

School or the Streets

Crime and California's Dropout Crisis

Fight Crime: Invest in Kids *California*

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Fight Crime: Invest in Kids California is a nonprofit, bipartisan, anti-crime organization led by California's sheriffs, police chiefs, district attorneys and crime victims dedicated to reducing crime by promoting public investments in programs proven to keep kids from becoming involved in crime. **Fight Crime: Invest in Kids California** is part of the national **Fight Crime: Invest in Kids** organization.

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School or the Streets

Crime and California's Dropout Crisis

Executive Summary

California faces a dropout crisis that poses a significant threat to public safety. An estimated one in three California high school students does not graduate from high school on time. And of the more than half-million Californians who turn 20 each year, 120,000 do not have a high school diploma or General Equivalency Degree.

High school graduates are less likely to turn to crime

High school dropouts are three and one-half times more likely than high school graduates to be arrested, and more than eight times as likely to be in jail or prison. Across the country, 68 percent of state prison inmates do not receive a high school diploma.

According to researchers, a 10 percentage point increase in graduation rates reduces murder and assault rates by about 20 percent, which would prevent 500 murders and over 20,000 aggravated assaults in California each year.

Proven interventions can improve graduation and dropout rates

Smaller learning communities at high schools with student and family advisors. Implementation of the First Things First program would yield 16 extra high school graduates for every 100 students enrolled. Participation in the School Transitional Environment Project (STEP) program cuts student dropout rates in half.

High-quality preschool. Evidence from two long-term evaluations of the effects of preschool show that participating in high-quality preschool increases high school graduation rates by as much as 44 percent.

Targeted dropout-prevention programs. The Check & Connect program uses monitors to check that high-risk students are in school and connect them to needed services. Ninth grade students not in the program were three times more likely to drop out than participating students.

Increased investments in effective programs are needed in California

California is falling far short of the investment needed to increase graduation rates.

At the high school level, only one California high school is implementing the proven First Things First model; there are no known proven STEP or Check & Connect programs in the state; and the state's promising small learning communities program, the California Partnership Academies, reaches only one in five high schools.

Considering interventions for younger children, hundreds of thousands of low-income children in California do not have access to publicly-funded preschool programs due to long waiting lists and inadequate funding.

Cutting dropouts saves money and lives

California's dropout crisis not only threatens public safety, it also damages California's economy. Dropouts earn less, pay fewer taxes, and are more likely to collect welfare and turn to crime. For each year's worth of dropouts, California suffers billions of dollars in economic losses over time, including \$12 billion in crime costs alone.

School or the Streets

Crime and California's Dropout Crisis

The more than 350 law enforcement leaders and crime victim members of **Fight Crime: Invest in Kids California** are committed to taking dangerous criminals off the streets. But years of crime-fighting experience and rigorous research show that tough law enforcement is not enough. In order to most effectively reduce crime and safeguard our communities, it is necessary to take steps to prevent kids from ever becoming involved in crime in the first place.

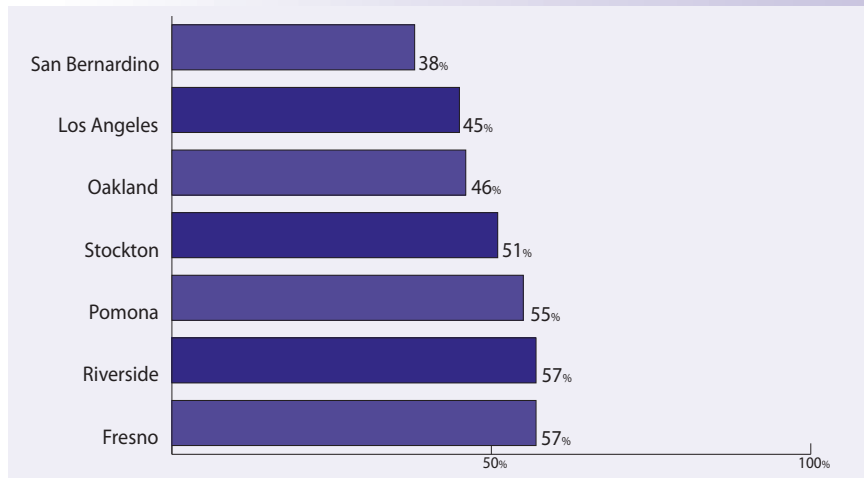
A good education is not only critical to a young person's success in life, it is also one of the most fundamental crime-prevention tools available. Kids who stay in school and graduate are more likely to become productive citizens, and less likely to turn to crime.

