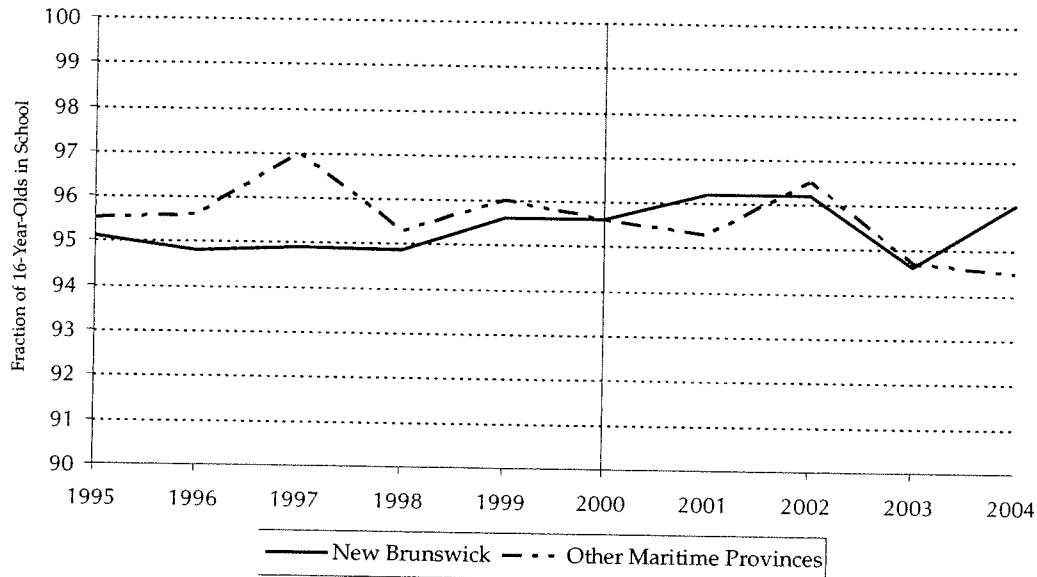
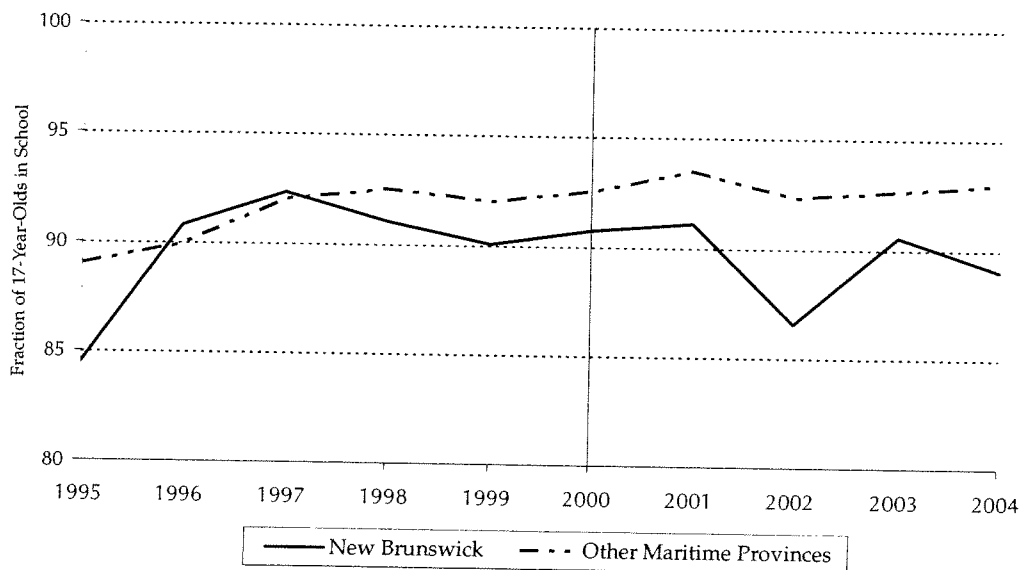
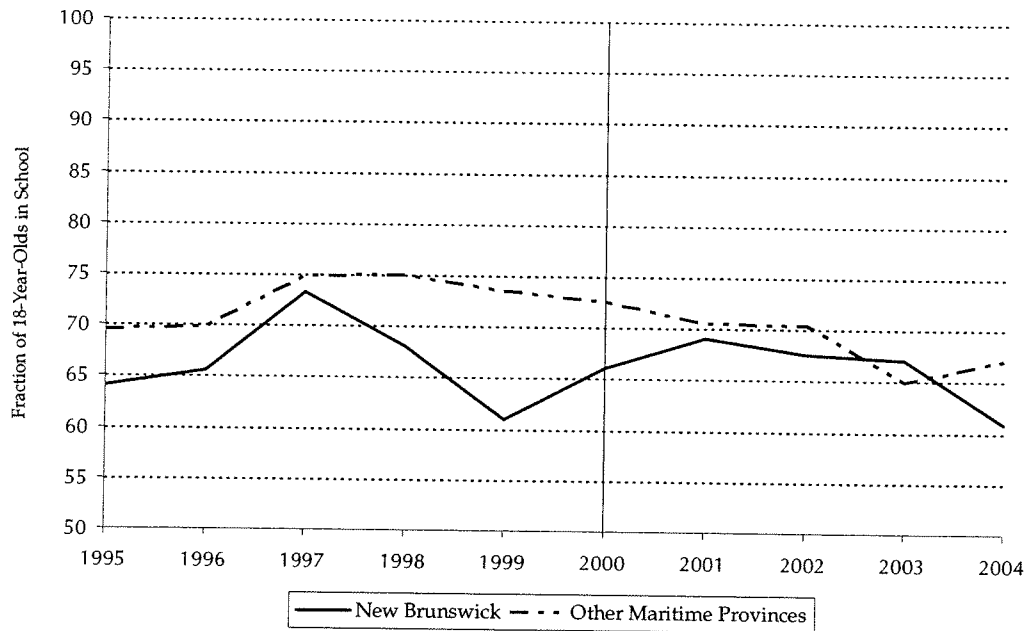


**Figure 2A:** *Fraction of Maritime 16-Year-Olds in School Full-Time, 1995 – 2004*

Note: Data are from the combined monthly Labour Force Surveys at Statistics Canada. Each plot indicates the fraction reported in school full-time for each survey year, excluding those in months June, July, and August. The vertical line in 2000 indicates the year in which New Brunswick raised the school-leaving age to 18.

**Figure 2B:** *Fraction of Maritime 17-Year-Olds in School Full-Time, 1995 – 2004*

Note: Data are from the combined monthly Labour Force Surveys at Statistics Canada. Each plot indicates the fraction reported in school full-time for each survey year, excluding those in months June, July, and August. The vertical line in 2000 indicates the year in which New Brunswick raised the school-leaving age to 18.

**Figure 2C:** *Fraction of Maritime 18-Year-Olds in School Full-Time, 1995 – 2004*

Note: Data are from the combined monthly Labour Force Surveys at Statistics Canada. Each plot indicates the fraction reported in school full-time for each survey year, excluding those in months June, July, and August. The vertical line in 2000 indicates the year in which New Brunswick raised the school-leaving age to 18.

olds in school stays relatively flat for all provinces, at about 96 percent. The fraction of 17-year-olds in school is also flat after 1998, at about 90 percent. The 17-year-old enrolment rate is slightly lower for New Brunswick, even though that province's law implies enrolment should be closer to 100 percent after 2000. We see no noticeable change at that time.<sup>8</sup>

A similar pattern holds when we look at educational attainment. The law change in New Brunswick is too recent to observe individuals older than 19 and exposed to the new law. But among 19-year-olds in 2004, 18.6 percent did not complete high school and did not take any postsecondary education. This compares to 19.7 percent for the other Maritime Provinces. In 2000, New Brunswick's dropout rate among 19-year-olds was also slightly smaller than for the other Maritime Provinces (22.6 percent versus 23.2 percent, respectively). Neither difference is statistically significant. In short, the increase in New Brunswick's school-leaving age appears to serve more as a signal by the province of its desire to encourage high-school graduation, but without a serious commitment to keeping every 16- and 17-year-old in school with appropriate enforcement.

<sup>8</sup> The discrepancy in the difference between New Brunswick and other Maritime Provinces before and after 2000 is small and not statistically significant.

## Delving Deeper: The Results of a More Systematic Analysis

The last section discussed how exceptions to, or weak enforcement of, the minimum school-leaving age can diminish its effectiveness in compelling students to stay. States with more restrictive laws do not have noticeably lower dropout rates or early exit rates than other states. These simple comparisons, however, may belie the true impact of compulsory measures if the same states with more restrictive laws also tend to have more students that leave school early for other reasons.

This section describes the results of a more systematic analysis of the effects of recent U.S. changes in school-leaving ages on school enrolment and attainment. I estimate that raising the school-leaving age above 16 is, in fact, associated with an increase in school attainment, albeit a small one.

The main analysis combines the monthly outgoing rotation files of the Current Population Survey (CPS) between 1979 and 2003. (Appendix A describes the data I use in more detail.) The Bureau of Labor Statistics uses the CPS to calculate unemployment rates in the United States. Each monthly survey includes about 30,000 nationally representative individuals, with information about their state of residence, labour force participation, weekly or hourly earnings, and educational attainment. To focus the analysis on the effects of recent changes to compulsory school laws, I limit the sample to individuals aged 20 to 24 between 1975 and 2003, matched to the school-leaving ages shown in Figures 1A and 1B for the years 1970 to 1995. Individuals are matched to the school-leaving age of their state of residence when they were 16 years old.<sup>9</sup>

Using regression analysis (see Appendix B), the first question I ask is: what is the effect on length of schooling when the minimum-leaving age is raised above 16? The analysis uses control variables for the effects of an individual's state of residence, birth cohort, and survey year. These variables control for perennial differences in state education attainment that do not vary over time, as well as national trends in education attainment that do vary over time. Controlling for such outside influences allows for a more precise estimation of the effects we are really interested in; that is, the effects of facing a minimum school-leaving age above 16 on different measures of educational attainment.

I estimate that, on average, raising the school-leaving age above 16 increases an individual's length of schooling by between 0.12 and 0.16 years, depending on what control variables are included in the analysis (detailed results are in Table B1 in Appendix B).

Next, I ask whether raising the school-leaving age influences high-school completion and postsecondary enrolment. This is a similar analysis, but I use high-school completion and postsecondary school enrolment as outcome variables instead of years of schooling. The results indicate that raising the school-leaving age above 16 decreases the dropout rate and increases college or university entrance.

<sup>9</sup> In this analysis, I include immigrants, since most 20-to 24-year-old immigrants likely faced compulsory schooling laws in the U.S. The results are similar excluding them, and available on request.

Again, depending on the specific set of control variables included in the analysis, raising the school-leaving age above 16 lowers the fraction of 20- to 24-year-olds who have never completed high school by between 1.2 and 2.1 percentage points. Even though compulsory schooling laws do not mandate any postsecondary education, I also find that raising the minimum age above 16 increases the fraction of young adults with at least some college or university by between 1.5 and 2.1 percentage points. One explanation consistent with this finding is that some individuals compelled to stay longer in high school become more interested in postsecondary education or view higher education as less daunting an obstacle than when they were younger.

