

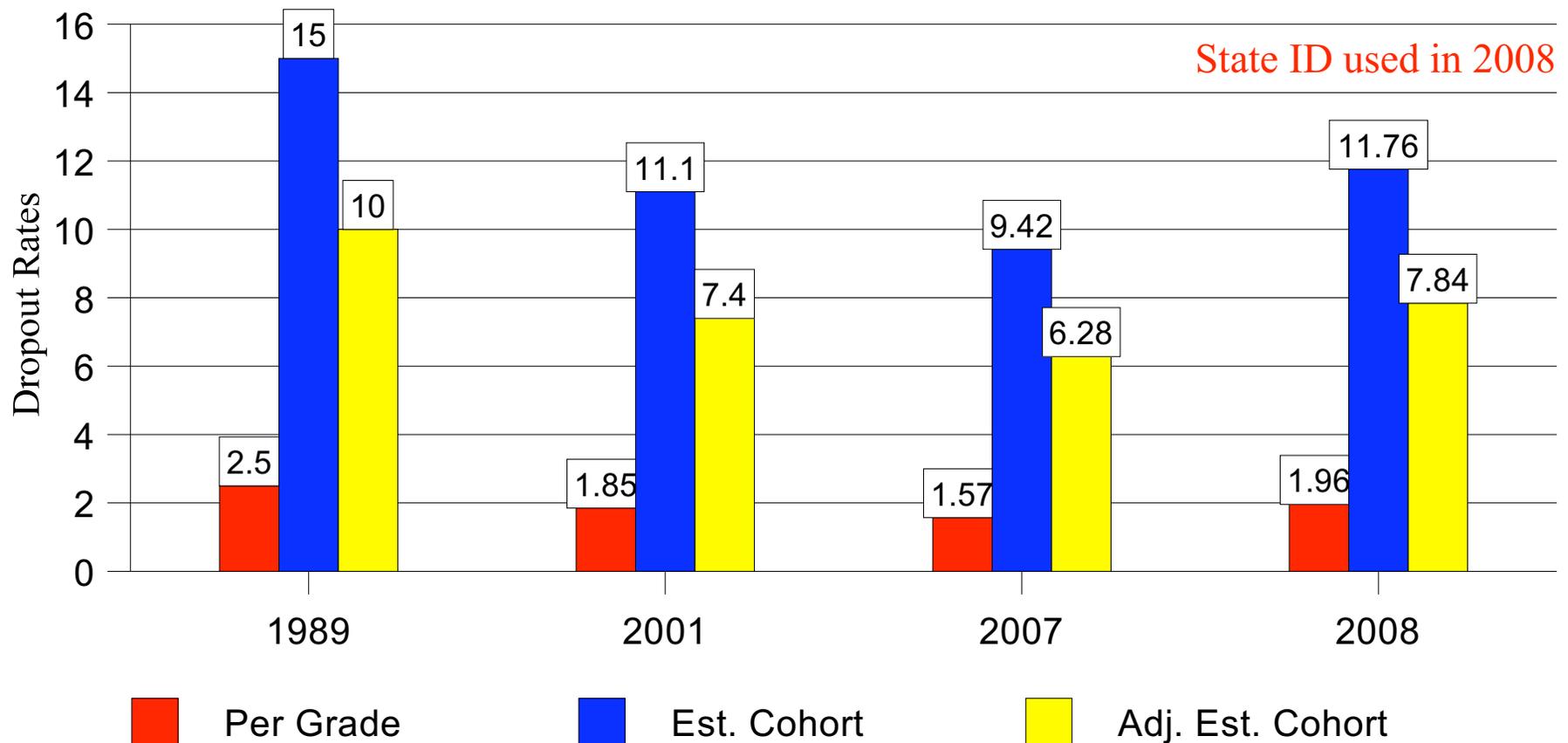
The Costs of Dropping Out of School in Iowa