California's dropout crisis

California faces a dropout crisis that poses a significant threat to public safety. An estimated one in three California high school students does not graduate from high school on time.¹ And of the more than half-million Californians who turn 20 each year, 120,000 do not have a high school diploma or General Equivalency Degree.²

At more than 100 of California's 1,000 high schools, the majority of high school students are not expected to graduate.³ Nationally, nearly 50 percent of African-American and nearly 40 percent of Latino youth attend high schools in which graduation is not the norm.⁴

LOW GRADUATION RATES IN LARGE SCHOOL DISTRICTS



2003-04 Graduation Rates,
Editorial Projects in Education Research Center, 2007

For years, the dropout crisis in California and across the nation has been a "silent epidemic,"⁵ drawing insufficient attention due to differing, and sometimes very misleading, methodologies to measure high school graduation rates. Many districts have assumed, without evidence, that students who stopped showing up for class were enrolled somewhere else.

For example, for the Class of 2006, California reported an inflated graduation rate of 83 percent to the federal government for the No Child Left Behind Act—based on unreliable dropout data—although the more accurate graduation rate measure is 67 percent.⁶

The extent of the dropout crisis is still not precisely clear because California lacks an effective, comprehensive data system that tracks individual student data from the time a student enters the educa-

tional system until he or she leaves it. As a result, California's graduation rate is still only an estimate. California is in the process of building a longitudinal data tracking system, but proposed funding to support local data collection for the system was cut from the 2007-2008 state budget.⁷

High school dropouts are three and one-half times more likely than high school graduates to be arrested, and over eight times more likely to be in jail or prison.

INCREASED GRADUATION RATES WOULD PREVENT VIOLENT CRIME

ANNUAL IMPACT IF HIGH SCHOOL GRADUATION RATES INCREASED 10 PERCENTAGE POINTS

County	Homicides Prevented*	Aggravated Assaults Prevented*
Alameda	25	920
Alpine	-	1
Amador	-	22
Butte	2	96
Calaveras	-	25
Colusa	-	8
Contra Costa	16	485
Del Norte	-	14
El Dorado	1	83
Fresno	15	727
Glenn	-	12
Humboldt	-	48
Imperial	-	127
Inyo	-	14
Kern	4	535
Kings	-	83
Lake	-	45
Lassen	-	17
Los Angeles	214	7,241
Madera	2	113
Marin	-	60
Mariposa	-	14
Mendocino	-	78
Merced	4	229
Modoc	-	3
Mono	-	9
Monterey	3	231
Napa	-	79
Nevada	-	48

County	Homicides Prevented*	Aggravated Assaults Prevented*
Orange	15	1,053
Placer	1	96
Plumas	-	6
Riverside	22	1,105
Sacramento	22	1,161
San Benito	-	31
San Bernardino	35	1,198
San Diego	20	1,799
San Francisco	19	529
San Joaquin	11	792
San Luis Obispo	-	118
San Mateo	6	309
Santa Barbara	2	258
Santa Clara	9	718
Santa Cruz	1	161
Shasta	-	126
Sierra	-	1
Siskiyou	-	22
Solano	6	178
Sonoma	1	389
Stanislaus	6	452
Sutter	-	50
Tehama	-	95
Trinity	-	5
Tulare	11	425
Tuolumne	-	23
Ventura	6	235
Yolo	-	112
Yuba	2	50
Statewide total	501	22,864

Lochner & Moretti, 2004; CA DOJ Criminal Justice Profile, 2005

Due to rounding, figures do not add to total shown.

* Number of homicides or aggravated assaults that would be prevented

A 10 percentage point increase in graduation rates would prevent approximately 500 murders and over 20,000 aggravated assaults each year.

High school graduates are less likely to turn to crime

Rigorous research has established the strong link between high school graduation and reduced crime. This is not surprising since dropping out can have the short-term effect of leaving young people unsupervised on the streets, and the long-term impact of leaving teens and adults without the skills they need to make an honest living.

