resources per person, as ACE families' per capita income is 2.97 to 3.16 times smaller than the averages for Denver and Colorado respectively (American Community Survey, 2017).²

ACE Households, Compared to Denver and Colorado

	Median Household Size	Median Household Income	Per Capita
ACE	4.39	\$34,684.46	\$8,239.63
Colorado	2.4	\$62,520.00	\$26,050.00
Denver Metro	2.3	\$56,258.00	\$24,460.00

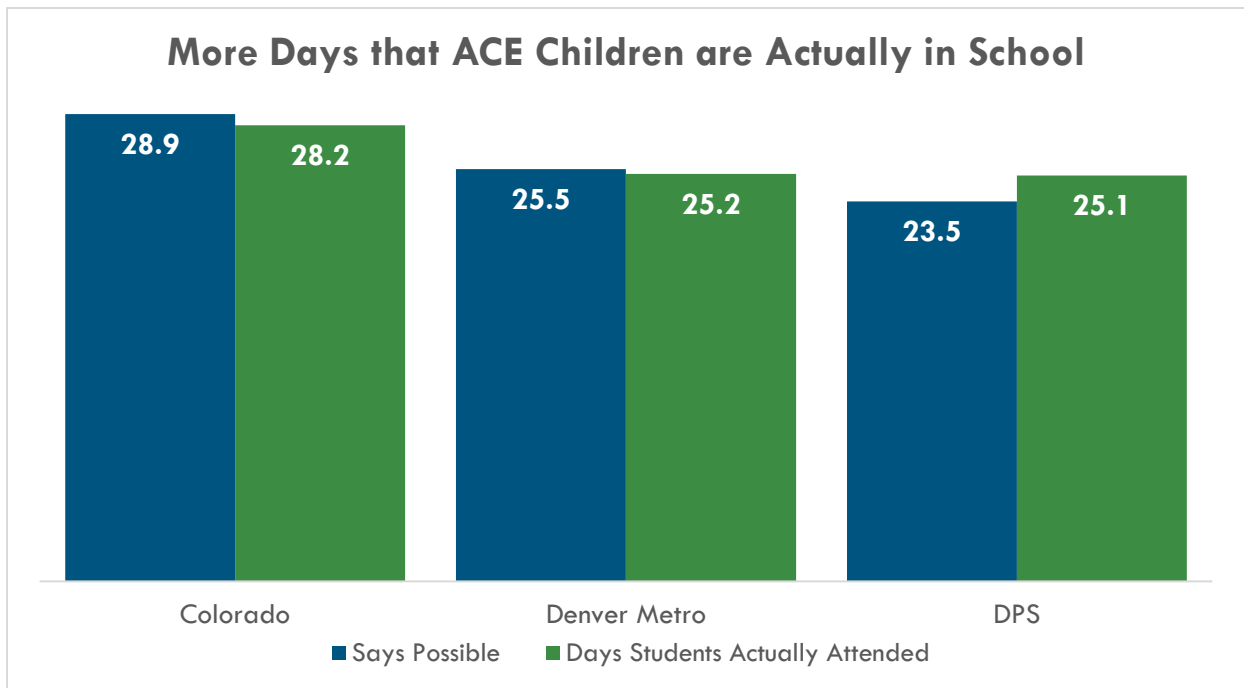
ACE recipients spend more time in school: Over the previous five decades, research has proven that when children attend school more, they learn more and are more likely to graduate. While the total possible days that ACE students can attend school (171.2) is similar to schools across Colorado and Denver, when average attendance rates are factored in, ACE students actually spend more time in school than their peers in public schools (Colorado Department of Education, 2016).

ACE children also spend more time in school each day-- an average of 7.21 hours, which is a full hour more than Colorado students. When these hourly averages are considered as well, it becomes clear that ACE students spend quite a bit more time in school than other students in Colorado. Based on the total number of possible school days, ACE students could spend about 208 hours more in school each year than their peers throughout Colorado. When average attendance is factored in, ACE students spend about 203 more hours in school (Education Commission of the States, 2011; National Center for Education Statistics, 2017; Colorado Department of Education, 2018).



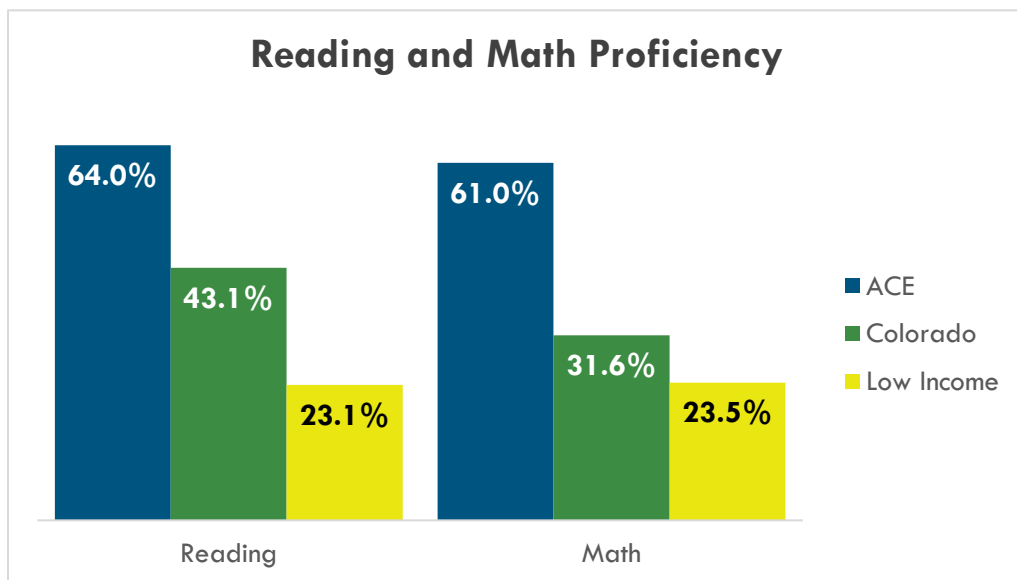
² While the median household of an ACE family contains 4.39 persons, the median number of children is 3.4, and the median number of adults is 1.03. So, on average, this equates to a single parent taking care of three children.

