

# THE COSTS OF DROPPING OUT OF SCHOOL IN IOWA: 2015 UPDATE

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## Definition of dropout:

The National Center for Education Statistics (NCES) definitions used for dropouts include students who satisfy one or more of the following conditions:

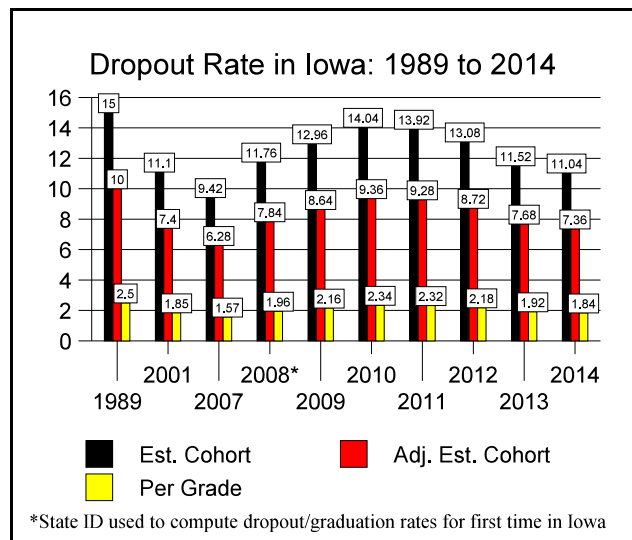
- Was enrolled in school at some time during the previous school year and was not enrolled by October 1 of the current year or
- Was enrolled in school at some time during the previous school year and left the school before the previous summer and
- Has not graduated from high school or completed a state or district-approved educational program; and
- Does not meet any of the following exclusionary conditions: a) transfer to another public school district, private school, or state or district-approved educational program, b) temporary school-recognized absence for suspension or illness, c) death, or d) move out of the state or leave the country.

A student who has left the regular program to attend an adult program designed to earn a General Educational Development (GED) or an adult high school diploma administered by a community college is considered a dropout. However, a student who enrolls in an alternative school or alternative program administered by a public school district is NOT considered a dropout.

## Dropout rate in Iowa (Grades 7-12):

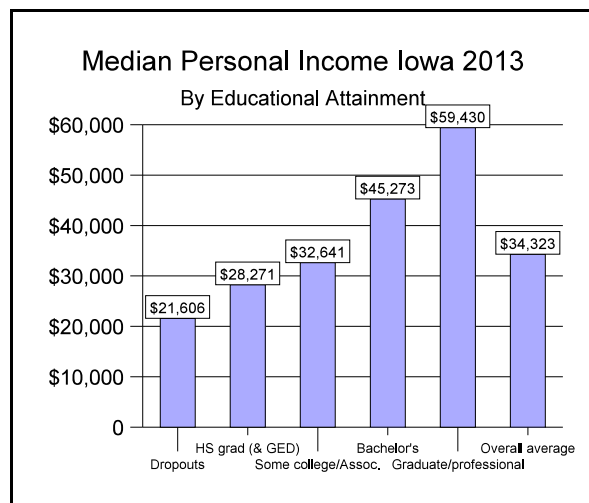
Per grade dropout rate was 2.5 in 1989 (when first study on costs of dropping out of school was conducted), decreasing to 1.57 in 2007; State ID was used to compute dropout/graduation rates for first time in 2008, and rate increased to 2.34 in 2010; decreased to **1.84** in 2014.

Cohort rate was found by multiplying the per grade dropout rate by 6 (# years between grades 7 and 12); adjusted cohort rate is cohort rate multiplied by 2/3 (to adjust for dropouts coming back into the system). (See figure to right.) The number of dropouts in 2013 was 4,167; the number in 2014 was 4,004.



## Variation in personal income by education level (Iowa, 2013):

Less than HS (dropouts) \$21,606, HS graduate (incl. GEDs) \$28,271, some college or Assoc. degree \$32,641, bachelor's degree \$45,273, graduate or professional degree \$59,430, total (overall) \$34,323. (See figure below left.)