High school dropouts are three and one-half times more likely than high school graduates to be arrested, and over eight times more likely to be in jail or prison.⁸ Across the country, 68 percent of state prison inmates do not receive a high school diploma.⁹

While staying in school even one year longer reduces the likelihood that a youngster will turn to crime,¹⁰ graduating

high school has a dramatic impact. University of California, Berkeley economist Enrico Moretti and Canadian economist Lance Lochner studied the relationship between graduation and crime and concluded that a 10 percentage point increase in graduation rates would reduce murder and assault rates by about 20 percent.¹¹

Increasing graduation rates in California from 67 percent to 77 percent, therefore, would yield 50,000 more graduates annually and prevent approximately 500 murders and over 20,000 aggravated assaults each year.¹² The accompanying chart provides a county-by-county analysis of violent crimes that could be prevented by such an increase in graduation rates.

Programs proven to improve graduation and dropout rates

Effective educational programs that increase high school graduation rates are among our best bets for reducing crime. However, improving graduation rates is not easy. Columbia University researcher Henry Levin and his colleagues conducted an extensive search of programs impacting graduation and “found very few interventions that demonstrably increased high school graduation rates on the basis of rigorous and systematic evaluation.”¹³

In addition, there are few programs with rigorous evidence showing they cut dropout rates. Although staying in school does not guarantee that a student will graduate, preventing dropouts itself is linked to reducing crime.¹⁴ Dropout-prevention programs also have the potential to improve graduation rates and cut crime even more.

In part, the small number of effective programs is because many promising efforts seem to be working but have not yet been rigorously evaluated. It also

reflects, however, the reality that it can be hard to turn teens’ lives around once they are already well on their way down the wrong track in life. A low-dosage intervention over a short period of time will not be enough.

There are several approaches with rigorous proof that they can improve graduation and dropout rates:

Small learning communities with student and family advisors

First Things First (FTF) was originally launched in 1998 and is operating in more than 70 schools in nine districts around the country. The FTF program model was implemented in Kansas City and replicated in 12 middle schools and high schools in four school districts (in Texas, Missouri and Mississippi) as part of a rigorous external evaluation. The reform targets middle school and high school kids, and consists of three major components:

• **Small learning communities:**

These consist of up to 350 students and their key instructors throughout the duration of the program, which can be several years.

• **Family advocate system:** Each student is paired with a staff member who monitors and assists in the student's progress.

• **Instructional improvement efforts:** Teachers participate in professional development and work to align curricula with state and local standards.

Rigorous evaluations of First Things First have demonstrated impressive results. Research shows FTF would yield 16 extra high school graduates for every 100 students provided the intervention.¹⁵

In addition, School Transitional Environment Project (STEP) is a classroom-based intervention of smaller learning communities within high schools, which employs homeroom teachers as guidance counselors, administrative contacts and liaisons to parents of the students. The program is designed to help at-risk students successfully make the transition from middle school to high school. A rigorous long-term evaluation showed that program participation cut student dropout rates in half.¹⁶

High-quality preschool

Law enforcement leaders have long known about the impressive crime-prevention benefits of high-quality preschool. By age 27, at-risk 3- and 4-year-olds left out of one effective program were five times more likely to be chronic law breakers than similar children who attended the program.¹⁷ And youngsters left out of another high-quality program were 70 percent more likely than program participants to have been arrested for a violent crime by age 18.¹⁸

Evidence from two long-term evaluations of the effects of preschool show that participating in effective preschool also increases high school graduation rates.

The High/Scope Educational Research Foundation initiated a study of the Perry Preschool Program in Ypsilanti, Michigan, in 1962. The Perry Preschool Program is a high-quality, one- to two-year-long educational program. The program includes a home-visiting component and is considered a model of effective early childhood educational programs.¹⁹

According to a long-term study following at-risk children through age 40 who attended Perry Preschool, children enrolled in Perry Preschool were 44 percent more likely to graduate from high

school than similar children not in the program.²⁰ A separate analysis concluded that the Perry Preschool Program would yield 19 extra high school graduates for every 100 students provided the intervention.²¹

Chicago's federally-funded Child-Parent Centers have served over 100,000 3- and 4-year-olds since 1967. The program is a center-based early education program that provides preschool and family-support services to economically-disadvantaged children.²²

Researchers found that Child-Parent Center children were 29 percent more likely to graduate from high school than similar children not enrolled in the program.²³ A separate analysis concluded that this program would yield 11 extra high school graduates for every 100 students provided the intervention.²⁴