All the extra hours that ACE students spend in school add up. The chart below illustrates that extra time in terms of extra days spent in school compared to students in Colorado, the Denver Metro area, and the Denver Public School system (DPS) based on possible school days and days students attended. Compared to Colorado, ACE students spend the equivalent of more than 28 full school days in class. ACE students also spend about 25 more school days' worth of time in class than students in Denver Metro and DPS schools.

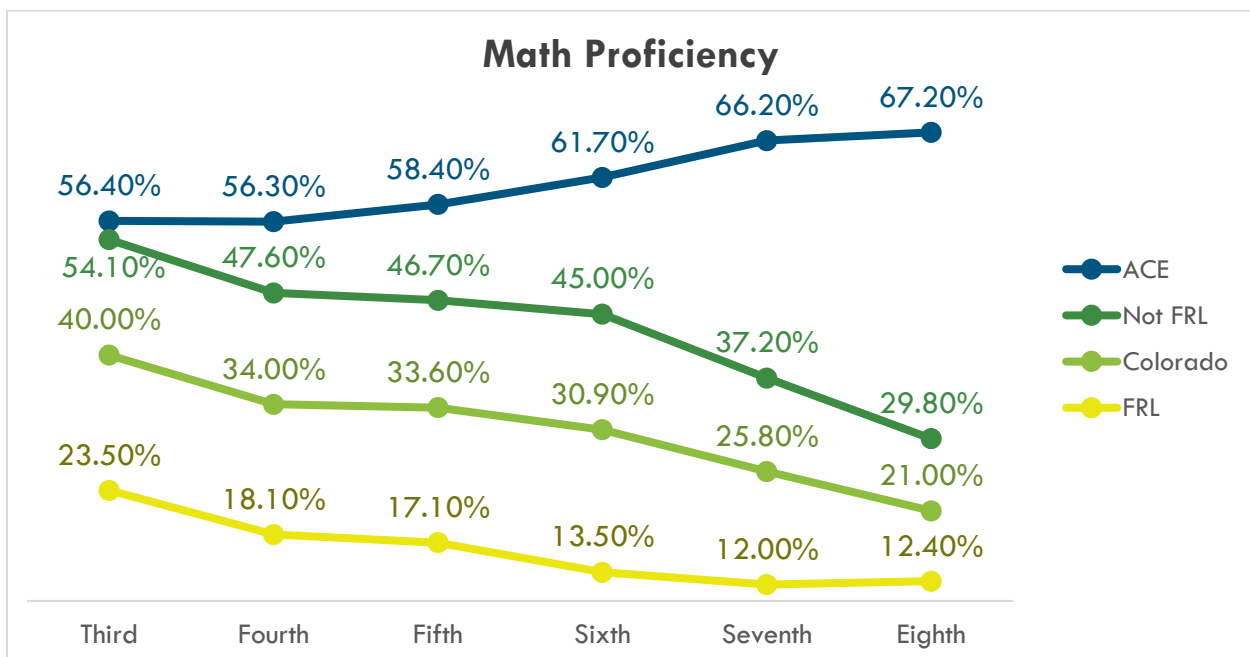
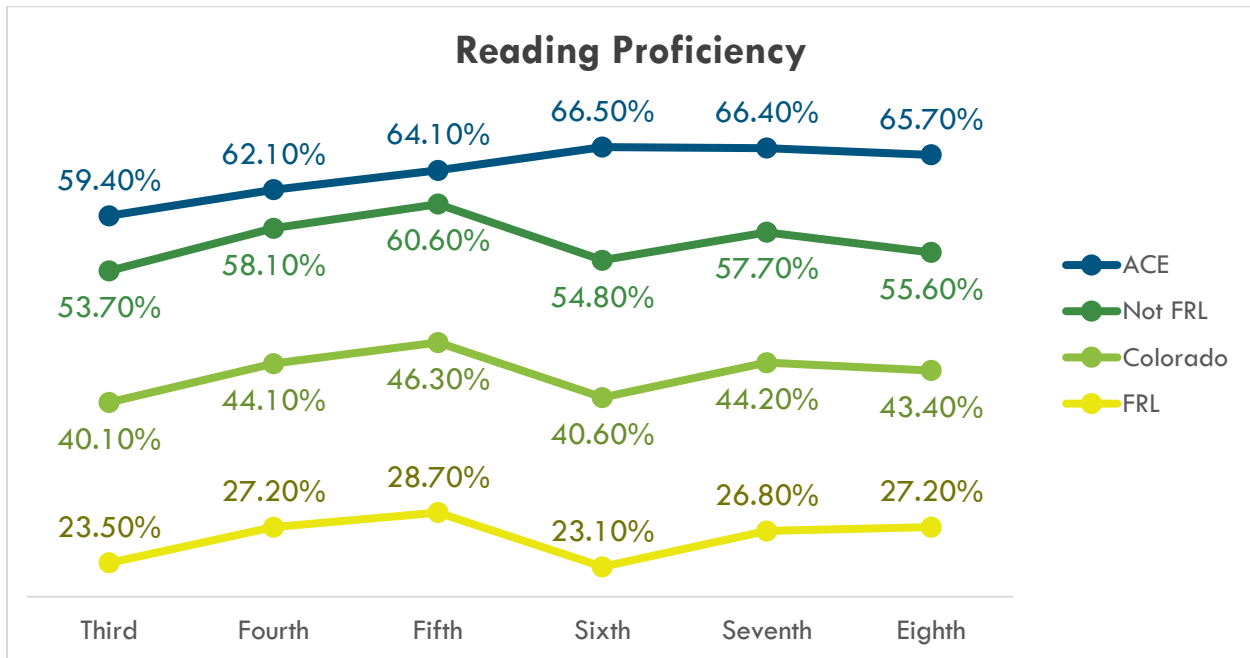


The greater the attendance, the better the children perform on standardized tests.

ACE students outperformed all Colorado public school students in both Reading and Math (Colorado Department of Education, 2018).