Decreased Personal Income & Revenue,
Increased Unemployment/Welfare Burden,
Increased Risk of Incarceration,
Deceleration in Personal Growth, and
Reduced Sense of Control over One's Life –
and Innovative Programs to Reduce the Costs

Presented at Risky Business Conference,
Des Moines, Iowa
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DROPOUT RATES IN IOWA

1989¹, 2001, 2007 & 2008



¹ Year of initial study

Note: The “estimated cohort” rate is the estimated dropout rate for *all six grades 7-12* ($= 6 \times$ per grade rate). The “adjusted estimated cohort” is the estimated cohort rate adjusted for those expected to return and graduate ($= (2/3) \times$ cohort rate), *perhaps in more than 6 years*.

Comparison of Median Personal Income: Dropouts and High School Graduates in Iowa

Incomes of Dropouts and H.S. Graduates with No College, Some College, Bachelor Degree, and Advanced Degree

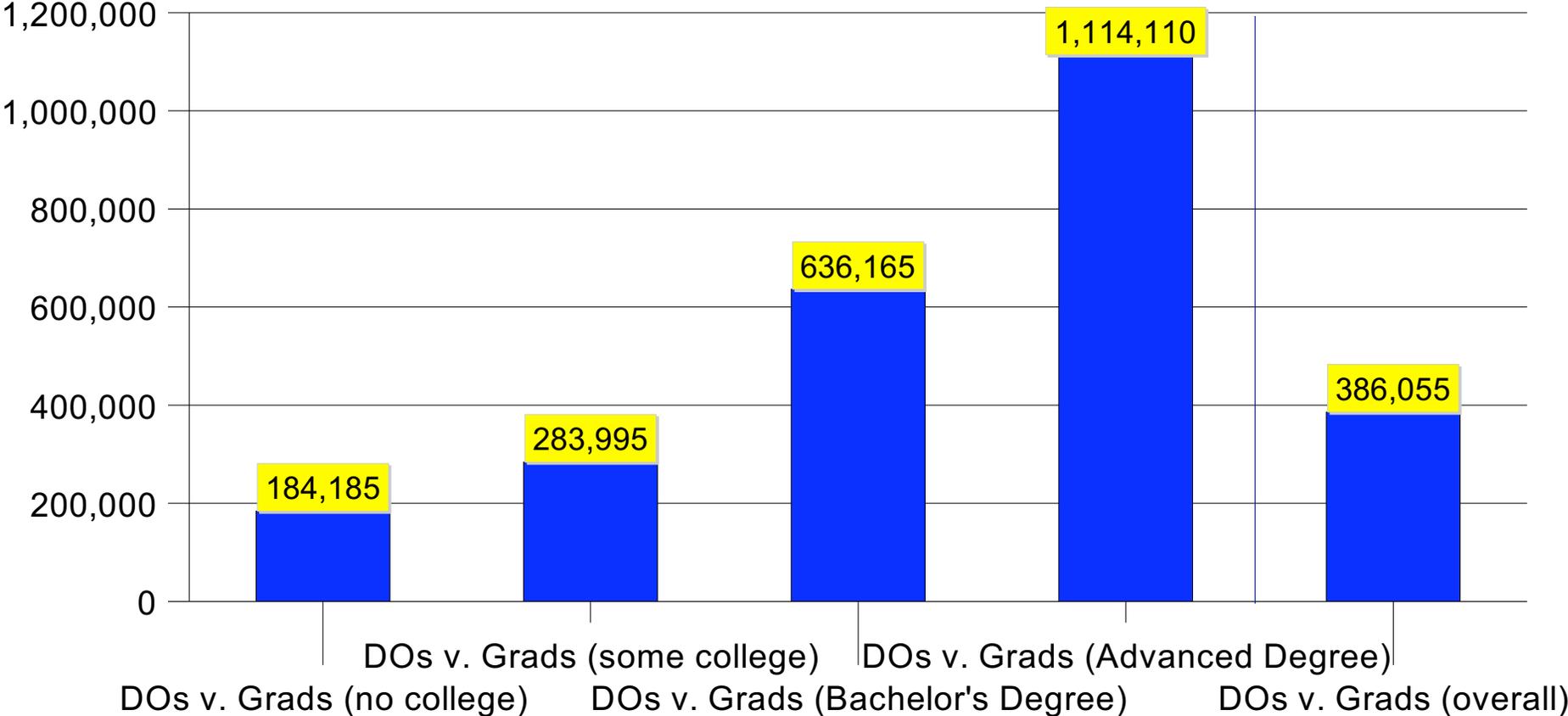
Differences in median incomes over 45-year working lifetime (based on 2000 census for Iowa):