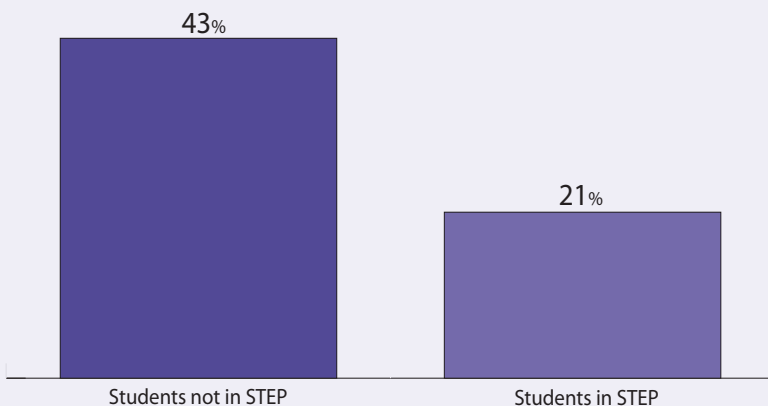
Targeted dropout-prevention programs

Check & Connect is a dropout-prevention program that targets high-risk middle and high school students. Students are assigned to a staff program monitor. The program consists of two main functions. The "check" component assesses student engagement with school via the monitoring of truancy and school performance. The "connect" component involves students receiving individualized attention in conjunction with school personnel, family members, and community service providers. The monitor intervenes when students encounter problems to help them stay on track and in school.²⁵

Two rigorous evaluation studies found Check & Connect to be effective at keeping kids from dropping out of school. One study found that 12th grade students in Check & Connect were 33 percent less likely to drop out of school than students not in the program.²⁶ Another study found that 9th grade students not in the program were three times more likely to drop out.²⁷

STEP SMALL LEARNING COMMUNITIES CUT DROPOUTS IN HALF

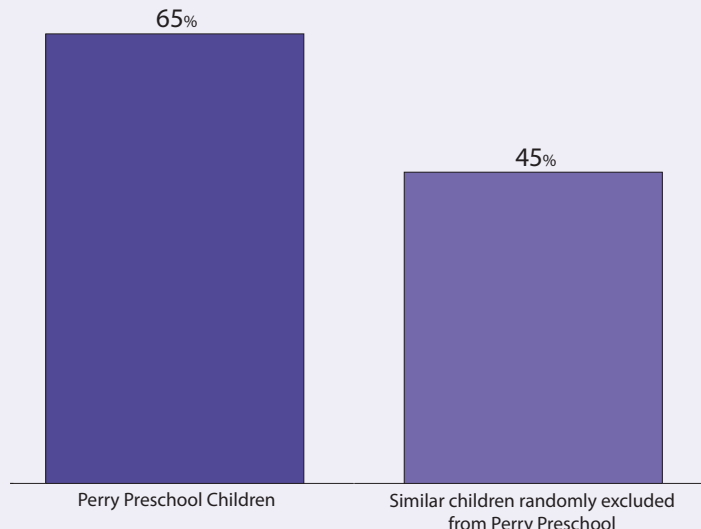
Percent of students who dropped out of high school



Feiner & Adan, 1998

QUALITY PRESCHOOL INCREASES GRADUATION RATES

By age 40, percent of children who have graduated from high school



Check & Connect is a dropout-prevention program that targets high-risk middle and high school students. Two rigorous evaluation studies found it to be effective at keeping kids from dropping out of school.

Effective class-size reduction

Tennessee's class-size experiment demonstrates that, when effectively implemented, smaller class sizes for young students can increase graduation rates. Tennessee's Project STAR (Student/Teacher Achievement Ratio) began in 1985. Project STAR used a random control trial design to assign children in grades K-3 to small classes (13-17 kids) or full-size classes (22-26 kids). Children were kept in the small class-size arrangement for up to four years, and returned to full-size classes by grade 4. STAR researchers continued to follow students through grade 12. Nearly 12,000 students in more than 300 classrooms across Tennessee participated in the STAR experiment.²⁸

Project STAR's class-size reduction had a significant effect on high school graduation rates, with low-income kids benefiting the most. Being in small classes eliminated a significant graduation gap between higher-income and low-income kids.²⁹ An analysis of Project STAR projected that four years of

small class sizes during grades K-3 would yield 11 extra high school graduates for every 100 students who attended smaller classes.³⁰