*Cost in loss of personal income of dropping out, as wage rate based on the number of hours of high school (interpretation suggested by Del Holland, Metro High School, 2002):*

Five course hours per year, 180 days per school year, and four years of high school yields 5 x 180 x 4 or 3,600 hours of high school for a typical student. The difference between the HS graduate/GED and dropout personal income (\$6,665) multiplied by 45 years is \$299,925. Dividing this by 3,600 hours yields about **\$83/hr**. This may be viewed as the value of achieving the high school diploma in hourly wages. Contrast this to \$7-8/hr for a typical high school student job, which may be beneficial or necessary, but can lead to absenteeism, skipping classes for work, falling behind in classes, and eventually dropping out of school. (Comparing dropout income to that of *all working Iowans*, yields about **\$159/hr.**)

*Cost in reduction in revenue due to dropping out (Iowa, 2013 income and tax data, 2015 state cost data):*

- Number of dropouts *without* high school equivalency: **3,156** [= 4,004 dropouts in 2014 - 848 GEDs obtained by 16-18 year olds in 2014];
- Reduction in state (income + sales) tax revenues over 45 year lifetime of work due to reduced personal income of dropouts compared with the overall income of all Iowans (potential net increase to state treasury): **\$124.25 million** [=  $\{(\$1,239-\$593)$  est. income taxes/year x 3,156 (#dropouts without high school equivalency in 2014) x 45 years} +  $\{(\$34,323 - \$21,606) \times 30\%$  (taxable part of income) x 6% (sales tax rate) x 3,156 x 45 years}];
- “One-time” state cost to educate 3,156 dropouts to high school completion: **\$44.20 million** [= \$6,366 (state cost/student for 2014-15 year) x 3,156 x 2.2 years (average time to graduate after dropping out)];
- Potential net increase in state treasury over 45 year working lifetime of Iowa’s 2014 dropouts associated with educating them to the status of graduates:  
\$124.25 million - \$44.20 million = **\$80.05 million**, or **about \$1.8 million per year**.

*Cost in increased risk of incarceration of dropouts:*

Incarcerated in 2013: 8,209

Education level grades 1-12 (dropouts): 1,547

High school graduates, college (postsecondary): 2,366

Total (not counting GEDs, unknown or no data on education level): 3,913

Increased risk of incarceration = odds (dropout among incarcerated)/odds (dropout among general population)  
=  $(1,547/2,366)/(.1104/.8896) = 5.3$

This was obtained using the cohort rate for the general population for 2013 (11.04% or .1104). Using the adjusted cohort rate (7.36% or .0736) for the general population, yields an increased risk of incarceration of **8.2**. This is the increased risk of incarceration that is associated with dropping out of school. In other words, dropouts continue to have from about 5 to 8 times the risk of incarceration as graduates.

The cost of incarceration for each inmate in Iowa in 2012 was \$84.85/day or about **\$30,970/year**. This is about 5 times the 2014-15 regular state cost of education per pupil. This cost of incarceration does not include court costs, damage to property, loss in productivity, increased insurance rates, loss of human life, incapacitation, and/or hospital costs for the victim—all of which may be due to criminal acts.

*Cost in increased welfare payments to dropouts due to their higher unemployment rates:*

Food assistance (“food stamps”) per person in 2014: \$1,310/year

FIP (Family Investment Program) per person in 2014: \$1,572/year

Medicaid per person in 2014: \$7,920/year

Total welfare payments per person in 2014: \$10,802/year

Unemployment rates in 2013: 10.94% (dropouts, based on labor force); 7.27% (dropouts, based on total);

5.81% (high school graduates, based on labor force); 4.63% (high school graduates, based on total)

Labor force participation rate in 2013: 66.45% (dropouts); 79.66% (high school graduates)

Estimated cost of welfare payments due to increased unemployment for 3,156 dropouts in 2014

=  $(3,156)(.0727 - .0463)(\$10,802)$  or about **\$900 thousand per year**.

Estimated cost of welfare payments due to reduced labor force participation for 3,156 dropouts in 2014

=  $(3,156)[(1 - .6645) - (1 - .7966)](\$10,802)$  or about **\$4.50 million per year**.

Thus, the total increase in welfare payments for dropouts is estimated to be about **\$5.40 million per year**.

Reduced labor force participation rate (with only about 2 out of 3 dropouts in the labor force) may indicate *longer-term economic problems* for dropouts.

*Cost in reduced payments by state to school districts due to dropouts in district:*

Since 2008, the state has tracked dropouts (and graduates) via State ID student numbers. To some extent, the increase in the dropout rate in the following two years was a statistical artifact. However, the reality is that many school districts (especially the large ones, with the highest number of dropouts) have experienced reductions in state funding for education due to the increase in the number of dropouts, in direct proportion to the number of dropouts. For example, a district with 100 dropouts in 2015 would lose (a minimum of) \$6,366 x 100 or \$636,600. Including other than regular education costs (e.g., special education and dropout prevention), this would be \$10,247 x 100 or about \$1,024,700 that would have been lost in this district. (Specific district costs per pupil may be slightly different from the state costs.)