Why High School Graduation Matters

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THE IMPORTANCE OF HIGH SCHOOL
Urgency for America

So this is a problem we cannot afford to accept and we cannot afford to ignore. The stakes are too high—for our children, for our economy, and for our country. It's time for all of us to come together—parents, students, principals and teachers, business leaders and elected officials from across the political spectrum—to end America's dropout crisis.

—Barack Obama, February 24, 2009
Urgency for California

If current trends persist, in 2025 only 35 percent of working-age adults in California will have at least a bachelor’s degree, but 41 percent of jobs will require at least a bachelor’s degree. This equates to a shortfall of one million college graduates.

Substantial improvements in educational outcomes are needed to meet the demands of tomorrow’s economy and ensure the economic prosperity of Californians.

Failure to make improvements will result in a less-productive economy, lower incomes for residents, less tax revenue for the state, and more dependence on social services.

—PPIC, California 2025 (2012)
Clausen study (1993)

• Cohort born in Great Depression and tracked until age 70

• Adult success: obtained more education, had lower rates of divorce, had more orderly careers, achieved higher occupational status, and experienced fewer life crises, such as unemployment

• Best predictor: “planful competence,” a combination of dependability, intellectual involvement, and self-confidence, that was evident in high school

• “Predicting to age 70, there’s nothing that predicts better than what they were like in high school”
Pathways to the Middle Class

- Examined data from the National Longitudinal Study of Youth
- Followed children from 1986 to 2010
- Estimated adult incomes at age 40
- Middle class: 300% above poverty rate ($68,000 for a married couple with two children)
- Developed life-cycle model to identify six stages and indicators of success for each life stage
Benchmarks for Success

- **Birth**
  - Family formation
    - Born at normal birth weight to a non-poor, married mother with at least a high school diploma

- **Age 5**
  - Early childhood
    - Acceptable pre-reading and math skills
    - Behavior generally school-appropriate

- **Age 11**
  - Middle childhood
    - Basic reading and math skills
    - Social-emotional skills

- **Age 19**
  - Adolescence
    - Graduates from high school with GPA ≥ 2.5
    - Has not been convicted of a crime nor become a parent

- **Age 29**
  - Transition to adulthood
    - Lives independently
    - Receives a college degree or has a family income ≥ 250% of the poverty level

- **Age 40**
  - Adulthood
    - Reaches middle class (family income at least 300% of the poverty level)
HIGH SCHOOL DROPOUTS
My Background on Dropouts

Research
• “Dropping Out of High School” (AERJ, 1983)
• Engaging Schools: Fostering High School Student’s Motivation to Learn (NRC, 2005)
• Dropping Out: Why Students Drop Out of High School and What Can be Done About It (Harvard University Press, 2011)

Practice
• Collaborator on proven dropout prevention program, ALAS (1990-95)
• Dropout Prevention: A Practice Guide (IES, 2008)

Policy
• Started California Dropout Research Project (2006)
• Solving California’s Dropout Crisis (CDRP, 2008)
California Dropout Research Project Activities

- New research with a focus on California (research studies, policy briefs, statistical briefs, city dropout profiles)
- Policy recommendations from policy committee (policymakers, educators, researchers)
- Dissemination through mailings, website, presentations, media
Dimensions of the Dropout Crisis

1. Magnitude and trends
2. Consequences
3. Causes
4. Solutions
1. The problem is severe
What is a Dropout?

• Dropout as a status
• Dropout as an event
• Dropout as a process:

  Enroll ➔ Attend ➔ Progress ➔ Graduate

  ↓

  Drop Out
What is a Graduate?

- **Graduate** earns a high school diploma
- **Completer** earns diploma or equivalency (GED)
California School District Graduation Rates 2009-10 thru 2015-16

scroll over data points for more detail

1. Choose Subgroup(s)
   - All Students
   - Asian
   - Black
   - Latino
   - White
   - Socioeconomic Disadvantaged
   - ELL Students
   - Females
   - Males
   - Migrant Students
   - Special Education

2. Choose District(s)
   - Multiple values

Selected Districts
- Sacramento City Unified
- State Average

cohort includes first-time ninth graders plus students that transfer into the cohort, minus students who transfer out, emigrate, or die during the four-year cohort period.
The district sample includes 423 California school districts with reported cohort graduation data. County Office of Education and direct-funded charter school cohort outcomes are excluded.
Data Source: California Department of Education Dataquest http://data2.cde.ca.gov/dataquest/