As a check on these results, I perform the same analysis, but this time using the actual school-leaving age (16, 17, or 18) to categorize the results instead of the legal school-leaving age. The results are similar.

### *The evidence from the most recent cohorts*

Some of the changes to compulsory schooling laws included so far in the sample occurred in the 1970s and 1980s. Because the effects of these laws may have changed with time, it is useful to restrict the above analysis to the most recent cohorts.

For the most recent cohorts, Figure 3 shows the estimated effect of raising the legal leaving age above 16 on the probability of being enrolled in school at different ages. The sample used to construct this figure includes only individuals from the 2000 to 2003 CPS. Each dot in the figure shows the estimated increase in the likelihood of being in school (full-time or part-time) for the corresponding age group. The two thinner lines trace out the 95-percent confidence interval around this estimate. The bars at the bottom of the figure show the average school enrolment in each age group for comparison.

The first dot indicates that an increase in the school-leaving age to above 16 raises the probability of attending school at age 16 by 0.6 percentage points. A stronger influence occurs on the likelihood of attending at age 17 and 18. The attendance rate is 4.1 percentage points higher among 17-year-olds under a school-leaving age above 16, compared to one that is lower. I also estimate some effect on school enrolment in the early twenties, although the large confidence region indicates some uncertainty about the size of these later effects. The evidence lines up with the previous findings above that some individuals may be influenced by high school compulsion to also obtain postsecondary education.

Figure 4 shows the estimated effects from raising the school-leaving age above 16 on specific education-attainment levels. The sample includes only 20- to 24-year-olds in the CPS between 2000 and 2003. The findings are consistent with what effects we might expect the legal leaving age to have on the distribution of education attainment. Within U.S. regions, states with minimum-leaving ages above 16 have fewer individuals whose highest grade attainment lies below Grade 11, and more individuals with Grade 12 and some college education. The compulsory school laws do not influence university graduation, graduate school or professional degree attainment, but this may be because the sample mostly

**Figure 3:** *Estimated Effects of Minimum School-Leaving Age Above 16 on School Enrolment, 2000 – 2003 Current Population Surveys, Excluding June, July, and August*



Note: Each black dot in the top half of the figure represents a separate regression by age category. An indicator variable for whether an individual is in school was regressed on whether the individual faced a dropout age above 16 in his state of residence when he was 16 years old, plus nine region-fixed effects. The estimated coefficients for the effects of facing a higher dropout age are reported here for each age group. The thinner lines outline the 95-percent confidence interval. The bars in the bottom half of the figure indicate the fraction of sample in each age group in school (right scale).

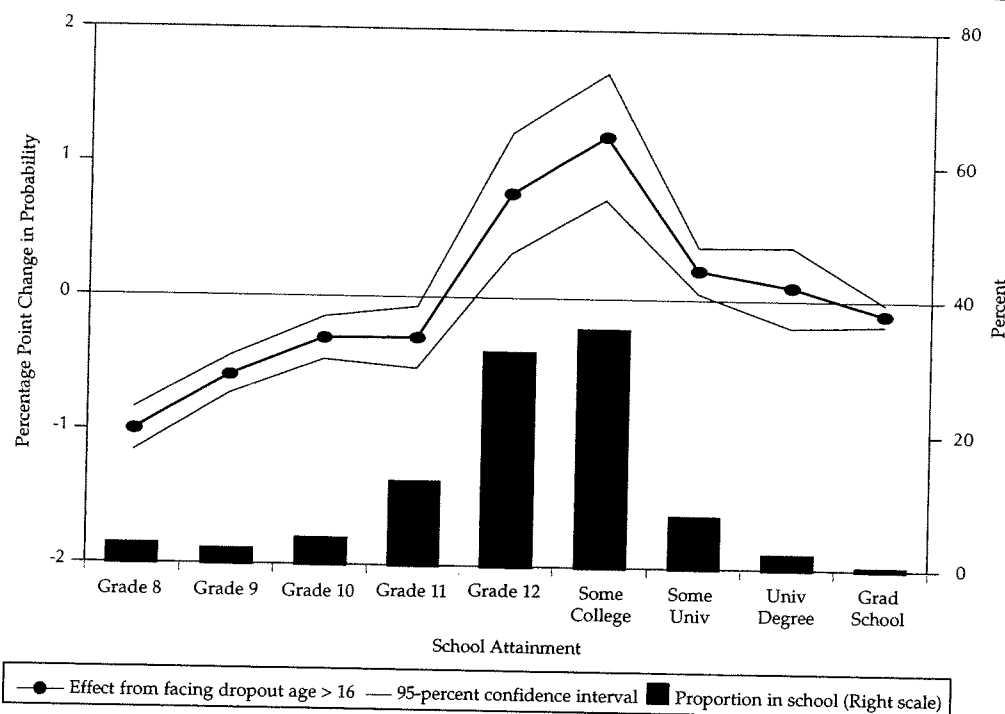
includes individuals in their early twenties who have not yet completed their schooling.

It may not seem surprising that compulsory schooling beyond age 16 increases educational attainment. After all, that is what the policy is meant to do. What's interesting about these findings is that the effects are small, especially considering that a strict interpretation of the law would imply that virtually no teenager would be allowed to leave before age 16. Clearly, this is not the case. The other interesting finding is that the more restrictive compulsory schooling laws also seem to lead to more postsecondary schooling. This effect was not observed in earlier studies (e.g. Acemoglu and Angrist 2001). Postsecondary schooling may seem more achievable from the standpoint of a high-school graduate compared to a high-school dropout.

### The Effect of Compulsory Schooling on Subsequent Employment and Wages

Raising school attainment alone, however, does not indicate successful policy. A more important question is what happens to those compelled to stay in school. To answer it, the next section estimates the effects of raising the school-leaving age above 16 on early unemployment and earnings outcomes for 20- to 24-year-olds. I

**Figure 4:** *Estimated Effects of Minimum School-Leaving Age Above 16 on Grade Attainment, 2000 – 2003 Current Population Surveys, 20- to 24-Year-Olds*



**Note:** An indicator variable for the school attainment indicated along the x-axis was regressed on whether an individual 20 to 24 years old in the 2000 to 2003 CPS faced a dropout age above 16 in their state of residence when they were 16, plus nine region fixed effects. The estimated coefficients for the effects of facing a higher dropout age are reported here for school attainment level. The thinner lines outline the 95-percent confidence interval. The bars in the bottom half of the figure indicate the fraction of sample in each education level (right scale).

estimate the effects only among those impacted by the changes to law; that is, I estimate whether teenagers compelled to stay in school longer benefit from facing a more restrictive leaving age and, if so, by how much. (The methodology for producing these estimates, as well as detailed results, are found in Appendix B.)

The sample I use here includes all 20- to 24-year-olds in the CPS who were 16 years old between 1970 and 1995. I estimate the effect of compulsory schooling on employment status for everyone in this sample. Because some individuals affected by the law changes may still be in school (at the postsecondary level), I measure the effect of compulsory schooling on weekly earnings only for those in the sample working at least 25 hours per week.

Depending on the specific set of control variables included in the statistical analysis, the results indicate that an additional year of compulsory schooling beyond age 16 has the following effects: it lowers the probability of being unemployed by between 2.5 and 5.6 percentage points (unemployment is defined as not working but looking for work); lowers the probability of not working (irrespective of whether one is looking for work or not) by between 2.7 and 13.3 percentage points; and boosts weekly earnings among those working more than 25

hours per week by between 9.9 and 25.8 percent (detailed results are in Table B2 in Appendix B).

Again, as in the analysis on the effects of school-leaving age laws on education attainment, I repeat the same calculations using the actual dropout age faced by individuals at age 16 as the variable of interest instead of the categorical variable.

The similarities between this second set of estimates and the previous one are striking. They suggest that the impact of a year of compulsory schooling above the age of 16 in the last 30 years is similar to the impact from raising the school-leaving age to 14, 15 or 16 in the earlier part of the 20th century.

### Why Not Stay in School?

Finding large gains to individuals from compelling them to stay in school raises the question of why dropouts drop out in the first place. Why do young persons in Canada leave school early if staying on generates attractive gains, on average, to their careers? The possibility that students cannot afford to stay in high school seems unlikely. Many dropouts do not work. Among 16- and 17-year-olds recorded in the 2001 Census as not in school, only 55 percent are in the labour force, and 90 percent still live at home with parents.

Several alternative explanations for dropout behaviour exist. First, dropouts may simply abhor school. Poor classroom performance and condescending attitudes from other students and teachers may make students want to leave as soon as possible, even at the expense of forgoing large returns (Lee and Burkam 2003). Removing reasons for school distaste, in this case, could go a long way in reducing dropout rates. Second, dropouts may be myopic. Myopic students that temporarily downplay or ignore future consequences of their decisions — as considered by Laibson (1997) and O'Donoghue and Rabin (1999) — may prefer dropping out to staying on but later prefer staying on to dropping out. A third alternative is that cultural or peer pressures might dominate adolescent decision making and lead to dropout behaviour. Cultural norms that devalue schooling, a lack of emotional support, or low acceptance for higher education among peers may exacerbate students' distaste for school beyond the minimum (e.g. Akerlof and Kranton 2002; and Coleman 1961). A final consideration is that students may simply mis-predict, underestimating the real expected benefit from staying in school longer. Students' guesses about gains from schooling are often wildly off the mark from those estimated by social scientists (e.g. Dominitz and Manski 2000; and Usher 2005). Teenagers from more disadvantaged family backgrounds are more likely to predict lower gains from additional schooling than those from more affluent families — not just for high school, but higher education as well. Perhaps the main reason why students from low-income households more often dropout or fail to continue on to university is not poverty per se, or debt aversion, but a systematic tendency among this group to overestimate the costs and underestimate the benefits of education.<sup>10</sup>

<sup>10</sup> For a more detailed discussion about the implications of these results for explaining dropout behaviour, see Oreopoulos (2005).

## Conclusion

This Commentary looks at recent experiences with raising the school-leaving age to 17 and 18 in order to assess the potential benefits for other provinces besides New Brunswick that might do the same. Do such measures serve to decrease high-school dropout rates and improve career outcomes among disadvantaged youths?

I find no change in the relative dropout rate of New Brunswick after it increased the school-leaving age to 18, compared with other Maritime Provinces. I do find small, but significant effects of raising the dropout age in the U.S. An increase in the school-leaving age above 16 increases the total number of years in school by 0.13 years, on average, and decreases high-school dropout rates by about 1.2 percent. I also find that raising the age limit increased postsecondary school attendance by 1.5 percent, even though postsecondary school is not compulsory. Perhaps this finding indicates that would-be dropouts reconsider postsecondary options after getting close to, or completing, a high-school degree.