- Dropouts and h.s. graduates w. no college: $\$4,093 \times 45 = \mathbf{\$184,185}$
- Dropouts and h.s. graduates w. some college: $\$6,311 \times 45 = \mathbf{\$283,995}$
- Dropouts and h.s. graduates w. Bachelor degree: $\$14,137 \times 45 = \mathbf{\$636,165}$
- Dropouts and h.s. graduates w. advanced degree: $\$24,758 \times 45 = \mathbf{\$1,114,110}$
- Dropouts and h.s. graduates (overall): $\$8,579 \times 45 = \mathbf{\$386,055}$

Note: The result for h.s. graduates (overall, \$386,055) was calculated by taking the weighted median of the four groups (graduates with no college, some college, Bachelor degree, and advanced degree), which yielded \$30,779, subtracting the median income for dropouts (\$22,200), and multiplying by 45 years.

Differences in Lifetime Median Incomes

Dropouts v. Various Levels of Graduates (Iowa 2000 Census)



Potential Net Increase in State Treasury Associated with Educating Dropouts to High School Graduation

“Opportunity Cost” to State Treasury Versus State Cost for Educating Iowa’s 4,442 Dropouts

- Reduced state tax revenues over 45 year lifetime of work due to reduced personal income of dropouts: **\$87.2 million** (“opportunity cost” to state treasury) [\approx $(\$1,178 - \$742)$ taxes/year \times 4,442 dropouts \times 45 years]
- State cost (“one-time”) to educate 4,442 dropouts to high school completion: **\$52.6 million** [\approx $\$5,333$ state cost/student for one year \times 4,442 dropouts \times 2.22 years]
- Potential net increase in state treasury over 45 year lifetime of work of current dropouts associated with educating them to the status of graduates:
 $\$87.2$ million - $\$52.6$ million = **$\$34.6$ million**
or **about \$768 thousand** per year

Note: The above estimate should be “conservative” since we are using 2000 personal income figures (based on overall estimated income for graduates, with 2004 tax rates) and 2008 state cost for education and dropout data.

Increased Welfare Costs for Dropouts

Family Investment Program (FIP) and Food Assistance

- Iowa's 2008 unemployment rate for dropouts was estimated to be 8.1% (U.S. Census Bureau web site)
 - Iowa's 2008 unemployment rate for high school graduates, some college/associate's degree, and bachelor's (or higher) degree was estimated to be 2.5% (U.S. Census Bureau web site)
 - FIP and food assistance payments estimated to be \$603/month in 2009 (does *not* include Medicaid) (Dept. of Human Services)
 - Increased welfare costs for dropouts estimated to be about **\$1.8 million per year** ($\approx (.081 - .025) \times 4,442$ dropouts \times \$603 welfare cost/month \times 12 months)
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Increased Risk of Incarceration

Dropouts v. High School Graduates

Data from Dept. of Corrections (March 2008):

- Estimated number of inmates reporting less than high school education (dropouts) = **2,256**
 - Estimated number of inmates reporting they were high school graduates, had some college, a college degree = **1,688**
 - Probability of dropout, given incarceration = **.572**
(= $2,256/3,944$)
 - Probability of dropout (cohort rate, general population) = **.118**
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Risk of Incarceration

Calculation (Bayes' Rule)

The (increased) **risk of incarceration** among dropouts over that of graduates may be shown to be equal to

$$\frac{\text{Odds of dropping out among incarcerated} \quad (.572)/(.428)}{\text{Odds of dropping out among general pop.} \quad (.118)/(.882)} = \frac{\quad}{\quad}$$

or about **10.0**. (See previous slide for data.)