Last Updated: 4/21/2017 by Daniel Katz
California School District Graduation Rates 2009-10 thru 2015-16

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Data Source: California Department of Education Datquest http://data1.cde.ca.gov/datquest/

Last Updated: 4/21/2017 by Daniel Katz
California School District Graduation Rates 2009-10 thru 2015-16

- White: 82.6%
- Latino: 77.5%
- ELL Students: 73.3%
- Selected Districts: Sacramento City Unified

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Cohort includes first-time ninth graders plus students that transfer into the cohort, minus students who transfer out, emigrate, or die during the four-year cohort period.

The district sample includes 420 California school districts with reported cohort graduation data. County Office of Education and direct-funded charter school cohort outcomes are excluded.

Data Source: California Department of Education Dataquest [http://data1.cde.ca.gov/dataquest/](http://data1.cde.ca.gov/dataquest/)

Last Updated: 4/21/2017 by Daniel Katz
Dropout Factories

• In US, 18% (2,007) of regular and vocational high schools account for 50% of the dropouts (“dropout factories”)

• In California, 1% (25) of all high schools account for 21% of dropouts
2. The social and economic costs are staggering
Consequences of Dropping Out

- **INDIVIDUAL CONSEQUENCES**
  - Lower wages
  - Higher unemployment
  - Increased crime
  - Poorer health
  - Reduced political participation
  - Reduced intergenerational mobility

- **SOCIAL COSTS**
  - Reduced national and state income
  - Reduced tax revenues
  - Increased social services
  - Increased crime
  - Poorer health
  - Reduced political participation
  - Reduced intergenerational mobility
Consequences of Dropping Out
(Compared to High School Graduates)

• Lifetime earnings half a million dollars lower
• 6 times more likely to be incarcerated
• Life expectancy nine years less
• 2-3 times more likely to receive Medicaid
• More likely to be poor—poor children 2-3 times more likely to become poor adults
### Economic Impact: Sacramento

(Adults 25-64 years of age)

<table>
<thead>
<tr>
<th></th>
<th>Dropouts</th>
<th>Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment/Population Ratio</td>
<td>47%</td>
<td>62%</td>
</tr>
<tr>
<td>Annual earnings</td>
<td>$17,649</td>
<td>$26,664</td>
</tr>
<tr>
<td>Poverty rate</td>
<td>35%</td>
<td>22%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2015 American Community Survey
Sacramento Dropouts

Employment Status of 16-19 Year-old Dropouts, 2011-15

Source: U.S. Census Bureau, 2011-15 American Community Survey
Computing Gains from Improving Graduation Rates

- Calculate number of dropouts, graduates, violent crime in city
- Estimate economic losses
- Estimate economic and social benefits of cutting number of dropouts in half
## Graduates, Dropouts, Crime

<table>
<thead>
<tr>
<th></th>
<th>Sacramento</th>
<th>California</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduates, 2015-16</td>
<td>2,291</td>
<td>406,874</td>
</tr>
<tr>
<td>Dropouts, 2015-16</td>
<td>310</td>
<td>48,118</td>
</tr>
<tr>
<td>Violent crime, 2010</td>
<td>2,380</td>
<td>101,875</td>
</tr>
<tr>
<td>(homicides, aggravated assaults)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Lifetime Economic Losses from One Year’s Dropouts, 2015-16 ($)

<table>
<thead>
<tr>
<th>Loss Type</th>
<th>Per Dropout</th>
<th>Per Cohort Sacramento</th>
<th>Per Cohort California</th>
</tr>
</thead>
<tbody>
<tr>
<td>State and local government</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health care costs</td>
<td>53,580</td>
<td>703,000</td>
<td>710M</td>
</tr>
<tr>
<td>Earnings (net of taxes)</td>
<td>4,540</td>
<td>29.2M</td>
<td>4.5B</td>
</tr>
<tr>
<td>Crime (Victim costs)</td>
<td>79,890</td>
<td>14.4M</td>
<td>1.9B</td>
</tr>
<tr>
<td>Other losses</td>
<td>69,800</td>
<td>10.8M</td>
<td>1.7B</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>391,910</strong></td>
<td><strong>53.1B</strong></td>
<td><strong>9.4B</strong></td>
</tr>
</tbody>
</table>
## Economic Benefits of Reducing Dropouts by Half