Exceptions to the law, weak consequences for truancy, or lack of enforcement limit the effectiveness of raising the school-leaving age. But perhaps exceptions are desirable because some students clearly would not benefit from staying on. The results in this paper do not capture whether those students for whom exceptions were made would have gained from being forced to stay. But among students affected, I estimate that additional compulsory schooling significantly improves their early career outcomes by lowering the likelihood of being unemployed and increasing earnings, on average. While the estimates obtained are based on data with a degree of imprecision, which warrants some caution, they are entirely consistent with earlier studies that find significant gains to wealth, health, and other social-economic outcomes from raising the minimum age for leaving school.

If the provinces are serious about making would-be dropouts stay in school longer, they need to effectively enforce these laws while promoting their potential benefits to administrators, parents, and students. While flexibility is prudent to deal with special circumstances, the results here point to a need for more resolve in cases where students begin to disengage from high school. Ideally, compulsory schooling laws would exist in the backdrop, where students don't consider leaving school before the minimum possible age simply because virtually no one does. A temporary increase in enforcement of existing laws might lead to this shift in attitude towards leaving early.

Overall, the results presented here speak favourably to supporting an increase in the school-leaving age to 17 or 18. Raising this age may offer an effective and affordable means to increase education attainment among the least educated and improve their subsequent employment circumstances and earnings potential.



## Appendix A: Data

The data for this paper come mostly from the National Bureau of Economic Research's extracts of the Current Population Survey (CPS) outgoing rotation files between 1979 and 2003. The CPS, administered by the U.S. Bureau of Labor Statistics, collects monthly household data about employment and labour markets for about 30,000 nationally representative individuals aged 16. It is the source of the data used to calculate the unemployment rate in the United States. The extract contains variables related to employment, such as hours worked, earnings, industry, occupation, education, and unionization. The extracts also contain many background variables: age, sex, race, ethnicity, and geographic location.

Every household that enters the CPS is interviewed each month for four months, then ignored for eight months, then interviewed again for four more months. In a given month, there are about 120,000 individuals sampled, but only one-fourth of the sample exit the survey and are not interviewed the following month. Usual weekly hours/earning questions are asked only to households in their fourth and eighth interview. Data from these outgoing interviews are combined for every year between 1979 and 2003 to create the extract, for a total sample size over 8.1 million.<sup>11</sup> To examine recent compulsory school-law changes, the base dataset includes only 16- to 24-year olds, who were aged 16 between 1970 and 1995. This restriction cuts the sample down to about 1.2 million.

Some of the variable definitions change from survey to survey and had to be adjusted to make year-to-year comparisons consistent. The years of schooling variable is the highest grade completed plus the number of years of postsecondary school. This variable is recorded in every CPS survey from 1979 to 1992 (the *gradeat* variable), and is capped at 17. Following Acemoglu and Angrist (2001), I combine this variable with the education categorical variable from the 1992 survey onwards (variable name *grade92*) by assigning imputed years of schooling to each category for males and females using the imputation method in Park (1994). A high-school dropout is defined as an individual with less than 12 years of schooling. A high-school graduate is defined as an individual with 12 or more years of schooling. An individual in school is defined as an individual reporting in the CPS as being enrolled in high school or college in the previous week, excluding surveys taken in the months between June and August. This variable is only available from the CPS since 1984 and for individuals aged 24 or less.

I use the NBER extract's imputed weekly earnings (*earnwke*), which essentially is actual weekly earnings among those who report it, and reported hourly earnings, times hours worked per week, for individuals who report earnings in hours. Definitions of unemployment (not working but looking for work) and not working come directly from the imputed labour force participation measures of the CPS (*ftpt79*, *ftpt89*, *ftpt94*).

11 Individuals in these files are interviewed twice, so the combined dataset contains two observations for almost all individuals one year apart. The analysis adjusts for heteroskedasticity from having the same individual in the dataset twice by first aggregating the entire dataset into cells by survey year, birth cohort, gender, and region, and uses Huber-White standard errors clustered at the cohort-region level.

The minimum school-leaving age data come from various years of the National Center for Education Statistics Education Digest. Individuals in the CPS were matched according to the minimum school-leaving age they would have faced at age 16 and assuming an individual's high-school state was the same as her current state of residence. The CPS does not record state of birth.

Much of the main analysis in the paper uses the data collapsed into cell means, aggregated by survey year, birth cohort, state of residence, gender, and race. All regressions and tabulations use either non-institutional population weights or earnings weights, depending on whether the dependent variable uses earnings.

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## Appendix B: Methodology

### *Effect of Compulsory Schooling Laws on Educational Attainment*

The main regression model to estimate the effects of raising the school-leaving age above 16 is the following:

$$(1) \text{ EDUC}_{iscy} = \lambda (\text{DROPAGE}_{sc} > 16) + u_s + u_c + u_y + e_{iscy},$$

where  $\text{EDUC}_{iscy}$  is a measure of education attainment for individual  $i$ , living in state  $s$ , born in year  $c$ , surveyed in year  $y$ . The variable  $\text{DROPAGE}_{sc} > 16$  is equal to one if the individual faced a school-leaving age above 16 when he, or she, was 16 years old in state  $s$ . The variable equals zero otherwise, and  $e_{iscy}$  is the error term. The regression includes fixed effects for state of residence, birth cohort, and survey year. These variables control for perennial differences in state education attainment that do not vary over time, as well as for national trends in education attainment that do vary over time. I also examine the results with linear birth cohort trends for each state.<sup>12</sup>

The variable of interest,  $\lambda$ , is the average effect of facing a school-leaving age above 16 on educational attainment. Table B1 shows estimates of  $\lambda$  under alternative specifications using the CPS sample of 20- to 24-year-olds who were 16 years old between 1970 and 1995. The first column replaces the state-fixed effects in equation (1) with nine region-fixed effects. The identification of the compulsory schooling effects in this case comes not only from changes in the school-leaving laws, but also from state-to-state variation in the leaving age, within a region. I estimate that, on average, raising the school-leaving age above 16 increases an individual's years of schooling by 0.12 years. Replacing region- with state-fixed effects in column 2 controls for average differences in attainment across states over the entire period. This specification (equation 1) does not significantly change the point estimate, now at 0.13 years. Finally, in column 3, I add state-specific linear cohort trends to examine the possibility the results are driven by state differences in overall education-attainment trends. This cautious specification makes estimation of the compulsory schooling law effect more difficult, since some of the trends may absorb some of the effects. Under this specification, however, we still identify a small effect — 0.16 more years of schooling — from higher school leaving laws.

The second and third rows show the same results, but with high-school completion and postsecondary school enrolment as outcome variables. The results also indicate that raising the school-leaving age above 16 decreases the dropout rate and increases college or university entrance. From the main specification in column 2, raising the school-leaving age above 16 decreases the fraction of 20- to 24-year-olds with less education than a high-school degree by 1.2 percentage points.

<sup>12</sup> The data are first aggregated into cell means at the state, cohort, survey year, gender, and race level, and weighted by cell sample size. The standard-errors reported cluster for state-specific heteroskedasticity using the Huber-White methodology.

**Table B1:** *The Effects of the Minimum School-Leaving Age on School Attainment for Individuals Aged 20 to 24 Who Were Aged 16 Between 1970 and 1995 — Regression Estimates*

	Faced Dropout Age > 16 at Age 16			Dropout Age Faced at Age 16		
Years of Schooling	0.1177 [0.0208]***	0.1301 [0.0236]***	0.1647 [0.0319]***	0.0681 [0.0094]***	0.0808 [0.0158]***	0.1042 [0.0199]***
Never Completed High School	-0.0164 [0.0033]***	-0.0119 [0.0037]***	-0.0212 [0.0050]***	-0.0155 [0.0014]***	-0.007 [0.0024]***	-0.0132 [0.0028]***
Some College	0.006 [0.0037]	0.0146 [0.0043]***	0.0214 [0.0059]***	-0.003 [0.0019]	0.0082 [0.0028]***	0.0138 [0.0037]***
Cell Size Observations	21555	21555	21555	21555	21555	21555
Region Fixed Effects	Yes	No	No	Yes	No	No
State Fixed Effects	No	Yes	Yes	No	Yes	Yes
Cohort Fixed Effects	Yes	Yes	No	Yes	Yes	No
Survey Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Cohort* State Linear Trend	No	No	Yes	No	No	Yes

Notes: Data are from the NBER's extracts of the Merged Outgoing Rotation Files of the Current Population Survey. The first three columns show results from regressing school attainment on a dummy for whether an individual faced a dropout age greater than 16, plus control variables indicated in the bottom rows. Columns 4 to 6 show results from regressing school attainment on the minimum school-leaving age (16, 17, or 18), plus the control variables. Standard errors are in brackets. The \*, \*\* and \*\*\* indicate that an estimate is statistically significant at the 10-, 5- and 1-percent level, respectively. See text for further details.

The second set of results uses the actual school-leaving age as the dependent variable (16, 17, or 18) instead of the dummy variable indicating a school-leaving age above 16 for the main specification. The results are similar.

Some of the compulsory schooling law changes used in the above analysis occurred in the 1970s and 1980s. We can examine the effects of facing a school-leaving age above 16 among the most recent cohorts if we use region-fixed effects instead of state-fixed effects, as we did in column 1 of Table B1. This requires a more restrictive assumption: that within a region (e.g. Pacific, New England), any relationship between the states' education-attainment differences and compulsory schooling-law differences are not driven by other institutional differences related to both. The finding in Table B1 that the estimated effect is very similar, whether we include region- or state-fixed effects, suggests this assumption is reasonable.

Figure 3 (in the main text) shows the estimates of  $\lambda$  for school enrolment status, but using region-fixed effects in equation (1) in place of state-fixed effects. The sample includes only individuals in the 2000 to 2003 CPS. Each dot in the figure shows the estimated increase in the likelihood of being in school (full-time or part-time) for the corresponding age group. The thinner lines trace out the 95-percent confidence interval around this estimate. The bars at the bottom of the figure show the average school enrolment in each age group for comparison.

Figure 4 (in the main text) shows the estimated effects from raising the school-leaving age above 16 on specific levels of educational attainment. The sample

includes only 20- to 24-year-olds in the CPS between 2000 and 2003. The x-axis values correspond roughly to an individual's cumulative years of education. The variable, 'highest education level obtained' was recoded as 8 for eighth grade, 9 for ninth grade, etc. Some college was recoded as 13, a professional degree was recoded as 14, a university degree was recoded as 16, and a graduate degree as 17.

### *Effect of Compulsory Schooling Laws on Unemployment Rates*

To estimate the impact of compulsory schooling for those influenced by these laws (those that would have dropped out sooner), consider the same regression model in equation (1), but using unemployment status as the dependent variable:

$$(2) \text{UNEMP}_{iscy} = \lambda (\text{DROPAGE}_{sc} > 16) + u_s + u_c + u_y + e_{iscy} ,$$

where  $\text{UNEMP}_{iscy}$  is equal to one if individual  $i$  (now older), living in state  $s$ , born in year  $c$ , surveyed in year  $y$  is unemployed, zero otherwise. Equation (2) is known as the reduced-form equation. The coefficient  $\lambda$  captures the average effect of raising the school-leaving age above 16 on the unemployment rate for everyone in the sample. Of course, not everyone is affected by the change in law. What we want to estimate instead is the impact from an increase in the dropout age for those that end up taking one more year of school. For example, suppose the increase in the dropout age makes 50 percent of the population take one more year of school ( $\gamma = 0.50$ ). We can estimate the impact of raising the school-leaving age on those 50 percent by dividing  $\lambda$  by 0.50. If an increase in the dropout age increases total number of school years by 0.50 and an increase in the dropout age decreases average unemployment by 0.02, then we can deduce the effect from taking one more year of compulsory schooling decreases average unemployment by 0.04 ( $0.02 / 0.50$ ), or  $\lambda / \gamma$ .