Cost of Incarceration

Versus State Cost to Educate Dropout to High School Completion

- Average cost of keeping a person incarcerated for one year in Iowa in 2002 was **\$22,977***
- State cost to educate a student for one year in 2002 was \$4,512
- State cost to educate a dropout to high school completion was estimated to be **\$10,017** (2.22 additional years x \$4,512/year) – **44%** of the cost of incarceration for one year
- Additional costs of crime: court costs, damage to property, loss in productivity, increased insurance rates, loss of human life, incapacitation, and escalating hospital/health costs for victims and incarcerated

* This is the most current data available on the cost of incarceration. Such data are no longer available from the Iowa Department of Corrections.

Quantifiable Costs of Dropping Out of School

Estimates for Iowa

- Reduced personal income over lifetime = **\$386,055**
 - Reduced state tax revenues over lifetime = **\$87.2 million**
 - Increase in welfare burden due to dropouts' higher rate of unemployment = **\$1.8 million** per year
 - Increased risk of incarceration = **10.0** (assuming cohort dropout rate of 11.8%)
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Qualitative Costs of Dropping Out of School

Factors Related to Dropping Out

- Deceleration in human growth and potential
 - Reduced sense of control over one's life (things happen *to* them, rather than their making things happen)
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Deceleration in Human Growth and Potential

Possible Cost Implications

Dropouts likely to have:

- Lower cognitive skill levels
 - Reduced options to economic progress in today's information-based/high tech economy
 - Restricted social network (due to the educational gap between dropouts and graduates)
 - Poorer health (more likely to have unhealthy behaviors; less likely to have healthy ones)
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Dropout's Reduced Sense of Control

Possible Cost Implications

Dropouts tend to have an external “locus of control” — they think things *happen to them*, rather than their *making* things happen. Some possible implications:

- Less likely to be involved in political processes
- Less likely to participate in activities to change her/his environment (e.g., training for better job)
- Less likely to reduce or cease unhealthy behaviors (e.g., smoking) and increase healthy ones (e.g., nutrition and exercise)

Reference: Wehlage, G. & Rutter, R. (1987). Dropouts: How much do schools contribute to the problem? In G. Natriello (Ed.) *School dropouts: Patterns and policies*. New York: Teachers College Press.

Tax Comparison Analysis by Iowa Legislative Services Agency (Fiscal Services)

Budget Impact: Increased State Revenues from Dropout Prevention versus Cost of At-Risk Programs

- At-risk student programs (allowable growth and supplemental weighting) cost a total of **\$74.3 million** (= \$64.4 + \$9.8 million, rounded up) in FY 2005.
 - Using the median incomes for Iowa h.s. dropouts and graduates who did **not** go on to any college, it was estimated that graduates (or dropouts who remained in school and graduated) would pay **\$191** more in state taxes than h.s. dropouts.
 - Over a 45 year working life, the above h.s. graduates would each pay an additional **\$8,595** (= \$191 x 45) in taxes to the State of Iowa – than would a dropout.
 - To break even for FY 2005, at-risk programs would need to have prevented **8,639** students from dropping out (cost of programs divided by estimated additional state taxes/individual graduating \approx \$74.3 million \div \$8,595.)
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Tax Comparison Analysis by Iowa Legislative Services Agency (Fiscal Services)

Budget Impact: Increased State Revenues from Dropout Prevention v. Cost of At-Risk Programs

- *Question:* How many potential dropouts (at-risk students) remained in school and graduated?
 - Those eligible for free and reduced price meals are considered at higher risk for dropping out. Approximately one-third of students in grades 1-6 are eligible. Applying this proportion to students entering high school, the five year (1998-2002) average would be 13,628 at-risk students.
 - Subtracting the average number of dropouts for this period (4,319) from the number of at-risk students (13,628), one obtains **9,309** “at-risk” students who were in the graduating class. *This number exceeds the “break even” number (8,639)* given on previous slide.
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Tax Comparison Analysis by Iowa Legislative Services Agency (Fiscal Services)