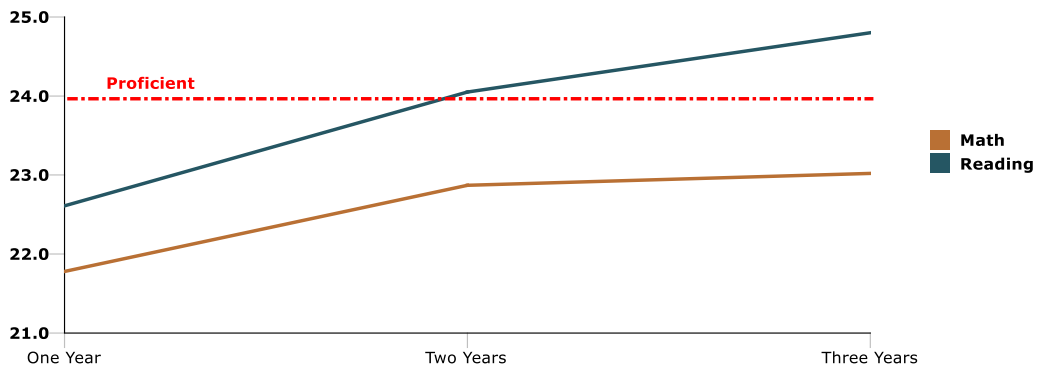
The following charts (Figures C4 and C5) show how ACE students in grades 3-8 are currently outperforming their FRL and non-FRL peers as well as Colorado students as a whole in reading and math proficiency (Colorado Department of Education, 2016).



Achievement and proficiency take years, not months: Over the course of several years, ACE students make gains toward proficiency, thus closing the achievement gap. Research has shown that

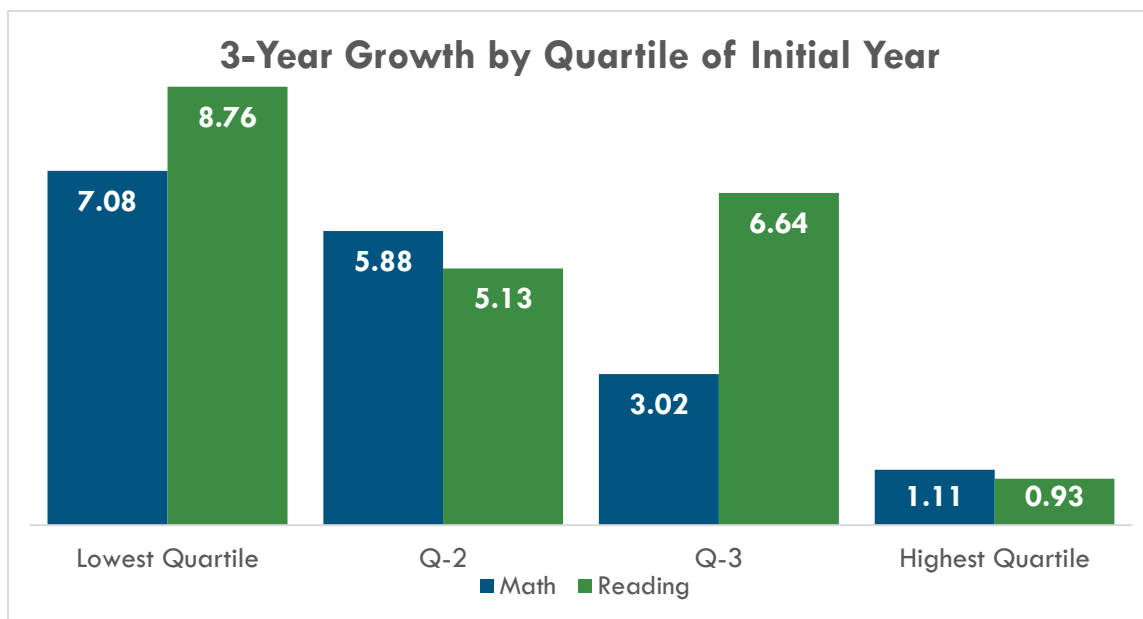
students transferring from a public school to a private school require more than a single year to reach proficiency (White, 2016; Brookings Institute Research). ACE data confirms these findings. Students transferring into a private school system take approximately two years to reach proficiency in Math and Reading (chart below).