Thus, to estimate the effect of one more year of compulsory schooling (from raising the school-leaving age above 16), we simply rescale our estimate in (2) by the estimated increase in school years in (1). Another way of looking at this is to suppose raising the school-leaving age caused everyone to take one more year of school. Then our estimate in (2) would give us exactly the effect of one more year of school on the likelihood of being unemployed ( $\lambda/1$ ).

For this approach to work, changes in the school-leaving age must be unrelated to changes in state demographic or institutional characteristics that also affect school attainment. Also, if raising the school-leaving age does not affect an individual's education attainment (e.g. whether facing a dropout age of 16 or 18, she intends to graduate), raising it also does not affect her unemployment rate. Another way to describe this instrumental variables method is in two stages. In the first stage, we estimate education attainment differences caused only by changes in the school-leaving age (the first stage is equation (1)). In the second stage, we estimate:

$$(3) \text{UNEMP}_{iscy} = \beta \text{EDUC\_HAT}_{iscy} + v_s + v_c + v_y + e_{iscy} ,$$

**Table B2: The Effects of Compulsory Schooling on Unemployment and Earnings for Individuals Aged 20 to 24 Who Were Aged 16 Between 1970 and 1995 – Second-Stage IV-Regression Estimates**

	Faced Dropout Age > 16 at Age 16			Dropout Age Faced at Age 16		
Unemployed	-0.025 [0.0139]*	-0.0378 [0.0160]**	-0.0561 [0.0163]***	-0.0278 [0.0104]***	-0.0253 [0.0138]*	-0.0504 [0.0147]***
Not Working	-0.1326 [0.0318]***	-0.0435 [0.0232]*	-0.0268 [0.0185]	-0.1356 [0.0256]***	-0.0236 [0.0222]	-0.0227 [0.0174]
Log Weekly Earnings for those working > 25 hrs/week	0.099 [0.0533]*	0.1328 [0.0757]*	0.2582 [0.0385]***	-0.0473 [0.0385]	0.0764 [0.0672]	0.2151 [0.0637]***
Cell Size Observations	21555	21555	21555	21555	21555	21555
Region Fixed Effects	Yes	No	No	Yes	No	No
State Fixed Effects	No	Yes	Yes	No	Yes	Yes
Cohort Fixed Effects	Yes	Yes	No	Yes	Yes	No
Survey Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Cohort* State Linear Trend	No	No	Yes	No	No	Yes

Notes: Data are from the NBER's extracts of the Merged Outgoing Rotation Files of the Current Population Survey. Standard errors are in brackets. The \*, \*\* and \*\*\* indicate that an estimate is statistically significant at the 10-, 5- and 1-percent level respectively. See text for further details.

where  $EDUC\_HAT_{iscy}$  is an individual's predicted education based on the first stage. The coefficient  $\beta$  is the average effect from one year of education, caused from a change in the compulsory school-leaving age. It is equivalent to  $\lambda / \gamma$ .

Table B2 shows estimates of the effects of a year of compulsory schooling on early career outcomes. The first three columns look at the effects of compulsory schooling when the school-leaving age is raised above 16. The last three columns use the actual dropout age faced as the independent variable of interest. The sample includes all 20- to 24-year olds in the CPS that were 16 years old between 1970 and 1995. I estimate the effect of compulsory schooling on unemployment and employment status for everyone in this sample. Because some individuals affected by the law changes may still be in school (at the postsecondary level), I measure the effect of compulsory schooling on weekly earnings only for those in the sample working at least 25 hours per week.

Column 1 shows the results using region-fixed effects instead of state-fixed effects. This specification lets us estimate the effects of compulsory schooling using cross-section variation in state laws, but requires the assumption that this within-region variation is not related to other factors that could explain education or labour market outcome differences. The table indicates that an additional year of compulsory schooling, caused from increasing the school-leaving age above 16, lowers the likelihood of unemployment by 2.5 percentage points (unemployment is defined as not working but looking for work). The confidence interval around this estimate is wide, but the estimate is statistically significant at the 10-percent level. The effect on the likelihood of working at all for this age group is quite

large, but imprecisely estimated. Perhaps most interestingly, the return to compulsory schooling on weekly earnings is 9.9 percent, an estimate not much different from earlier studies that use older birth cohorts. An additional year of compulsory schooling is associated with about 10-percent higher weekly earnings among those working more than 25 hours per week.

Column 2 shows the main results that include state-fixed effects, so that identification of the effects of compulsory schooling comes only from changes in the minimum school-leaving age. I estimate that a year of compulsory schooling from these law changes decreases the probability of being unemployed by 3.8 percentage points and decreases the probability of not working by 4.4 percentage points. The extra year also increases weekly earnings by an average of 13.3 percent.

Column 3 shows results from estimating the model that allows for underlying linear birth-cohort trends for each state. This specification makes the assumption required for causal interpretation of the results more likely, but at the expense of possibly absorbing variation driven by the school-leaving ages and making the estimates less precise. Nevertheless, with this model, the estimates for the effects of compulsory schooling on unemployment and not working are similar to those in column 2, and the effects on weekly earnings are greater.

Columns 4 to 6 show the same estimates but using the actual dropout age faced by individuals at age 16 as the instrumental variable in equation (1).

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**Attachment C**  
**ISER Publication –Kids Count Alaska Education Summary**

Kids Count Alaska is part of a nationwide program, sponsored by the Annie E. Casey Foundation, to collect and publicize information about children's health, safety, and economic status. We pull together information from many sources and present it all in one place. We hope this book gives Alaskans a broad picture of how the state's children are doing and provides parents, policymakers, and others interested in the welfare of children with information they need to improve life for children and families.

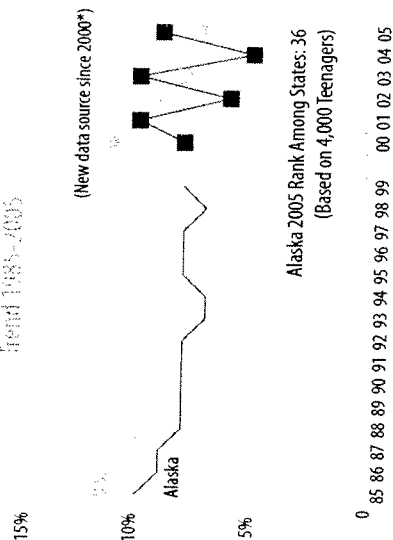
More than 206,000 children ages 18 or younger live in Alaska—just under a third of Alaska's 2006 population of about 671,000.

That's an increase of about 15% in the number of children since 1990. During the past 15 years the age structure of Alaska children has also changed, with younger children making up a declining share and teenagers a growing share. In 1990, children ages 4 or younger made up 31% of all children; by 2006 that share had dropped to 26%. Among those 15 to 18, the 1990 share was about 16%, but it had risen to 22% by 2006.

Boys outnumber girls in Alaska by close to 6%. There are more boys than girls in every age group. Even among infants, boys outnumbered girls by 8% in 2006.

Alaska's children have also grown more racially diverse in the past two decades, as illustrated by the figure showing Alaska's school children by race. In 1988, 68% of school children were White and 32% were from minorities—primarily Alaska Natives.

# Percent of Teens (16-19) Who Are High School Dropouts



\*See text.

Source: 2007 National Kids Count Data Book

## DEFINITIONS

Methods for measuring both the share of teenagers who drop out of school and the share who graduate have proliferated recently. Here we report data from two sources that define "dropouts" differently and two sources that measure high-school graduation rates differently. We use those various sources to help us better understand why so many teenagers don't finish high school—and to help identify possible ways of keeping more in school.

The American Community Survey, published by the U.S. Census Bureau, tabulates dropouts as the percentage of teenagers 16 through 19 who are not enrolled in high school and have not graduated. Those who have earned general equivalency diplomas (GEDs) are considered graduates and are not counted as dropouts. This is the source the national Kids Count Data Book uses, and the data are shown in the trend graph at the top of this page. This is also known as a "status" dropout rate and is the measure used by the U.S. Department of Education.<sup>1</sup> It is a consistent measure, comparable across states and over time.

The Alaska Department of Education and Early Development (DEED) uses a different definition of dropout: "A student who

was enrolled in the district at some time during the school year whose enrollment terminated. Dropouts do not include graduates, transfers to public or private schools, or transfers to state- or district-approved education programs. Students who are absent due to suspension, illness, or medical conditions are not reported as dropouts." DEED's calculations include students who are enrolled in grades 7 through 12 in October of a given school year but who drop out before the end of the year.

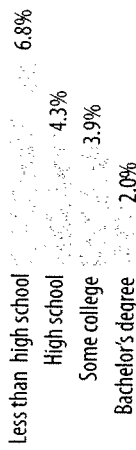
Looking at graduation rates, we use measurements from the National Center for Education Statistics (NCES) and DEED. NCES uses the "averaged freshman graduation rate," based on the percentage of freshmen in a given class who graduate four years later. DEED calculates the share of students graduating in a given class by incorporating the number of dropouts each year from grades 9 through 12.<sup>2</sup>

## SIGNIFICANCE

Completing high school is a necessary step toward becoming a self-sufficient adult—and those who don't graduate face serious financial and social consequences. The U.S. Census Bureau reports that the median yearly income of high-school dropouts in the U.S. was about \$20,200 in 2006. Those with even slightly more education (a high-school diploma or a GED) earned nearly one-third more, or about \$30,200 a year.<sup>3</sup> Those who go on to college can potentially earn several times what dropouts earn.

Besides a staggering loss in wages, Americans who fail to finish high school are also likely to experience poorer health, higher unemployment, greater need for public assistance, and an increased likelihood of going to jail.<sup>4</sup> The bar chart demonstrates that for every additional level of schooling, Americans have a lower unemployment rate. In 2006, the unemployment rate for Americans without high-school diplomas was 6.8%.<sup>5</sup> Those who finished high school but didn't go to college had an unemployment rate of 4.3% in 2006, while about 3.9% of those with some college were unemployed. Only 2% of those with bachelor's degrees were out of work.

## U.S. Unemployment Rate by Education Level, 2006



Source: U.S. Dept. of Labor, Bureau of Labor Statistics

## DROP-OUT MEASURES

As the trend graph to the left shows, the percentage of Alaska teens (16-19) who dropped out of high school varied considerably between 2000 and 2005. In 2005, Alaska's drop-out rate of 9% was higher than the national rate of 7% and ranked Alaska 36th among the states. We expect the fluctuations in this drop-out rate to become less dramatic as the American Community Survey increases its sample size in rural Alaska.