Increased investment in quality teachers

Researchers used state-level data from around the nation on teacher wages, student high school dropout rates, and other related variables to conclude that raising teacher wages by 10 percent reduced high school dropout rates by on average 3 to 6 percent.³¹ Based on this research, a separate analysis estimated that a 10 percent increase in teacher salaries for all years K-12 would strengthen the teacher workforce and yield on average five extra high school graduates for every 100 students.³²

Promising and emerging programs in California

Promising research shows that California is developing programs with the potential to positively impact graduation and dropout rates. These programs should be expanded widely if more rigorous research confirms they can reliably deliver strong results.

Rigorous research on Career Academies in California and several other states showed that Career Academies reduced high school dropouts by one third.

California Partnership Academies

The California Partnership Academies (CPAs) were created in the 1980s. A central element of the program, like First Things First and STEP, is small learning communities. The state funds 286 Academies at a total of 201 high schools in California.

The Academies provide a school-within-a-school structure targeted to at-risk students, with a focus on integrating academic and career technical education. Each Academy is devoted to one particular industry sector, such as health, information technology, media, agribusiness, or public safety. Students receive instruction in academic subjects and career technical classes that contribute to an understanding of the industry sector. Each Academy must partner with a local business community, whose representatives help develop the career technical curriculum, act as mentors and speakers, host workplace field trips, and provide summer and part-time school-year jobs.

Rigorous research on Career Academies in California and several other states showed that Career Academies reduced high school dropouts by one third.³³ CPA is one of the original Career Academy models, although components of Career Academies vary from state to state.³⁴

Research focused specifically on CPAs, although lacking a rigorous control group model, yielded promising results. According to findings released in 2007, seniors attending these programs were 10 percent more likely to graduate than seniors statewide.³⁵ Rigorous evaluations of CPAs are needed to more accurately determine its effectiveness.

After-school credit reclamation

An emerging program in California is “credit reclamation” classes, which have not yet been subject to an independent evaluation. According to school officials at Blair High School in Pasadena, credit reclamation classes have increased the number of on-time graduates in 2005 through 2007 by 32 percent. The classes are offered after school to students who need core curriculum credits in order to graduate. Students can earn up to five credits if they successfully complete 60 hours of study in their individual core subjects. During the past three years, over 100 students relied on credit reclamation courses to graduate on time.³⁶ Rigorous research with a control group is still needed to demonstrate the effectiveness of this approach.

Blair High School’s after-school program is funded through California’s 21st Century High School ASSETs (After School Safety and Enrichment for Teens) program. ASSETs, which *Fight Crime: Invest in Kids California* helped establish, funds approximately 200 locally-designed high school after-school programs across California.

Increased investments in effective programs are needed in California

Despite research on proven and promising programs, California is falling far short of the investment needed to substantially increase graduation rates. For example, with respect to proven small learning communities, only one California high school is implementing a proven First Things First program, and there are no known proven STEP programs in the state.³⁷

While the state supports promising small learning communities through the California Partnership Academies, the state has not expanded this program since 2000. Administrators, however, are considering expansion through SB 70, which was enacted in 2005 to promote career technical education linkages between high schools and community colleges.³⁸ Currently, only one in five high schools has a California Partnership Academy, and these programs are available for just 2 percent of high school students statewide.³⁹ For a county-by-county analysis of the percentage of high schools with proven or promising small learning communities, see Appendix. Additional funding for evaluating these academies is also needed to more accurately assess its promise as an effective graduation-boosting strategy.

California provides publicly-funded

preschool for many low-income children, but early learning programs still are not available to hundreds of thousands of low-income California children due to lack of funding and facilities. Three out of four publicly-funded preschools have waiting lists and are forced to turn away low-income children.⁴⁰ As a result, fewer than half of the state's low-income 3- and 4-year-olds attend publicly-funded preschools, and many of those programs are not of sufficient quality to achieve the gains demonstrated by effective programs.⁴¹

Also, no schools in the state offer Check & Connect dropout-prevention programs.