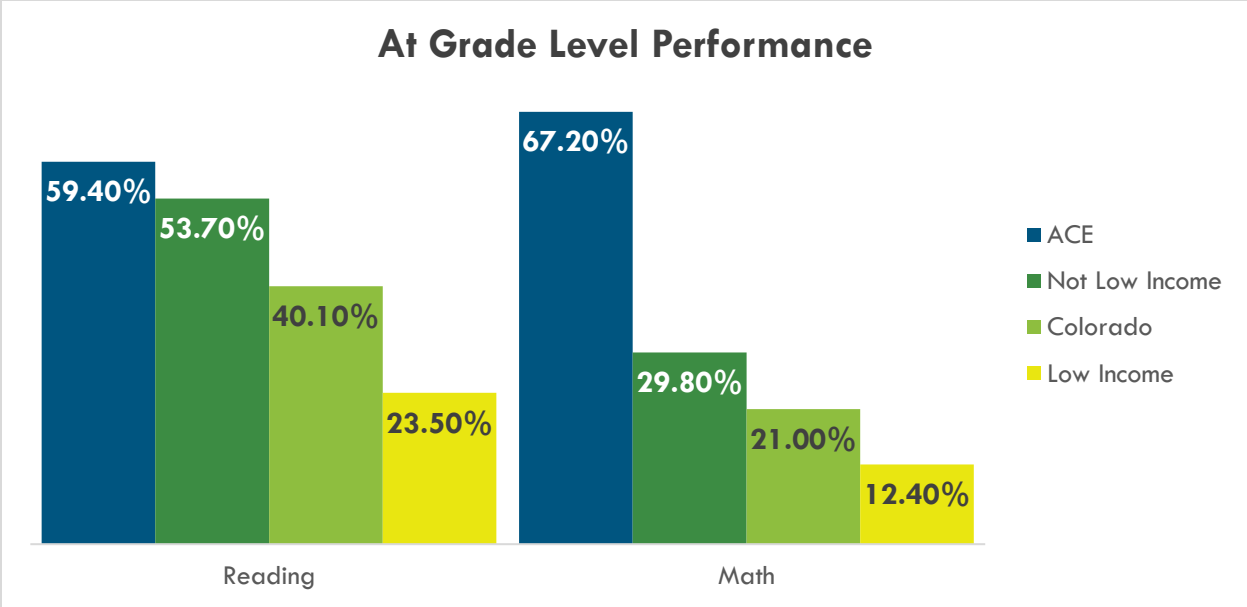
Three Year Gains - ACE Only



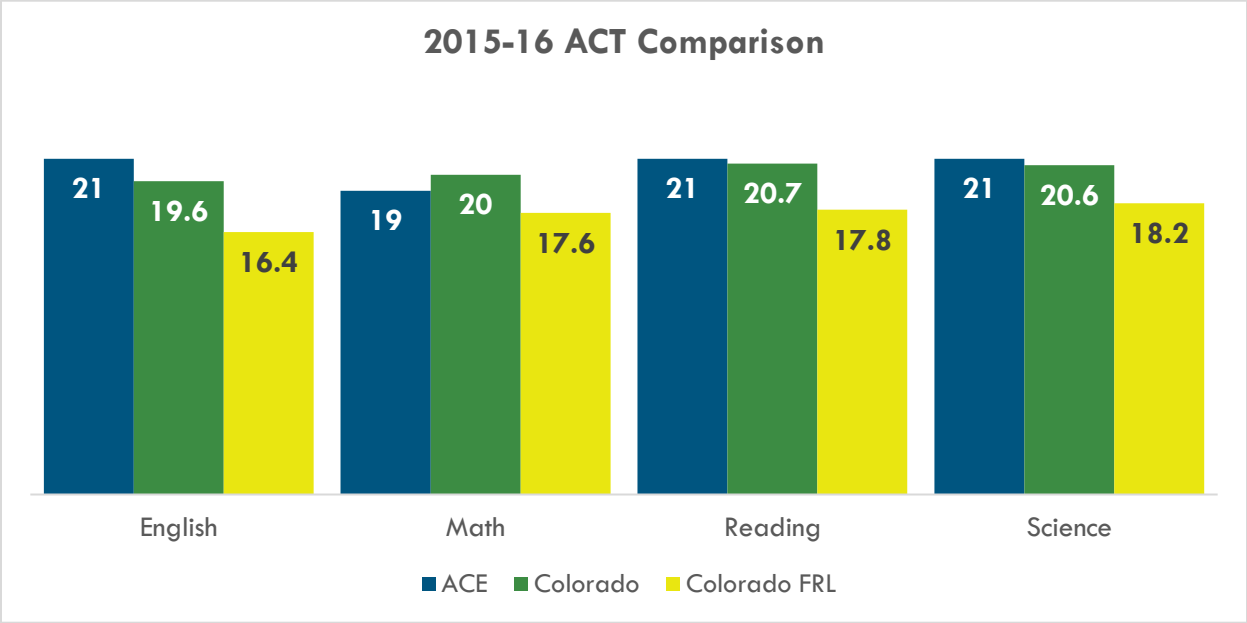
	Math	Reading
One Year	21.78	22.61
Two Years	22.87	24.05
Three Years	23.02	24.8

Reinforcing these findings, ACE examines student growth trends. Using the Colorado Growth Model and placing students into quartiles, data show that the worst initial performers make considerable gains (lowest quartile). As seen on the chart below, all students—even those students who initially test at or above proficiency, make gains on their standardized test scores over the course of three years.



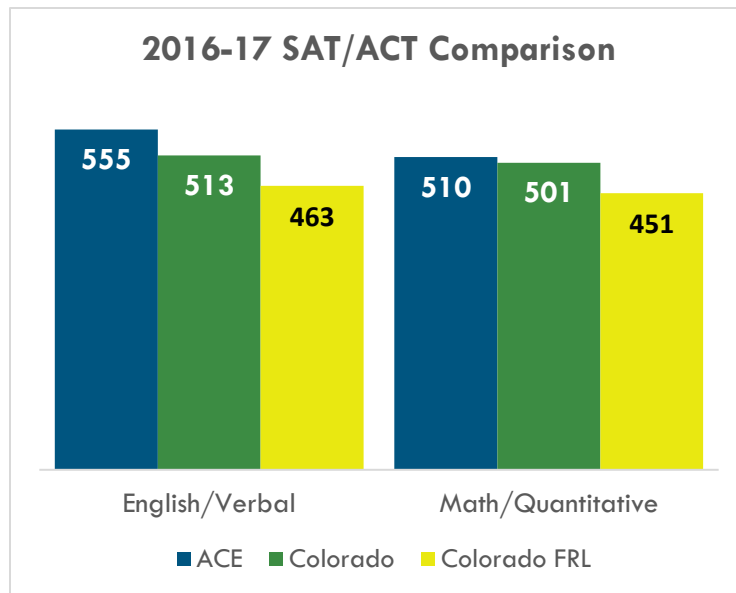


High school students are prepared for college and career: Proficiency in high school is critical to successes later in life. Comparing proficiency scores on between ACE recipients and their public-school peers taking the CMAS tests across the state shows that ACE high school students are much more proficiency in Reading, and wildly more proficient in Math. Confirming proficiency with college readiness, the chart below illustrates ACT performance data based on the ACT 2017 Colorado Profile Report (ACT).





Since this report was written, all Colorado public school students are required to take the SAT or PSAT. While public schools are taking the SAT, private school students still elect to take the ACT. To compare the two groups, the Princeton Review provides an online calculator converting ACT English and Math scores to the SAT Verbal and Quantitative Reasoning scoring format. The chart at right, shows how ACE students –had they taken the SAT in the 2016-17 school year –compare to their public-school counterparts.