Alaska's DEED reports drop-out rates for a larger age range of teens than the American Community Survey does. This indicator is based on the number of students enrolled in grades 7 through 12 in the public schools. A total of 63,132 students were enrolled in those grades during the 2005-2006 school year in Alaska, and 3,642—or 5.8%—dropped out.

The bar chart on the next page shows the share of enrollment and the share of dropouts by race in grades 7 through 12 in the 2005-2006 school year, as well as the drop-out rates by race. Alaska Natives made up about 25% of students but nearly 37% of those who dropped out. Black and Hispanic students made up much smaller shares of enrollment (about 4% to 5%) but about 5% to 6% of dropouts. On the other hand, White, Asian and Pacific Island, and mixed-race students made up smaller shares of dropouts than of enrollment.

The map showing drop-out rates by region of Alaska in the 2005-2006 year is also based on information from DEED. Rates were lowest in the Gulf Coast and Southeast regions and highest in the Northern, Southwest, and Interior regions.

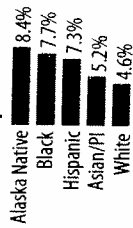
## Share of Enrollment and of Dropouts (Grades 7-12) by Race

(2005-2006)

### Share of Enrollment and of Dropouts



### Drop-out Rate



Source: Alaska Department of Education and Early Development

Drop-out rates in the Southwest, Gulf Coast, and Anchorage regions changed little from those in the previous school year. The Northern region saw an increase from 6.5% to 7.5%. Rates decreased in the Interior (from 7.8% to 6.7%), the Mat-Su Borough (from 6.1% to 5.2%), and Southeast (from 5.4% to 4.1%). Alaska's overall drop-out rate declined slightly between 2004-2005 and 2005-2006, from 6% to 5.8%.

## High-School Graduation Measures

The only measure of high-school graduation rates that is comparable across states is from the National Center for Education Statistics, which uses the "averaged freshman graduation rate" described earlier. This is the measure the U.S. Department of Education uses. The line graph shows that in the 2003-2004 school year, the averaged graduation rate among public high-school students was 74% nationwide and just over 67% in Alaska. These are the most recent figures available from NCES.

Sixteen states had graduation rates above 80% in the 2003-2004 year, and Nebraska had the highest rate, at 87.6%. Nine states had rates lower than Alaska's. Over the period from the 2000-2001 to 2003-2004, the graduation rate increased in 44 states and decreased in 5—including Alaska.<sup>6</sup>

High School Graduation Rates, 2003-2004

More recent graduation figures are available from Alaska's Department of Education and Early Development—but remember that DEED calculates graduation rates differently. DEED's figures show that 7,361 (or 60%) of Alaska's high-school seniors graduated with a regular high-school diploma during 2005-2006. That figure incorporates the number of dropouts each year from grades 9 through 12.

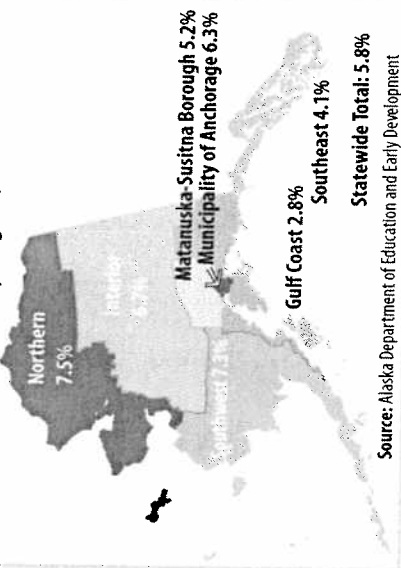
The first figure on the facing page shows 2006 graduation rates among Alaska students by race, sex, and other characteristics, while the figure below it compares shares of enrollment and shares of graduates by race.

There is a large gap in graduation rates among students of different races, with about 68% of White students graduating in 2006, compared with 45% among Alaska Native students. But the rates among Alaska Native, Black, and Hispanic students all increased 2 percentage points over rates in the previous school year. And while the graduation rate among Asian and Pacific Islander students remained the same, the rate among Whites declined by 3 percentage points, from 71% to 68%.

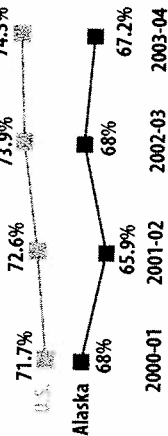
Alaska girls are more likely to graduate from high school than boys—63% compared with 57% in 2006. Students who have disabilities, speak limited English, or are from low-income families graduate at rates substantially below the statewide average of 60%. Fewer than half the students from low-income families graduated in 2006, and only around 40% of those with disabilities or limited ability to speak English got their diplomas.

The second bar chart on the facing page shows the racial and ethnic differences between enrollment and graduation among 12th-graders in 2005-2006. Ideally, the proportion of enrollment would be the same as the proportion of graduates—in other words, all the students who enrolled would actually graduate.

## Percentage of Dropouts (Grades 7-12), by Region, 2005-2006



## High-School Graduation Rates,\* Alaska and U.S. Average



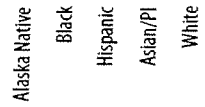
\*The number of graduates divided by the estimated count of freshmen four years earlier.

Source: National Center for Education Statistics

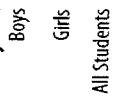
But we can see that White students made up a considerably larger share of graduates than of enrollment—about 60% of enrollment but 66% of graduates. Among Asian and Pacific Island students, the shares of enrollment and graduates were in fact the same—7.2%. Among other groups, the share of graduates fell short of their share of enrollment.

## Graduation Rates Among Alaska Students, 2006

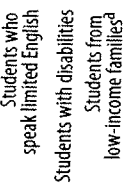
### By Race



### By Sex

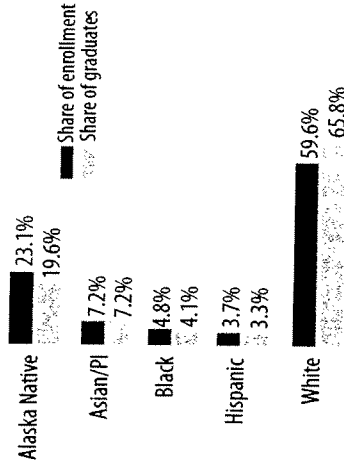


### By Other Characteristics



<sup>a</sup> "Low-income" as measured by eligibility for free or reduced-price lunch  
 Source: Alaska Department of Education and Early Development

## Share of Enrollment and of Graduates (Grade 12), by Race, 2005-2006



Source: Alaska Department of Education and Early Development

## Definition

This indicator monitors teenagers 16 through 19 who are not in school (either part- or full-time), not in the military, and not working (either part- or full-time). Both high-school dropouts and those with general equivalency diplomas who are not working or on active military duty are included. The data since 2000 are from the American Community Survey.

## Significance

This is an important time in adolescent life: the start of the transition to adult life. It can be a difficult process even for those adolescents who have lots of support and resources available to them. But for teenagers who don't have the skills and the support they need, the prospect can be daunting.

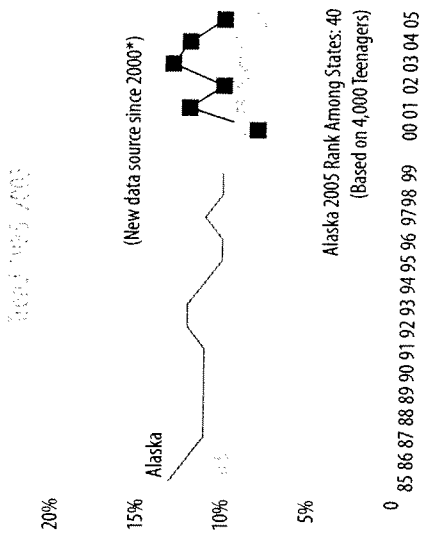
Teenagers who are not attending school nor working are sometimes referred to as "idle" or "disconnected," because they aren't spending their days in activities that will help them become productive adults—they are disconnected from adults and community networks. They are also more likely to be from families living in poverty. A recent study found that 31% of all children in Alaska lived in low-income families, while 44% of disconnected teens came from such families. About 1 in 5 teens from families in the lowest income bracket are not enrolled in school or working, compared with just 1 in 33 teens from families in the highest income bracket.<sup>7</sup>

A Hewlett Foundation report identified those least likely to make a successful transition to adulthood: (1) high-school dropouts; (2) those who have been in the juvenile justice system or foster care; and (3) teenage parents, especially mothers.<sup>8</sup> These teenagers don't have—and face major challenges trying to get—the educational and vocational skills and social support they need.

## Data

In 2005 the share of Alaska's teens 16 to 19 who were not employed or attending school declined to 10%, down from 13% in 2003. Still, Alaska has more idle teens than the 2005 national average of 8% and ranks 40th among the states on this indicator.

## Teens (16-19) Not in School and Not Working



\*See text.

Source: 2007 National Kids Count Data Book

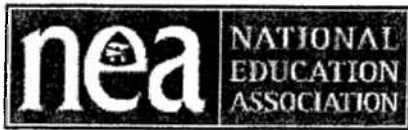
We don't have reliable breakdowns of disconnected teens by sex and race for Alaska, but the table below shows these breakdowns for the nation as a whole in 1996 and 2005. The Federal Interagency Forum on Child and Family Statistics found that the share of disconnected teens in all groups declined during this ten-year period. The largest decline (27%) was among teenage girls; this may reflect the increasing rate of girls graduating from high school and college. Among Hispanic teenagers the disconnected share dropped 25% and among Black teenagers 20%. Still, both Hispanic and Black teenagers remain more than twice as likely as White teens to be disconnected.

## Percentages of U.S. Teenagers (16-19) Not in School and Not Working, 1996 and 2005

	1996	2005	Change
All 16-19	9%	8%	-11%
Teenage Girls	11%	8%	-27%
Teenage Boys	8%	7%	-13%
White Teenagers	7%	6%	-14%
Black Teenagers	15%	12%	-20%
Hispanic Teenagers	16%	12%	-25%

Source: Federal Interagency Forum on Child and Family Statistics

**Attachment D**  
**NEA's 12 Point Plan for Reducing the School Dropout Rate**



## NEA's 12-Point Action Plan for Reducing the School Dropout Rate

To address the nation's school dropout crisis, NEA has developed a 12-point action plan that includes the most promising actions supported by experience and data.