A Conservative Analysis/Result

- This analysis uses a tax comparison between dropouts and only those high school graduates who do **not** go on to college.
 - Economic disadvantage is just one factor contributing to students being at-risk of dropping out of school.
 - This analysis and result are therefore likely to be *conservative*.
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Social/Educational Innovations in Iowa

Contributing to Reduction in Dropout/Unemployment Rates

- Dropout prevention programs via Iowa Code 257.38-41
 - School-Based Youth Services Program(s) supported by state grants (1990-2002) and Iowa Code 257.38-41
 - 21st Century, Reduce Alcohol Abuse, and Safe Schools/Healthy Students grants (federal resources for afterschool and other pro-social and prevention activities in selected communities, e.g., Community Connections in Allamakee County)
 - About 100 alternative schools/programs and many GED, adult high school completion, and home-schooling programs
 - School improvement initiatives for all school districts to improve student performance and maximize potential
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Social/Educational Innovations in Iowa

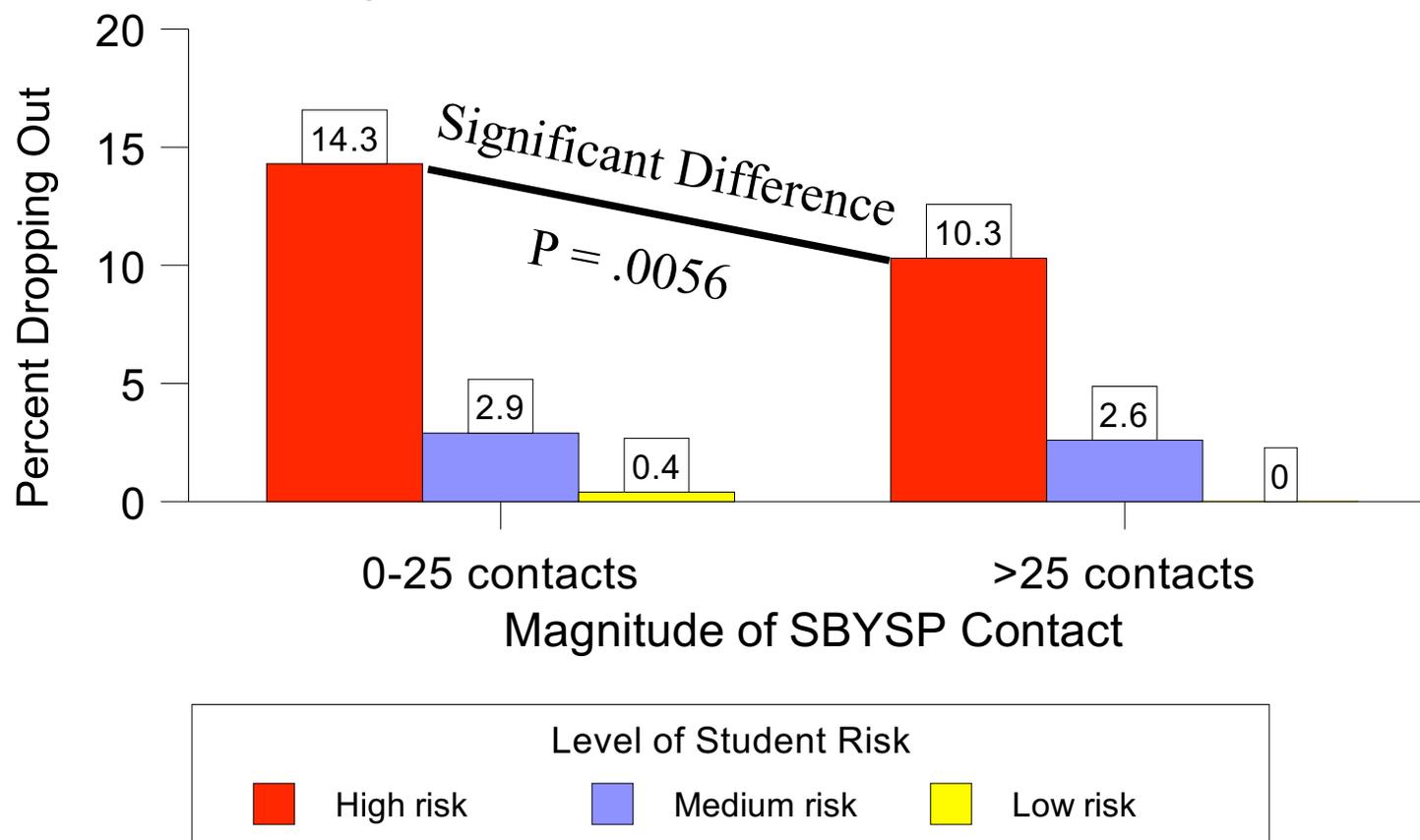
Contributing to Reduction in Dropout/Unemployment Rates