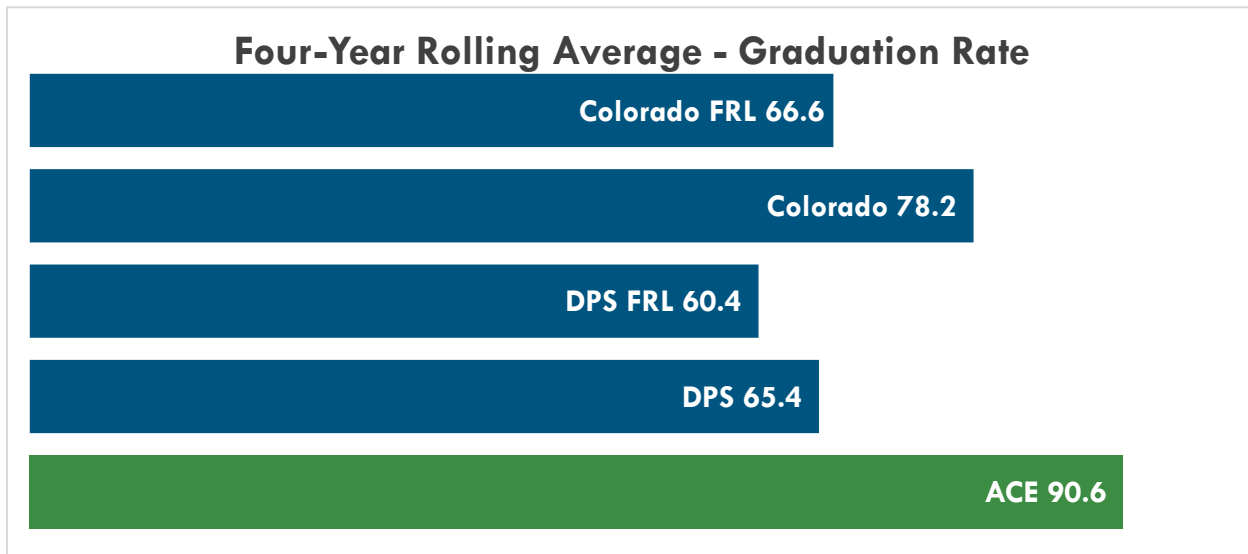
ACE recipients graduate from high school: Compared with students in schools throughout Colorado and DPS, a greater proportion of ACE scholars graduated from high school over the past four years. Perhaps more significantly though, the graduation rate for ACE scholars is far higher than the average high school graduation rate for low-income students across the state.

Four Year Graduation Rate Comparison

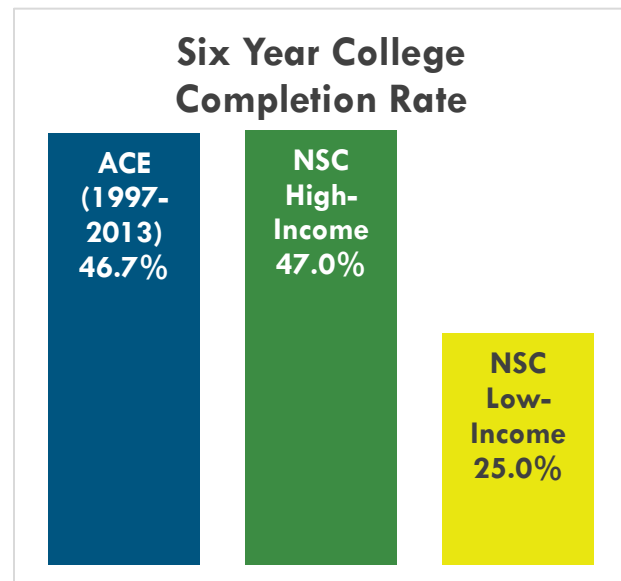
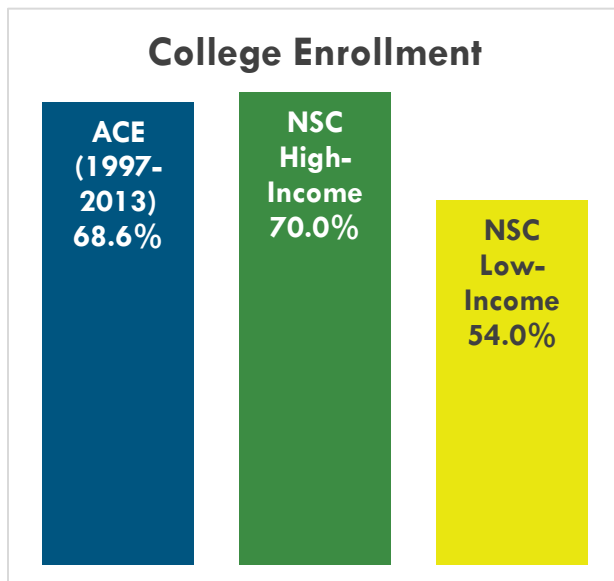
Year	ACE 4-Year Graduation ³	DPS 4-Year Graduation	DPS FRL 4-Year Graduation	State 4-Year Graduation	State FRL 4-Year Graduation
2014	88.3%	62.8%	56.9%	77.3%	64.2%
2015	80.0%	64.8%	59.9%	77.3%	65.5%
2016	93.0%	67.2%	62.1%	78.9%	67.8%
2017	100.0%	66.6%	62.3%	79.0%	68.5%

³ Calculated using the formula published on the Colorado Department of Education for on-time, four-year graduation.