1. Mandate high school graduation or equivalency as compulsory for everyone below the age of 21. Just as we established compulsory attendance to the age of 16 or 17 in the beginning of the 20th century, it is appropriate and critical to eradicate the idea of "dropping out" before achieving a diploma. To compete in the 21st century, all of our citizens, at minimum, need a high school education.
2. Establish high school graduation centers for students 19-21 years old to provide specialized instruction and counseling to all students in this older age group who would be more effectively addressed in classes apart from younger students.
3. Make sure students receive individual attention in safe schools, in smaller learning communities within large schools, in small classes (18 or fewer students), and in programs during the summer, weekends, and before and after school that provide tutoring and build on what students learn during the school day.
4. Expand students' graduation options through creative partnerships with community colleges in career and technical fields and with alternative schools so that students have another way to earn a high school diploma. For students who are incarcerated, tie their release to high school graduation at the end of their sentences.
5. Increase career education and workforce readiness programs in schools so that students see the connection between school and careers after graduation. To ensure that students have the skills they need for these careers, integrate 21st century skills into the curriculum and provide all students with access to 21st century technology.
6. Act early so students do not drop out with high-quality, universal preschool and full-day kindergarten; strong elementary programs that ensure students are doing grade-level work when they enter middle school; and middle school programs that address causes of dropping out that appear in these grades and ensure that students have access to algebra, science, and other courses that serve as the foundation for success in high school and beyond.
7. Involve families in students' learning at school and at home in new and creative ways so that all families-single-parent families, families in poverty, and families in minority communities-can support their children's academic achievement, help their children engage in healthy behaviors, and stay actively involved in their children's education from preschool through high school



graduation.

8. Monitor students' academic progress in school through a variety of measures during the school year that provide a full picture of students' learning and help teachers make sure students do not fall behind academically.
9. Monitor, accurately report, and work to reduce dropout rates by gathering accurate data for key student groups (such as racial, ethnic, and economic), establishing benchmarks in each state for eliminating dropouts, and adopting the standardized reporting method developed by the National Governors Association.
10. Involve the entire community in dropout prevention through family-friendly policies that provide release time for employees to attend parent-teacher conferences; work schedules for high school students that enable them to attend classes on time and be ready to learn; "adopt a school" programs that encourage volunteerism and community-led projects in school; and community-based, real-world learning experiences for students.
11. Make sure educators have the training and resources they need to prevent students from dropping out including professional development focused on the needs of diverse students and students who are at risk of dropping out; up-to-date textbooks and materials, computers, and information technology; and safe modern schools.
12. Make high school graduation a federal priority by calling on Congress and the president to invest \$10 billion over the next 10 years to support dropout prevention programs and states who make high school graduation compulsory.

For the Spanish version of this plan, see [El Plan de la NEA para Reducir el Abandono de los Estudios](#).

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**Attachment E**  
**“Understanding the Issue of the High school Dropout Age”**


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### Educational Policy

## Understanding and Addressing the Issue of the High School Dropout Age

### Benefits to Increasing the Compulsory Attendance Age

States have realized the increased importance of completing a high school education for entry into postsecondary education and the labor market, but the high school completion rate has only shown minimal gains over the last three decades and has shown no increase throughout the 1990s (Kaufmann et al., 2000). Changing the compulsory attendance age from 16 to 18 is one strategy states are employing in an attempt to reduce dropout rates. Within the last four years, numerous states have considered legislation to increase the compulsory attendance age. New Mexico, Connecticut, Louisiana, New York, Texas, and Vermont have recently passed such legislation. The following table ranks high school dropouts in 2000 from Midwestern states that have compulsory attendance age regulated at 18.

Percent of Teens Who Are High School Dropouts (Ages 16-19) in 2000		
State	National Rank	Dropout Rate Percentage
Minnesota	2	5%
Wisconsin	7	7%
Ohio	13	8%
(Annie E. Casey Foundation, 2003)		

The Pasadena Independent School District in Texas has seen positive results in decreasing its dropout rate by raising the compulsory attendance age. The state allowed school districts to raise the dropout age from 16 to 17, and this provided districts with "some teeth" to their anti-dropout plans (Schneider, 2000). In addition to raising the age limit, districts—through attendance clerks and counselors—kept excellent tracking records of students who left school and encouraged them to enroll into a GED program or re-enroll back into the school district. For example, in 1998–99, a report from the Texas Education Agency commended Pasadena's intermediate school district (Grades 7–12) for achieving a record low annual dropout rate of 1.6 percent.

The next table presents the compulsory attendance ages for other states in the Midwest, along with the year the attendance laws were established.

Compulsory Attendance Laws		
State	Enactment	Age Limits
Illinois	1883	6 - 16*

Indiana	1897	7 - 16
Iowa	1902	6 - 16
Michigan	1871	6 - 16**
Minnesota	1885	7 - 18
Ohio	1877	6 - 18
Wisconsin	1879	6 - 18
(Infoplease.com, 2003)		
*Illinois: 2003 Legislature introduced House Bill 2584, which would increase the legal dropout age to 18.		
**Michigan: 2003 Legislature introduced House Bill 4128, which would increase the legal dropout age to 18.		

Increasing the attendance age is an issue that has garnered support across the country, and in 2002 six states made the push to amend their laws. In states with successful legal passage of new compulsory attendance laws, such as Louisiana and Connecticut, similar language and processes were implemented. In all cases, parents or other persons having control of a child under the age of 18 can withdraw the child from school but must do so with legal written consent. The consent makes clear the decision of the parent to remove the child from school and that the school has offered to provide additional resources to keep the student in school.

Funding for an increase in the compulsory attendance age is difficult to assess and varies widely across states. States such as Louisiana and Montana have outlined fiscal policy analysis that details each state's estimated expenditures for increasing the compulsory attendance age. An explanation of fiscal spending, as well as additional examples of what other states have done to implement laws in support of increasing the compulsory attendance age, can be found in [Appendix A](#).

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**Attachment F**  
**“Alaska’s Dropout Rate Double US Average”**  
**Anchorage Daily News 11-16-08**

## Alaska's dropout rate double US average

**'THIS IS A SOCIAL ISSUE': Educators brainstorm how to keep our kids in school.**

By MEGAN HOLLAND  
mholland@adn.com

(11/16/08 00:11:59)

Failure can start early.

Some educators say they can see which kids aren't going to make it on the first day of kindergarten. Some children show up knowing how to read, while others come not even knowing what the colors are.

Battling one of the worst dropout rates in the country, Alaska educators gathered for a third day on Saturday to brainstorm how to stop the epidemic of kids quitting school before earning their diplomas. They called dropping out a result of an accumulative failure, which can start before kids even enter school.

"This is a social issue, one we all own," said Association of Alaska School Boards executive director Carl Rose. "We all need to take some responsibility in this."

Among the grim statistics:

- Alaska's dropout rate, at 8 percent, was double the national average in the 2005-2006 school year, according to the latest figures available from the U.S. Department of Education.
- 38 percent of today's ninth-graders will have no high school diploma 10 years from now, according to the Alaska Commission on Postsecondary Education.
- Alaska ranks 50th, or last, in the number of ninth-graders who will likely have a bachelor's degree in 10 years, according to the commission.

Republican U.S. Sen. Lisa Murkowski convened the Saturday hearing. She asked state and national education experts what the federal government could do to help fix the problem, even though the federal government has little input into public education, an arena largely left to the states, and, in Alaska, mostly to local school districts. (The big exception to this is the controversial federal No Child Left Behind law, which went into effect in 2002 and was meant to raise educational attainment for all students through testing.)

Among the suggestions for federal help was to fund more pre-kindergarten programs; to support more vocational and technical classes in high schools; and to continue to provide special grants for the education of Alaska Natives, who have among the highest dropout rates.

"We are failing our kids and we should be ashamed of ourselves," said Tina Michels-Hansen, of Cook Inlet Tribal Council, which offers tutoring and other schooling help for Anchorage School District Alaska Natives.

"Schools have become factories that communities passively accept," she said.

Part of the issue, according to University of Alaska president Mark Hamilton, is cultural. Parents and families are not valuing education. They need to realize even skilled labor fields, like plumbing or construction, require training that depends on knowledge, such as math, learned in high school.

"We have to stop saying, 'College isn't for everyone,' " he said. "Post-secondary education is for nearly everyone unless your goal is to be the head fry guy at McDonald's."

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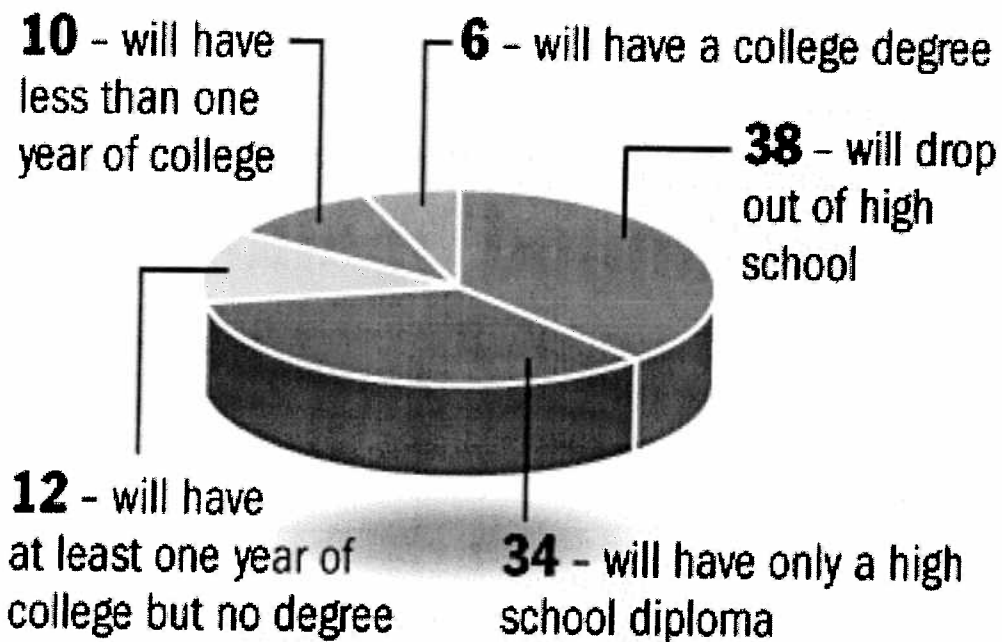
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# Not college bound

For every 100 ninth graders in Alaska today, 72 percent will not go to college within 10 years – and slightly more than half of those will have dropped out of high school.



Source: Alaska Commission on Postsecondary Education

**RON ENGSTROM** / Anchorage Daily News



**Attachment G**  
**“Chugach Program Boast 98 Percent Graduation”**  
**Anchorage Daily News 3-01-09**

 **adn.com**

Anchorage Daily News

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## Chugach program boasts 98 percent graduation

By JULIA O'MALLEY

jomalley@adn.com

(03/01/09 19:41:01)

Around a South Anchorage dinner table on a recent night, a group of students takes a moment before eating.

Girls in ponytails and boys in baseball caps who come from points all over the Alaska map -- Crooked Creek, Pilot Point, Teller and Chignik Lagoon -- go around the table, saying what they're thankful for.

One by one, each says, "Opportunities."

The students were in Anchorage as part of the Chugach School District's Voyage to Excellence program, which brings rural, primarily Alaska Native students from across the state, to Anchorage for weeks at a time to learn firsthand about big-city life, plan their futures and prepare for the high school graduation qualifying exam.

The program, in its 10th year, has a striking success rate: 98 percent of its students graduate from high school.

Compare that to 45 percent, the 2006 statewide graduation rate for Alaska Native students -- the lowest of any minority here, according to the state Department of Education. Or Alaska's overall graduation rate, which is 60 percent.

The secret: teaching social skills and tying what happens in the classroom to the work world.