<table>
<thead>
<tr>
<th></th>
<th>Sacramento</th>
<th>California</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifetime economic benefits</td>
<td>$26.5M</td>
<td>$4.7B</td>
</tr>
<tr>
<td>Annual reductions in homicides and aggravated assaults</td>
<td>142</td>
<td>5,387</td>
</tr>
</tbody>
</table>
3. The causes are complex—related to students, families, schools, and communities
Understanding Causes

• Causes vs. reasons vs. predictors
• Individual
  – Demographic (unalterable)
  – Attitudes and behaviors (alterable)
• Institutional: Family, School, Community
  – Resources
  – Practices
• Proximal (high school) vs. distal (before high school)
• Dropout vs. achievement
Reasons for Dropping Out

- Got a job
- ANY JOB REASON
  - Missed too many days of school
  - Thought it would be easier to get GED
  - Failing in school
  - Did not like school
  - Could not keep up with schoolwork
- ANY SCHOOL REASON
- ANY FAMILY REASON
- Pregnant

SOURCE: CDRP Statistical Brief 2
Individual Predictors

• Academic achievement (failed classes)
• Poor attendance
• Misbehavior
• Low educational aspirations
• Retention
• Mobility
Risk Indicators

Graduation Rates by Courses Failed

- Blue = Middle School
- Purple = High School

SOURCE: CDRP Research Report 14
Student and School Predictors

(Predicted 10th grade graduation rates by student and school SES, 2002)

SOURCE: Preliminary analysis of data from Education Longitudinal Study: 2002
The Dropout Process

Environment → Beliefs and attitudes → Engagement → Dropout Achievement

SOURCE: Engaging Schools (NRC 2005)
The Dropout Process

- Environment
- Beliefs about competence and control (*I can*)
- Values and goals (*I want to*)
- Sense of belonging (*I belong*)
- Cognitive Engagement
- Behavioral Engagement
- Emotional Engagement
- Dropout Achievement

The Importance of Noncognitive Skills for Successful School Performance

Figure 2.1
A Hypothesized Model of How Five Noncognitive Factors Affect Academic Performance within a Classroom/School and Larger Socio-Cultural Context

Farrington, et al. (2012)
21\textsuperscript{st} Century Competencies for Adult Success

• Cognitive Competencies
  – Cognitive processes and strategies
  – Knowledge
  – Creativity

• Intra-Personal Competencies
  – Intellectual openness
  – Work ethic and conscientiousness
  – Positive core self-evaluation

• Inter-Personal Competencies
  – Teamwork and collaboration
  – Leadership

Predictors of Adult Outcomes

SOURCE: Jackson (2013)
Implications of Research Findings for Policy and Practice

• Address both academic and social needs of students
• Start before high school—more effective and less costly
• Focus on both individual students and the institutions that support them (families, schools, communities)
4. There are a range of possible solutions
Intervention Strategies

1. **Programmatic**—focus on students
   - Support programs
   - Alternative programs and schools

2. **Comprehensive**—focus on schools
   - Comprehensive school reform
   - School/community partnerships

3. **Systemic**—focus on system
   - State policy (e.g., compulsory schooling age; graduation requirements)
   - School/district /state capacity building
1. Programmatic Solutions

- **Advantages**
  - Easier to design, fund, implement, evaluate

- **Disadvantages**
  - Limited impact—only appropriate where dropout problem is small
  - Adds to programmatic “overload” at local level
  - Limited number of proven programs (see What Works Clearinghouse)
2. Comprehensive Solutions

• **Advantages**
  – Potential to impact more students—more appropriate in “dropout factories”
  – Potential to impact multiple educational outcomes (test scores and dropout rates)

• **Disadvantages**
  – More difficult to reform schools
  – Few proven comprehensive school reform models—Comprehensive School Reform Quality Center identified 3 out of 18 models that significantly improved graduation rates
  – Unclear what incentives, resources, and support needed to improve schools
3. Systemic Solutions

• Advantages
  – Potential to impact more students
  – Potential to impact multiple educational outcomes (test scores and dropout rates)