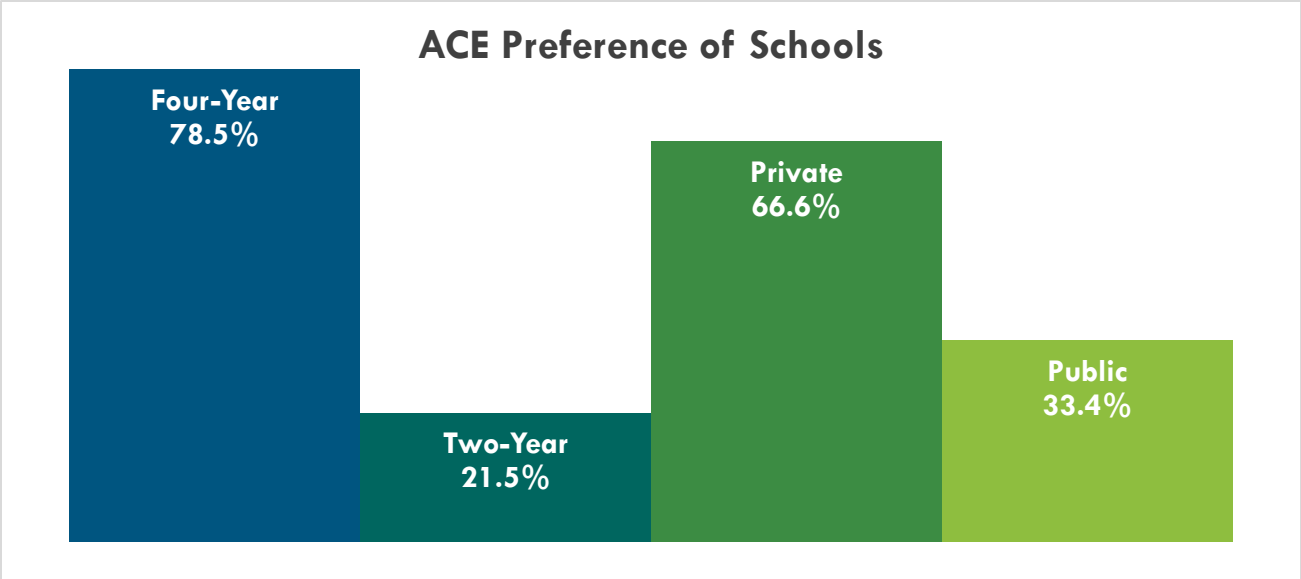
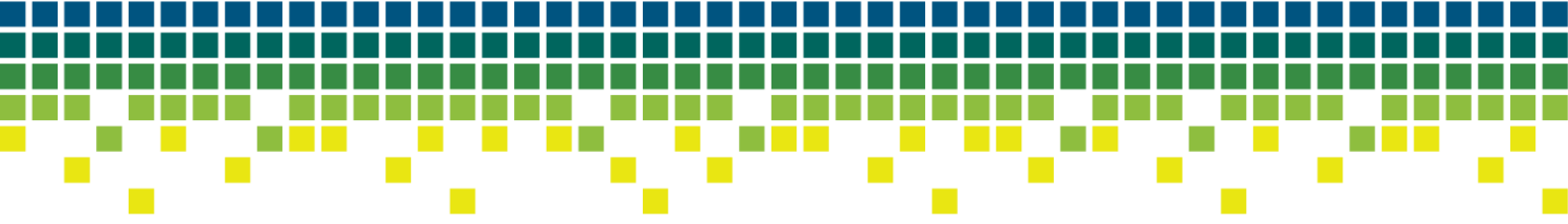
Because ACE student population is small, a four-year rolling average gives a better indication of the actual graduation rate. The chart (right) shows that ACE children graduate at statistically significant higher rates than their public-school low-income peers.⁴



ACE recipients graduate at the rate on high income students: Comparative data from the National Student Clearinghouse (2017) reveal that ACE scholars enroll in college at a rate 15 points higher and graduate at a rate 22 points higher than their peers from predominantly low-income schools (previous page). More importantly though, ACE scholars also enroll in and graduate from college at similar rates as students who attended high-income schools (National Student Clearinghouse, 2017).

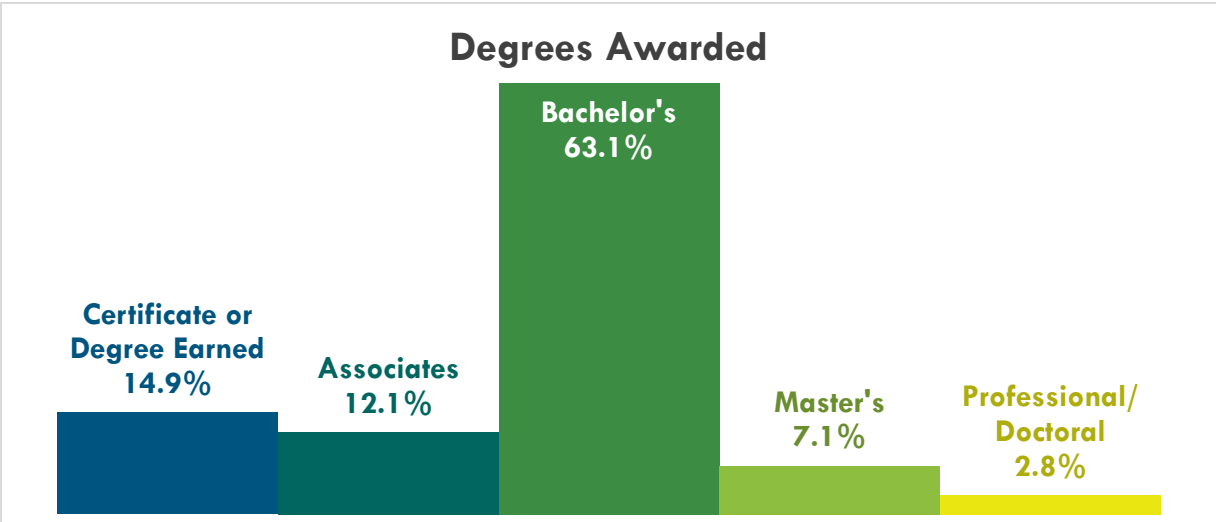


⁴ Chi-square test of significant.

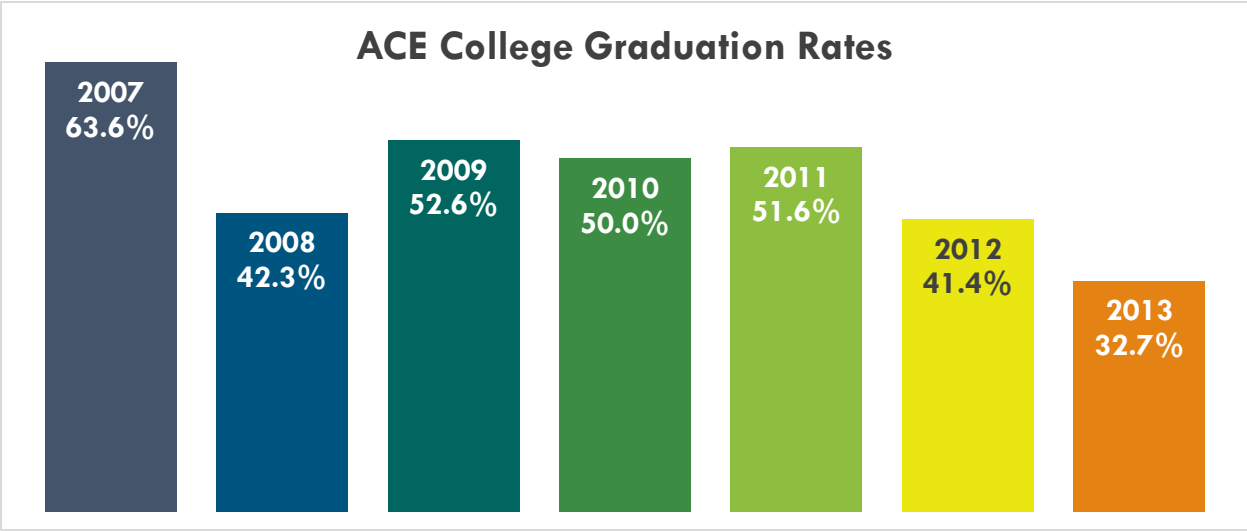


Most ACE students who went on to pursue higher education enrolled in public schools (58%), and 81.5% chose four-year institutions. However, two-thirds of ACE scholars actually prefer private institutions over public schools, and 78.5% of would prefer a four-year institution (National Center for Education Statistics, 2018).⁵