### THE REAL WORLD

VTE's recipe is a little bit like the old MTV reality show "Real World": take a group of kids from all over the state, put them together in a fashionable house, give them a set of rules and watch what happens.

On a recent night, seven students filled the five-bedroom house in a subdivision off Elmore, lounging on couches, clicking away at laptops before dinner. The house is fashionably decorated with contemporary paint colors, overstuffed furniture, and a big kitchen with marble counter-tops and commercial appliances. They sleep in bedrooms, dormitory-style. The girls have the upstairs, the boys the basement.

The program is run by the Prince William Sound-based Chugach district, but it accepts students from the Lake and Peninsula, Kuspuk and Bering Strait districts, as well as Nome's Northwestern Alaska Career and Technical Center.

About 150 participate each year. There's a waiting list and other rural districts would like to take part, but right now the program -- which is funded with a combination of state money and grants -

- can't handle any more.

Students begin as early as junior high school. The program works in phases -- most last a week or two though some can be longer.

The kids learn things they don't learn in the village, like how to talk to strangers, how to find an address they've never been to, how to dress for a job interview. They look at different career possibilities and make a plan for after high school. There's also lots of prep for the high school graduation qualifying exam.

In the village, students are used to knowing everyone, to having a network of support. Coming to Anchorage for training or school can be very frightening.

"You don't have the bus system, even the amount of people is intimidating," said Billijo Mills, one of the directors.

Working from their family-like home base, students learn the basics of setting up a life: renting an apartment, opening a bank account, looking for a job, being interviewed by a prospective employer.

"We set them up with a network of resources," Mills said.

Studies show that the more practical daily-living skills students have, the better their performance in school, she said.

"That's why we start in junior high. We start working on handshakes, eye contact, communication," she said.

Sometimes in tiny villages where there are only a handful of students in each class, isolation can make it hard for children to imagine a career, said Carol Wilson, the program's other director. VTE is focused on future employment, taking students to visit workplaces so they can see what happens on the job and what employers expect.

The program is an alternative to a boarding school. It doesn't take students out of their community for long. The idea is to broaden their horizons and give them skills they can use both in the city and back at home.

Once students pick a career field, teachers construct lessons to demonstrate how writing or math gets used in the commercial kitchen, or construction job site, or office.

"What makes it so successful is we are able to take what kids learn in a classroom and apply it to real life," Wilson said.

## **FUTURE**

The Carrs at Abbott Loop is mostly quiet at 8 p.m. as Gwen Vlasoff, 17, studies her grocery list. Half a dozen others buzz about, carrying items from the aisles. The students are in "Phase 3." In that phase, they function mostly independently, setting up job shadows with people in fields they are interested in and visiting vocational programs and UAA.

One of their tasks is to develop a menu for the week, shop using a budget, and then cook for each other. The selections aren't complicated. There's frozen pizza, chicken nuggets, fried rice and lasagna.

But in the vast grocery store, the questions stack up. One pizza seems cheaper than the other, but it's also slightly smaller. Which is the best deal? How many "servings" does a normal person eat? Less than \$3 a pound seems good for oranges compared to village prices but eight pounds of them still aren't cheap. Should they buy them?

Vlasoff, from the Prince William Sound village of Tatitlek, is one of the most focused and outgoing in the group. Kids commonly drop out of her high school, she said. Her sister just left school because she's having a baby. VTE keeps her thinking about graduating, she said. After several years in the program, she's decided she wants to be an elementary school teacher. She plans to go back to her village to teach.

VTE helps students get used to the city's sprawling stores and traffic and lines of strangers, said Jamie Ablowaluk, 16, who lives in the Bering Sea village of Teller. She spent a little time in Anchorage a few years ago, attending East High. The school is four times the size of her whole village, she said and she never settled in. It was too "rushy."

The program introduced her to vocational education classes. She discovered welding and is building up hours for a certification. Some kids in her village end up living with their parents practically forever, not ever building a life of their own. She doesn't want to be that way, she said.

"I'm thinking about the North Slope."

## **PASSING THE EXAM**

Lewis Phillips, 18, is from Crooked Creek, a village of 140 or so on the Kuskokwim River. He plans to be a heavy-equipment operator, but first he's got to pass the high school graduation qualifying exam to get his diploma. He already took it, and he's studying to take it again.

"I got to pass the writing," he said.

The exam can be a major hurdle for some students, Mills said. Students who complete all four years of high school but fail the exam get a certificate, but not a diploma. Last year, only one of 40 seniors in the state's five largest districts got a certificate instead of a diploma, while in the smaller districts one in 16 students did, according to state numbers.

"(It's) a high-stakes exam; there's always going to be issues with it," Mills said.

After they're done with high school, the students can come for test prep if they don't have a diploma, either staying for a session in the house or coming for a month for a test-prep summer camp, she said.

Sometimes students have to take the test several times, she said. But, they always take it again.

"We had one student take it, the math, six times. He stayed until he was 21," she said. But, in the end he finally passed. Now he has a job in the mining industry.

"He sent us a picture of him in his cap and gown," she said. "It was huge."

Because students in the program have plans for the future, they're motivated both to finish high school and to pass the test.

"We hear from teachers and parents," she said. "We get notes: 'What did you do to our son? He's getting up and going to school.'"

**Attachment H**  
**Legal Services Memo-Why Individual School Districts in Alaska Cannot**  
**Raise Compulsory Age**

# LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES  
LEGISLATIVE AFFAIRS AGENCY  
STATE OF ALASKA

(907) 465-3867 or 465-2450  
FAX (907) 465-2029  
Mail Stop 3101

State Capitol  
Juneau, Alaska 99801-1182  
Deliveries to: 129 6th St., Rm. 329

## MEMORANDUM

February 26, 2009

**SUBJECT:** Compulsory School Age (HB 33)

**TO:** Representative Cathy Muñoz  
Attn: Terry Harvey

**FROM:** Jean M. Mischel  
Legislative Counsel

You have asked whether a school district is prohibited from establishing a compulsory school age that is different from the compulsory age set by the legislature in AS 14.30.010. The answer is yes. While a school district may adjust the school age for purposes of enrolling a student as many districts have done for kindergartners, a school district may not compel a student's attendance if the student is beyond the compulsory age of seven to 16 years of age.

AS 14.30.010 provides

(a) Every child between seven and 16 years of age shall attend school at the public school in the district in which the child resides during each school term. Every parent, guardian or other person having the responsibility for or control of a child between seven and 16 years of age shall maintain the child in attendance at a public school in the district in which the child resides during the entire school term, except as provided in (b) of this section.

(b) This section does not apply if a child

(1) is provided an academic education comparable to that offered by the public schools in the area, either by

(A) attendance at a private school in which the teachers are certificated according to AS 14.20.020;

(B) tutoring by personnel certificated according to AS 14.20.020;  
or

(C) attendance at an educational program operated in compliance with AS 14.45.100 - 14.45.200 by a religious or other private school;

(2) attends a school operated by the federal government;

(3) has a physical or mental condition that a competent medical authority determines will make attendance impractical;

(4) is in the custody of a court or law enforcement authorities;

(5) is temporarily ill or injured;

(6) has been suspended or expelled under AS 14.03.160 or suspended or denied admittance under AS 14.30.045;

(7) resides more than two miles from either a public school or a route on which transportation is provided by the school authorities, except that this paragraph does not apply if the child resides within two miles of a federal or private school that the child is eligible and able to attend;

(8) is excused by action of the school board of the district at a regular meeting or by the district superintendent subject to approval by the school board of the district at the next regular meeting;

(9) has completed the 12th grade;

(10) is enrolled in

(A) a state boarding school established under AS 14.16; or

(B) a full-time program of correspondence study approved by the department; in those school districts providing an approved correspondence study program, a student may be enrolled either in the district correspondence program or in the centralized correspondence study program;

(11) is equally well-served by an educational experience approved by the school board as serving the child's educational interests despite an absence from school, and the request for excuse is made in writing by the child's parents or guardian and approved by the principal or administrator of the school that the child attends;

(12) is being educated in the child's home by a parent or legal guardian.

(c) If a parent, legal guardian, or other person having the responsibility for or control of the child elects to enroll a child who is six years of age in first grade at a public school, after enrollment, the child is subject to the provisions of (a) and (b) of this section. If the parent or guardian of a child who is six years of age and is enrolled in first grade at a public school determines, within 60 days after the child is enrolled, that the best interests of the child are not being served by enrollment in the first grade, the child may be withdrawn from school, and the provisions of (a) and (b) of this section do not apply to the child until the child is seven years of age.

By its plain meaning, nothing in this section exempts school districts or authorizes a modification to the age for *compulsory* attendance at a school in this state.

A school district may, however, establish a school age for purposes of *allowing* a child to attend a school in the district under AS 14.03.070 and 14.03.080. Those sections provide

**Sec. 14.03.070. School age.** A child who is six years of age on or before September 1 following the beginning of the school year, and who is under the age of 20 and has not completed the 12th grade, is of school age.

**Sec. 14.03.080. Right to attend school.** (a) A child of school age is entitled to attend public school without payment of tuition during the school term in the school district in which the child is a resident subject to the provisions of AS 14.14.110 and 14.14.120.

(b) A person over school age may be admitted to the public school in the school district in which the person is a resident at the discretion of the governing body of the school district. A person over school age may be charged tuition by the governing body of the school district.

(c) A child under school age may be admitted to a public school in the school district of which the child is a resident at the discretion of the governing body of the school district if the child meets minimum standards prescribed by the board evidencing that the child has the mental, physical, and emotional capacity to perform satisfactorily for the educational program being offered. A district's educational program must prescribe that under school age students advance through the curriculum or grade level by the following school year. A governing body may delegate the authority granted under this subsection to the chief school administrator of the school district.

(d) A child who is five years of age on or before September 1 following the beginning of the school year, and who is under school age, may enter a public school kindergarten.

(e) A child under school age shall be admitted to school in the district of which the child is a resident if immediately before the child became a resident of the district, the child was legally enrolled in the public schools of another district or state.

(f) This section does not require a school district to admit a child or person currently under suspension or expulsion under AS 14.03.160 in that or another school district.

Under AS 14.14.090(2) a school board is required to provide for an educational program for each school age child who is enrolled in or a resident of the district.

The statutes establishing school age do not contradict or supersede the compulsory attendance requirement. A district is obligated to provide an education for a student of school age but the student is not compelled to take advantage of it, or forced to stay at the school after age 16 under the compulsory attendance statute.

If I may be of further assistance, please advise.

JMM:plm  
09-122.plm



**Attachment I**  
**Notes on Juneau School District at Risk Programs**

Juneau School District – Programs for At-Risk Students (some)

Alternative High School-no more than 150 students, separate campus,

CHOICE Program-for students who are academically at risk-retreat model involving parent & teacher support

Learning Communities- for all students, more choices for grades 10-12, voc ed, construction, engineering, native culture, college bound, arts & humanities, science & technology, new-health, recreation & fitness

Truancy- Juneau has a full time truant tracker. As required in statute, Juneau presents to all students at the start of the year a handbook that must be shared with parents and signed; it explains the truancy policy in detail.