Finally, California did implement class-size reduction on a large scale in 1996, reducing class size to 20 in 18,000 K-3 classes statewide. Outcomes have been mixed: While initial evaluations did not find achievement gains for students in smaller classes, in part due to newly recruited teachers being inexperienced, a more recent evaluation found positive benefits. California's policy does not provide as much funding per child or as small classes as the Tennessee program that demonstrated a positive impact on graduation rates.⁴²

total of \$169,000.⁴³

Overall, factoring in costs to crime victims and reduced productivity from a less-qualified workforce, for each year's worth of dropouts California suffers an estimated \$46 billion in economic losses, including \$12 billion in crime costs alone.⁴⁴

Proven interventions that improve graduation rates are a smart investment for California. Even putting aside benefits to graduates themselves and the economy generally, each dollar invested in First

With respect to proven small learning communities, only one California high school is implementing a proven First Things First program, and there are no known proven STEP programs in the state.

Things First, quality preschool and the other interventions proven to increase graduation rates generates \$2 to \$4 in taxpayer savings alone.⁴⁵

Cutting dropouts saves lives and money

California's dropout crisis not only threatens public safety, it also damages California's economy. Dropouts earn less, pay fewer taxes, and are more likely to collect welfare and turn to crime. For example, high school graduates in California earn on average \$290,000 more than dropouts over their lifetimes—and pay over \$100,000 more in federal, state and local taxes. Once criminal justice costs, welfare benefits and health coverage are factored in, each dropout costs federal, state and local taxpayers a

Conclusion and recommendations

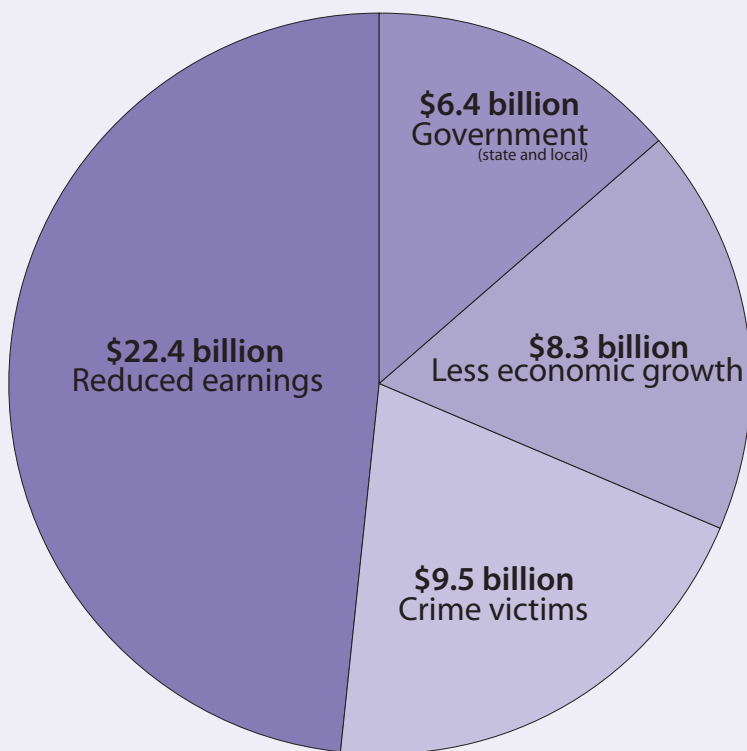
The law enforcement leaders and crime survivors of **Fight Crime: Invest In Kids California** call on policymakers to cut crime by supporting meaningful reform of California's education system.

Specifically, state and federal policymakers should:

- **Increase investment in evidence-based programs proven to improve graduation and dropout rates**, such as smaller learning communities with student and family advisors and high-quality preschool.
- **Improve California's data collection system in order to more effectively track dropouts and graduates** and to help evaluate the impact of local polices, programs and practices.
- **Invest in rigorous evaluations of promising programs** to ensure they deliver strong results.

California cannot afford to turn its back on wise investments that will increase high school graduation rates and cut crime. The safety of all Californians is at stake.

\$46 BILLION IN LOSSES TO CALIFORNIA FROM EACH YEAR'S DROPOUTS



Belfield & Levin, 2007

Net losses to state and local government include criminal justice, welfare and health costs plus lost taxes, after subtracting public education expenditures saved when students stop attending school.

Each dollar invested in **First Things First**, quality preschool and the other interventions proven to increase graduation rates generates \$2 to \$4 in taxpayer savings alone.