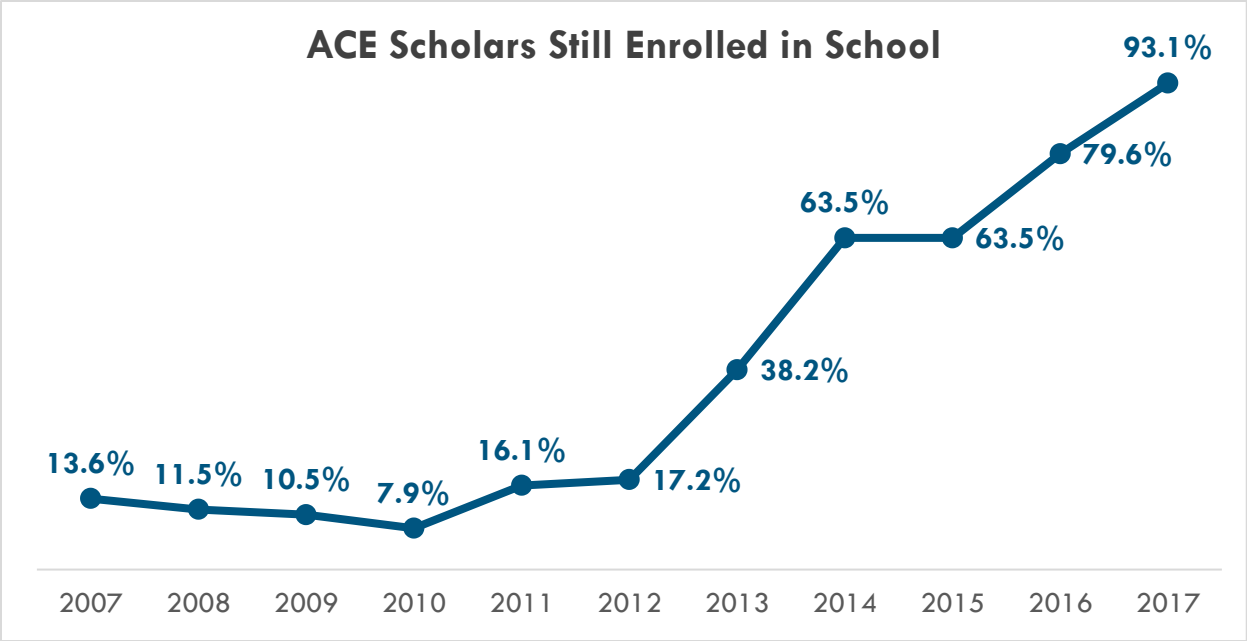
A majority of ACE college graduates earned at least a bachelor’s degree (72.7%; next page). Compare that to ACE parents with 11% rate of earning a Bachelor’s or higher and 16% having an Associate’s degree –a statistically significant increase from one generation to the next for earning a 4-year degree (p < .000).



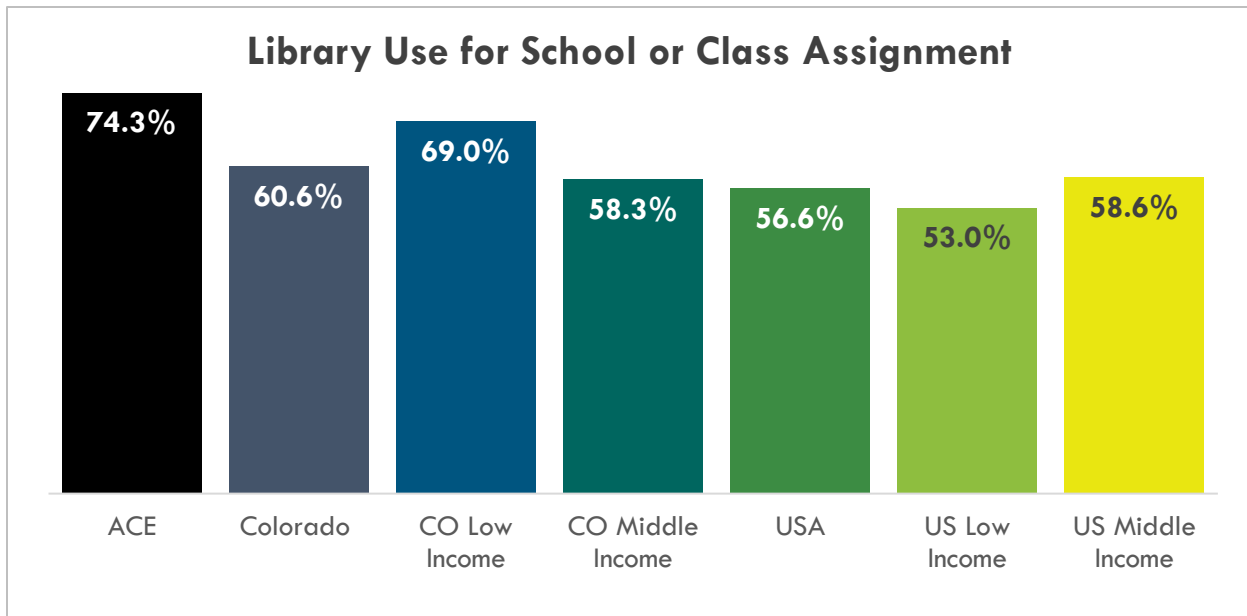
⁵ These findings are based on the initial institutions where students enrolled. Several students enrolled at a community college for a semester before transferring.