Enforcement-Juneau (and Anchorage too) have worked with the municipality to pass a local ordinance allowing the school to issue tickets directly to parents, \$100 fine. After home visits, after calls, they do issue the tickets when warranted.

**Attachment J**  
**Truancy Report from Todd Brocious Dept of Education**

**Terry Harvey**

**From:** Brocious, Todd D (EED) [todd.brocious@alaska.gov]  
**Sent:** Tuesday, February 24, 2009 2:35 PM  
**To:** Terry Harvey  
**Cc:** Prussing, Paul R (EED); Curran, Cynthia A (EED); Herman, Marcy J (EED)  
**Subject:** RE: info

Hi Terry,

It was good to talk to you yesterday. I really cannot speak with any authority as to how districts are enforcing compulsory attendance and responding to attendance violations across Alaska. As we talked about, some districts have shared that they employ truancy officers who actively work with students who are or who have been challenged by truancy, but EED does not formally collect information on what truancy procedures districts develop, or on any enforcement measures they are implementing. Districts anecdotally report broadly varying interpretations of what constitutes truancy, as well as report tremendous variability in the resources they have available to dedicate to enforcement/encourage compliance with compulsory attendance. I can confirm that there is no uniform or standardized response to truancy in Alaska's public schools. Alaska's truancy laws explicitly give districts local authority to establish their procedures.

My involvement with truancy has very formal parameters. First, I provide technical assistance to districts to ensure they are cognizant of the existing state laws requiring them to have procedures to reduce and to prevent truancy. Second I ensure districts understand their state and federal statutory reporting requirements-- they are required to collect and report truancy data on all full-day unexcused absences to EED for each school year by June 30<sup>th</sup>. (EED provides several statewide audio conferences to districts each fall to inform them of all state and federal laws pertaining to truancy, suspensions, and expulsions. EED highlights reporting requirements under No Child Left Behind Title IV Part A Safe and Drug-Free Schools Community Act, Alaska statutes Sec 14.30.010-14.30.030, and Regulation 4 AAC 06.250 during these training events. We also respond to many individual district inquiries each year.) Third, I am responsible for ensuring the EED statewide suspensions, expulsions, and truancy data collection system is working and that it is collecting the information Alaska is required to collect. Finally, I do have an enforcement role with districts in that I review the data base each year to ensure all districts have submitted their data as required, and have the authority to withhold NCLB reimbursements for any district that might fail to comply. (In my 8 years of involvement, no district has failed to ultimately submit data) I hope this information is helpful.

Respectfully, Todd

Todd Brocious  
 Alaska Department of Education & Early Development  
 Education Specialist  
 Safe and Drug-Free Schools, Innovative Programs, HIV, FASD, Elearning, Quality Schools  
 phone: (907) 465-2887  
 fax: (907) 465-2713

---

**From:** Terry Harvey [mailto:Terry\_Harvey@legis.state.ak.us]  
**Sent:** Tuesday, February 24, 2009 10:32 AM  
**To:** Brocious, Todd D (EED)  
**Subject:** info

Todd, appreciate your comments regarding truancy enforcement in Alaska. Possible for a brief overview of your working knowledge of how enforcement is applied in Alaska? Also confirmation of your understanding that each district enforces in their own way, there is no standard enforcement

3/12/2009

**Louie Flora**

---

**From:** Kelly Foreman [kelnmart@hotmail.com]  
**Sent:** Thursday, March 12, 2009 1:36 PM  
**To:** Rep. Paul Seaton  
**Cc:** Louie Flora  
**Subject:** Please oppose HB 33  
**Attachments:** Comparison of Compulsory School Ages and Dropout Rates.pdf

Dear Chair Seaton,

I am opposed to any legislation to increase the compulsory school age.

There is no solid evidence for expanding the compulsory school age. I have compiled a table comparing the compulsory school ages of all the states and their graduation and dropout rates. The information was obtained from the Education Commission of the States website ([www.ecs.org/clearinghouse/64/07/6407.htm](http://www.ecs.org/clearinghouse/64/07/6407.htm)) and The National Center for Education Statistics website ([nces.ed.gov/pubs2008/dropout06/figures/figure\\_04.asp](http://nces.ed.gov/pubs2008/dropout06/figures/figure_04.asp)). The average dropout rate for states with compulsory attendance until 16 is 23.4% and for states requiring attendance until 18 it is 23.9%. Is this small difference worth the increase in government spending and increase in taxation?

While a state or a parent might be able to force 17- and 18-year-olds to attend classes in a school, neither the state nor parent can force them to learn their academic subjects or have better attitudes toward academic learning.

Please oppose this legislation.

Thank you,  
Kelly Foreman  
19941 Grant Circle  
Eagle River, AK 99577  
907-622-4661

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## Comparison of Compulsory School Ages and Dropout Rates on State-by-State Basis

State	Start age*	End age*	Graduation Rate**	Dropout Rate	Average dropout rate for states with compulsory attendance age of 16: <b>23.4%</b>
<b>Alabama</b> (ALA. CODE § 16-28-3)	7	16	65.9	34.1	
<b>Alaska</b> (ALASKA STAT. § 14.30.010)	7	16	64.1	35.9	
<b>Arizona</b> (ARIZ. REV. STAT. § 15-802)	6	16	84.7	15.3	
<b>Delaware</b> (DEL. CODE ANN. tit. 14, § 2702)	5	16	73.1	26.9	
<b>Florida</b> (FLA. STAT. ANN. § 1003.21)	6	16	64.6	35.4	
<b>Georgia</b> (GA. CODE ANN. § 20-2-690.1)	6	16	61.7	38.3	
<b>Idaho</b> (IDAHO CODE § 33-202)	7	16	81.0	19.0	
<b>Indiana</b> (IND. CODE ANN. § 20-33-2-6)	7	16	73.2	26.8	
<b>Iowa</b> (IOWA CODE ANN. § 299.1A)	6	16	86.6	13.4	
<b>Kentucky</b> (KY. REV. STAT. ANN. 159.010)	6	16	75.9	24.1	
<b>Maryland</b> (MD. CODE ANN., EDUC. § 7-301)	5	16	79.3	20.7	
<b>Massachusetts</b> (MASS. GEN. LAWS ANN. ch. 76, § 1; MASS. REGS. CODE tit. 603, § 8.02)	6	16	78.7	21.3	
<b>Michigan</b> (MICH. COMP. LAWS § 380.1561)	6	16	73.0	27.0	
<b>Minnesota</b> (MINN. STAT. § 120A.22)	7	16	85.9	14.1	
<b>Missouri</b> (MO. REV. STAT. § 167.031)	7	16	80.6	19.4	
<b>Montana</b> (MONT. CODE. ANN. § 20-5-102)	7	16	81.5	18.5	
<b>New Jersey</b> (N.J. REV. STAT. § 18A-38-25)	6	16	85.1	14.9	
<b>New York</b> (N.Y. EDUC. LAW § 3205)	6	16	65.3	34.7	
<b>North Carolina</b> (N.C. GEN. STAT. § 115C-378)	7	16	72.6	27.4	
<b>North Dakota</b> (N.D. CENT. CODE § 15.1-20-01)	7	16	86.3	13.7	
<b>Rhode Island</b> (R.I. GEN. LAWS § 16-19-1)	6	16	78.4	21.6	
<b>Vermont</b> (VT. STAT. ANN. tit. 16, § 1121)	6	16	86.5	13.5	
<b>Wyoming</b> (WYO. STAT. ANN. § 21-4-102)	7	16	76.7	23.3	

<b>Arkansas</b> (ARK. CODE. ANN. § 6-18-201)	5	17	75.7	24.3	Average dropout rate for states with compulsory attendance age of 17: <b>26.9%</b>
<b>Colorado</b> (COLO. REV. STAT. §22-33-104)	6	17	76.7	23.3	
<b>Illinois</b> (105 ILL. COMP. STAT. ANN. § 5/26-1)	7	17	79.4	20.6	
<b>Maine</b> (ME. REV. STAT. ANN. tit. 20A, § 5001-A)	7	17	78.6	21.4	
<b>Mississippi</b> (MISS. CODE ANN. § 37-13-91)	6	17	63.3	36.7	
<b>Pennsylvania</b> (PA. CONS. STAT. ANN. § 13-1326)	8	17	82.5	17.5	
<b>South Carolina</b> (S.C. CODE ANN. § 59-65-10)	5	17	60.1	39.9	
<b>Tennessee</b> (TENN. CODE ANN. § 49-6-3001)	6	17	68.5	31.5	Average dropout rate for states with compulsory attendance age of 18: <b>23.9%</b>
<b>California</b> (CAL. EDUC. CODE 48200)	6	18	74.6	25.4	
<b>Connecticut</b> (CON. GEN. STAT. § 10-184)	5	18	80.9	19.1	
<b>District of Columbia</b> (D.C. CODE ANN. § 38-202)	5	18	68.8	31.2	
<b>Hawaii</b> (HAW. REV. STAT. 302A-1132)	6	18	75.1	24.9	
<b>Kansas</b> (KAN. STAT. ANN. § 72-1111)	7	18	79.2	20.8	
<b>Louisiana</b> (LA. REV. STAT. ANN. § 17:221)	7	18	63.9	36.1	
<b>Nebraska</b> (NEB. REV. STAT. § 79-201)	6	18	87.8	12.2	
<b>Nevada</b> (NEV. REV. STAT. § 392.040)	7	18	55.8	44.2	
<b>New Hampshire</b> (N.H. REV. STAT. § 193:1)	6	18	80.1	19.9	
<b>New Mexico</b> (N.M. STAT ANN. §§ 22-8-2, 22-12-2)	5	18	65.4	34.6	
<b>Ohio</b> (OHIO REV. CODE ANN. § 3321.01)	6	18	80.2	19.8	
<b>Oklahoma</b> OKLA. STAT. ANN. TIT. 70, § 10-105	5	18	76.9	23.1	
<b>Oregon</b> (OR. REV. STAT. § 339.010)	7	18	74.2	25.8	
<b>South Dakota</b> (S.D. CODIFIED LAWS § 13-27-1)	6	18	82.3	17.7	
<b>Texas</b> (TEX. EDUC. CODE ANN. § 25.085)	6	18	74.0	26.0	
<b>Utah</b> (UTAH CODE ANN. § 53A-11-101)	6	18	84.4	15.6	
<b>Virginia</b> (VA. CODE ANN. § 22.1-254)	5	18	79.6	20.4	

<b>Washington</b> (WASH. REV. CODE ANN. § 28A.225.010)	8	18	75.0	25.0
<b>West Virginia</b> (W. VA. CODE § 18-8-1)	6	18	77.3	22.7
<b>Wisconsin</b> (WIS. STAT. ANN. § 118.15)	6	18	86.7	13.3

\*Compulsory School Age Requirements - [www.ecs.org/clearinghouse/64/07/6407.htm](http://www.ecs.org/clearinghouse/64/07/6407.htm)

\*\* Dropout and Completion Rates in the United States - [nces.ed.gov/pubs2008/dropout06/figures/figure\\_04.asp](http://nces.ed.gov/pubs2008/dropout06/figures/figure_04.asp)