HIGH SCHOOLS WITH PROVEN/PROMISING SMALL LEARNING COMMUNITIES

BY COUNTY

County	Proven SLCs**	Promising CPAs**	Total High Schools	Percentage
Alameda	0	14	41	34%
Alpine	0	0	2	0%
Amador	0	0	2	0%
Butte	0	2	8	25%
Calaveras	0	0	2	0%
Colusa	0	1	4	25%
Contra Costa	0	7	30	23%
Del Norte	0	0	1	0%
El Dorado	0	1	6	17%
Fresno	0	4	31	13%
Glenn	0	0	5	0%
Humboldt	0	0	9	0%
Imperial	0	2	8	25%
Inyo	0	0	5	0%
Kern	0	11	31	35%
Kings	0	3	5	60%
Lake	0	1	6	17%
Lassen	0	1	4	25%
Los Angeles	1*	45	194	24%
Madera	0	0	6	0%
Marin	0	1	8	13%
Mariposa	0	0	3	0%
Mendocino	0	0	11	0%
Merced	0	1	11	9%
Modoc	0	1	3	33%
Mono	0	0	5	0%
Monterey	0	5	14	36%
Napa	0	0	4	0%
Nevada	0	2	2	100%

County	Proven SLCs**	Promising CPAs**	Total High Schools	Percentage
Orange	0	14	65	22%
Placer	0	1	13	8%
Plumas	0	0	4	0%
Riverside	0	13	50	26%
Sacramento	0	16	37	43%
San Benito	0	0	2	0%
San Bernardino	0	7	49	14%
San Diego	0	10	78	13%
San Francisco	0	2	14	14%
San Joaquin	0	4	19	21%
San Luis Obispo	0	0	9	0%
San Mateo	0	4	17	24%
Santa Barbara	0	2	11	18%
Santa Clara	0	7	41	17%
Santa Cruz	0	2	8	25%
Shasta	0	0	8	0%
Sierra	0	0	2	0%
Siskiyou	0	0	8	0%
Solano	0	3	11	27%
Sonoma	0	1	15	7%
Stanislaus	0	2	17	12%
Sutter	0	0	5	0%
Tehama	0	0	3	0%
Trinity	0	0	3	0%
Tulare	0	5	17	29%
Tuolumne	0	0	7	0%
Ventura	0	4	21	19%
Yolo	0	2	7	29%
Yuba	0	0	3	0%
STATEWIDE TOTAL	1	201	1005	20%

California Department of Education. (n.d.). California Partnership Academy Directory. Retrieved on November 15, 2007 from <http://www.cde.ca.gov/ci/gs/hs/cpagen.asp>

California Department of Education. (n.d.). School Directory. Retrieved on November 15, 2007 from <http://www.cde.ca.gov/re/sd/>

* Los Angeles County's SLC is First Things First at the Maywood Academy.

** SLCs are Small Learning Communities; CPAs are California Partnership Academies.

¹ California Department of Education. (2007). *DataQuest*. Retrieved October 10, 2007 from <http://data.cde.ca.gov/dataquest/CompletionRate/CompRate1.asp?cChoice=StGradRate&cYear=2005-06&level=State>

² Belfield, C. & Levin, H. (2007). *The economic losses from high school dropouts in California*. Santa Barbara, CA: California Dropout Research Project, University of California at Santa Barbara. This figure does not include approximately 40,000 20-year-olds with General Equivalency Degrees (GED), even though evidence suggests that a GED-holder does not have the human capital of a high school graduate.

³ Zuckerbrod, N. (2007, November 2). "One in 10 high schools a 'dropout factory.'" *Contra Costa Times*.

Johns Hopkins University researchers deem "dropout factories" as high schools in which there are consistently 60% or fewer seniors than freshmen, based on their analysis that schools that meet this criterion are expected to graduate less than 50 percent of their students (given the numbers of students who reach 12th grade but do not graduate).

John Hopkins University, Center for Social Organization of Schools. (n.d.). *Interpreting promoting power, dropout rates, graduation rates and the term "dropout factory" in your community: Frequently asked questions*. Retrieved November 12, 2007 from http://web.jhu.edu/CSOS/images/FAQ_Dropout_Factorie_s_final_version_nov_2007.pdf

For a list of schools identified as dropout factories, see: http://web.jhu.edu/CSOS/images/List_of_Schools_with_a_Weak_3yr_Avg_2004_2005_2006V4.pdf

⁴ Balfanz, R. & Legters, N. (2004). *Locating the dropout crisis: Which high schools produce the nation's dropouts? Where are they located? Who attends them?* Baltimore, MD: John Hopkins University, Center for Social Organization of Schools.