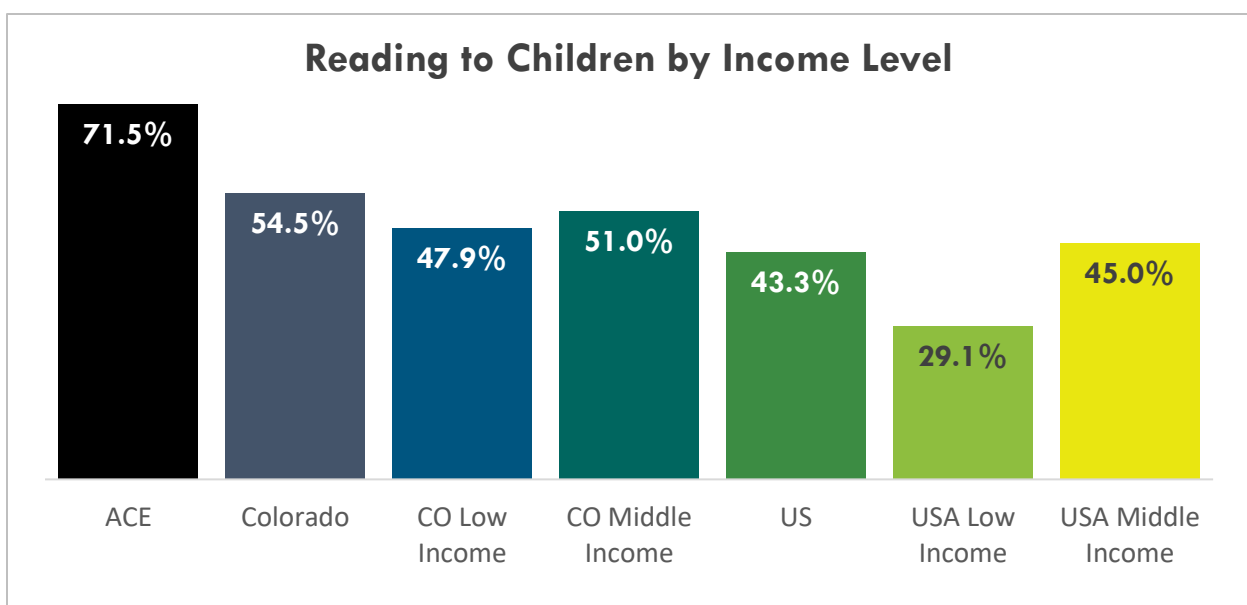
Scholarship recipients who graduated from high school between 2007 and 2013 and went on to enroll at a college or university. The cohorts between 2014 and 2017 are not included as many students are still enrolled as students. Similarly, there are still a number of 2012 and 2013 graduates who are still in school. The five ACE scholars who enrolled in college prior to the 2007 class all earned college degrees. The total graduation rate of ACE Scholars between 1997 and 2013 was 46.7%.



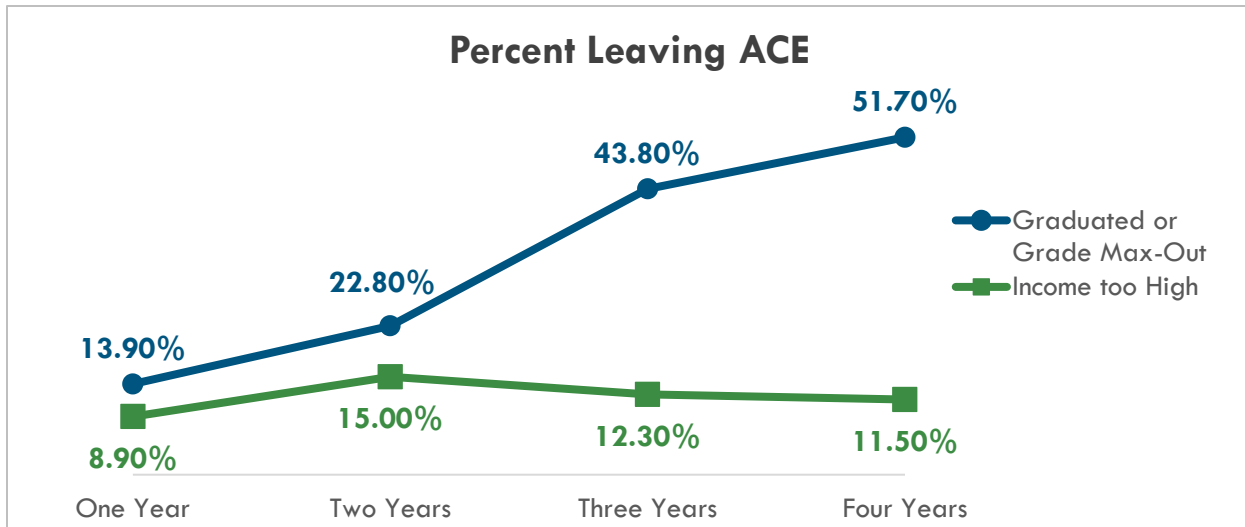
ACE families take advantage of libraries: ACE families are particularly likely to utilize their local libraries. More than 74% of ACE families report using the library compared to just 60.6% of Coloradans and 56.6% of Americans. This holds true when the US and Colorado populations are broken down into low- and middle-income levels as well, as Figure 28 (above) shows (Current Population Survey, 2013).



ACE families are also disproportionately likely to read to their children compared to households with school-aged children in Colorado and the US. Once again, this also holds true when the Colorado and US populations are broken up into low- and middle-income categories, as Figure 29 (below) indicates (Current Population Survey, 2013). This is crucial, as it indicates that ACE families exhibit a higher level of engagement with their children’s education.



It takes two: While their children reach proficiency in approximately two years, it typically takes two years for ACE families to see a significant boost to their income level, and that growth continues in the years following the initial spike. On average 12% of ACE families each year no longer qualify for the scholarship based on their earnings. The chart below shows, 15% of families who exit the program after the second year do so because their income is too high.



In addition to a number of families earning too much to qualify for the scholarship and their children reaching proficiency, many ACE parents begin to pursue more education themselves. At time of initial application, 57% of ACE parents have never gone beyond high school, with an additional 17% having taken some college but have earned no certificate or degree. The chart below shows that in the second year of the scholarship, parents are progressing toward a post-secondary credential, earning that by the end of the third year. These data strongly suggest that parents are encouraged to pursue higher education for themselves as a result of their interactions with other parents at their child's school.