- Iowa Jobs for America's Graduates (IJAG), Governor's initiative for improving the potential for dropouts and potential dropouts to succeed in employment
 - Career Education and School-to-Work initiatives
 - Federally sponsored Drug-Free Schools initiatives to help schools address substance abuse through education and intervention assistance programs (e.g., at Woodbury Elementary in Marshalltown, now in 14th year of service)
 - Surveys for monitoring risky behaviors (Youth Risk Behavior Survey and Iowa Youth Survey) and school health programs and policies (School Health Profiles)
 - Career and technical education programs
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An Example of Dropout Rate Reduction: Iowa's School-Based Youth Services Program

Dropping Out and Magnitude of SBYSP Contact

By Level of Student Risk: 1995-96



Reference: Veale, J, Morley, R. & Erickson, C. (2002). *Practical evaluation for collaborative services*. Thousand Oaks, CA: Corwin Press.

Useful Web Sites

For Accessing Data on the Costs of Dropping Out of School

- **www.census.gov** for data on personal income of dropouts and graduates in U.S., especially the following page:

<http://www.census.gov/hhes/income/earnings/call1iaboth.html>

- **www.bea.gov** for data on personal income for a given state
 - **www.bls.gov** for data on unemployment rates for dropouts and graduates in U.S.
 - **www.census.gov** (American Community Survey) for unemployment rates for 2008 for dropouts and graduates in Iowa
 - **www.iaae.net** for dropout statistics, rates, and graduation rates for Iowa
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Resources

For Accessing Data on the Costs of Dropping Out of School

The following department/agencies were helpful in providing data for this slide show:

- Iowa Department of Corrections
 - Iowa Department of Education
 - Iowa Department of Human Services
 - Iowa Department of Revenue and Finance
 - Census Services (Iowa State University)
 - Iowa Legislative Services Agency (Fiscal Services)
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References

- Iowa Department of Education (2007). Dropout and Graduation Data (from the Iowa DE web site). Des Moines, IA 50319.
 - Prouty, Dennis (Nov. 29, 2004). High school dropouts. Report for Iowa Legislative Services Agency (Fiscal Services), State Capitol, Des Moines, IA 50319
 - Veale, James R. (November 1990). The Costs of Dropping Out of School and the Productivity Benefits of Returning and Graduating: A Survey of Iowa's Alternative School Graduates from 1987 to 1989. Prepared for the Iowa Department of Education. Des Moines, IA 50319.
 - Veale, J., Morley, R. & Erickson, C. (2002). *Practical evaluation for collaborative services*. Thousand Oaks, CA: Corwin Press.
 - Wehlage, G. & Rutter, R. (1987). Dropouts: How much do schools contribute to the problem? In G. Natriello (Ed.) *School dropouts: Patterns and policies*. New York: Teachers College Press.
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