• Disadvantages
  – More difficult to alter families, schools, and communities
  – Mixed impact from systemic reforms
  – Unclear what incentives, resources, and support needed to improve school, district, and state capacity
<table>
<thead>
<tr>
<th>Intervention</th>
<th>Benefit-Cost Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preschool</td>
<td>2.33</td>
</tr>
<tr>
<td>Preschool + Early Childhood</td>
<td>3.59</td>
</tr>
<tr>
<td>Class size reduction in grades K-3 (15 to 1)</td>
<td></td>
</tr>
<tr>
<td>--All students</td>
<td>1.29</td>
</tr>
<tr>
<td>--Low-income students</td>
<td>2.11</td>
</tr>
<tr>
<td>Raise teacher salaries</td>
<td>2.65</td>
</tr>
<tr>
<td>High school reform</td>
<td>4.47</td>
</tr>
</tbody>
</table>

SOURCE: Belfield and Levin (2007)
IES Practice Guide
(US Department of Education, 2008)

1. Utilize data systems to identify students at risk for dropping out
2. Assign adult advocates to students at risk of dropping out
3. Provide academic support and enrichment to improve academic performance
4. Implement programs to improve students’ classroom behavior and social skills
5. Personalize the learning environment and instructional process
6. Provide rigorous and relevant instruction to better engage students in learning and provide the skills needed to graduate and to serve them after they leave school
CDRP Policy Report
(released February 27, 2008)

• Policy strategy—pressure and support
• Pressure—modify accountability system, report more useful data
• Support—build capacity of schools, districts, state—rather than implementing programs
• Will improve achievement and other student outcomes
• Improvement requires fiscal, human, and social resources
What the State Should Do

1. Fix the accountability system in order to maintain pressure and to allow sufficient time to address the problem.

2. Collect and report more useful data on dropouts and the state’s progress in improving graduation rates.

3. Develop high school reform standards and create “lighthouse” districts to implement them in schools with high dropout rates.

4. Undertake middle school reform.

5. Make strategic investments in proven dropout prevention strategies targeting the most disadvantaged students and schools.

6. Re-examine high school graduation requirements.
What Districts Should Do

1. Marshal the will of the district and community to address the dropout problem.

2. Adopt proven strategies to keep students in school and support their successful graduation.

3. Develop a structured, participatory, and timed process for implementing these strategies in all targeted schools.

4. Develop and use data to monitor the implementation of the strategies and to modify the implementation plan.

5. Partner with outside support organizations to identify strategies and to develop and monitor implementation.
What Schools Should Do

1. Create a personalized learning environment for both students and teachers.
2. Provide academic and social supports for students.
3. Provide rigorous and meaningful instruction.
4. Create connections to the real world.
Implementing Recommendations

- Choosing between strategies, targeted programs, schoolwide programs
- Selecting strategies and programs that are both effective and cost effective
- Matching strategies and programs with local context—populations, resources, capacity
- Evaluating outcomes of locally implemented programs
What Else is Needed?

1. Redefine high school success
2. Provide incentives to educate all students
3. Build the capacity of the educational system
4. Desegregate schools
5. Strengthen families and communities
Challenges

• No statewide data system
• No state repository for proven programs and practices
• Existing models (e.g., randomized control trials) for conducting evaluations time-consuming and costly
• Little interest or incentives at local level to adopt proven programs
• Little capacity in state, counties, and districts to evaluate local reform efforts and state policy initiatives
Recommendations

• Redefine high school success
  – Alter accountability system (e.g. College Ready Indicator System)

• Provide incentives to educate all children
  – Measure and reward 5-year and 6-year graduation rates
  – Support and recognize dropout recovery

• Develop more pathways to high school and college
  – Alternative high schools (e.g. Big Picture Learning)
  – High school/college schools (Early College High School)
  – Three-year bachelor’s degree pathway (dual enrollment, AP)

• Develop, evaluate, and disseminate cost-effective student support programs
  – Social-emotional programs
  – College-career preparation and counseling programs
  – Ninth grade basic skills classes
Recommendations

• Build the capacity of the educational system
  – Develop and support district partnerships and networked improvement communities
  – Build inter-segmental data system (e.g., Cal-PASS Plus)
  – Build local and state-level capacity to identify “evidence-based” (costs and effectiveness) programs and practices (e.g., Center for Benefit-Cost Studies in Education; Washington State Institute for Public Policy)

• Desegregate schools

• Strengthen families and communities
Importance System Improvement

The single fundamental change principle from our system change work is this: *people learn best and most from others doing similar work and getting success*. Therefore, California should turn its attention to enabling schools, districts, and charter organizations to learn from each other.


Websites

cdrpsb.org

whatworks.ed.gov