⁵ Bridgeland, J.M., Dilulio, J.J., & Morison, K.B. (2006). *The silent epidemic: Perspectives of high school dropouts*. Washington, DC: Civic Enterprises. Retrieved on November 12, 2007 from <http://www.gatesfoundation.org/nr/downloads/ed/TheSilentEpidemic3-06FINAL.pdf>

⁶ California Department of Education. (n.d.). *Statewide graduation rates*. Retrieved on November 12, 2007 from <http://data1.cde.ca.gov/dataquest/CompletionRate/CompRate1.asp?cChoice=StGradRate&cYear=2005-06&level=State>

The California Department of Education computes two different graduation rates, based on two different formulas. The first rate (67% for 2005-2006) is based on the number of ninth-graders enrolled four years prior to graduation. The second rate relies on reported dropout rates (83% for 2005-2006). According to Russ Rumberger with the California Dropout Research Project, "The second rate is the one California uses for state and federal accountability, but the first rate is more similar to other estimates, and is considered more accurate."

Rumberger, R.W. (2007). *What is California's high school graduation rate?* Santa Barbara, CA: California Dropout Research Project, University of California, Santa Barbara. Retrieved on November 8, 2007 from <http://www.lmri.ucsb.edu/dropouts/pubs.htm>

Current dropout data, which the second rate relies on, is considered unreliable: "The current definition of a dropout relies upon the accuracy of each school or district in determining the status of absent students. When a student who is enrolled in school stops attending, there can be any of several causes:

temporary absence due to illness; moving out of the school boundary, district, or state; transferring to a private or charter school; taking a General Education Development (GED) or California High School Proficiency (CHSPE) exam in lieu of completing high school; or dropping out. There are inherent difficulties in identifying some of these causes; while student transfers may produce a request for transcripts, other motivations may not result in explicit notification to the school."

Becker, D.E. & Watters, C. (2007). *Independent evaluation of the California High School Exit Examination (CAHSEE): 2007 Evaluation report*. Alexandria, VA: Human Resources Research Organization.

⁷ California Department of Education. (2007). *CDE data news, issue 3 - student demographics*. Retrieved November 12, 2007 from <http://www.cde.ca.gov/ds/sd/cs/flnwsltr07.asp>

The enacted 2007-2008 budget did not include the Governor's \$65 million proposal to support local data collection and maintenance for the California Longitudinal Pupil Achievement Data System (CALPADS).

⁸ Catterall, J.S. (1985). *On the social cost of dropping out*. Stanford, CA: Center for Education Research; Bridgeland, J.M., Dilulio, J.J., & Morison, K.B. (2006). *The silent epidemic: Perspectives of high school dropouts*. Washington, DC: Civic Enterprises. Retrieved on November 12, 2007 from <http://www.gatesfoundation.org/nr/downloads/ed/TheSilentEpidemic3-06FINAL.pdf>

⁹ Harlow, C.W. (2003). *Education and correctional populations*. Retrieved on June 1, 2007 from <http://www.ojp.usdoj.gov/bjs/pub/pdf/ecp.pdf>

¹⁰ Lochner, L. & Moretti, E. (2004). The effect of education on crime: Evidence from prison inmates, arrests, and self reports. *The American Economic Review*, 94(1), 155-189.

¹¹ Lochner, L. & Moretti, E. (2004). The effect of education on crime: Evidence from prison inmates, arrests, and self reports. *The American Economic Review*, 94(1), 155-189.

¹² Criminal Justice Statistics Center, Office of the Attorney General. (2005). *California criminal justice profile 2005*. Retrieved on October 5, 2007 from http://stats.doj.ca.gov/cjsc_stats/profos/00/11.pdf

Based on 2,503 reported homicides and 114,321 reported aggravated assaults in 2005.

¹³ Levin, H., Belfield, C., Muennig, P., & Rouse, C. (2007). *The costs of an excellent education for all of America's children*. New York: Teachers College, University of Columbia.

¹⁴ Lochner, L. & Moretti, E. (2004). The effect of education on crime: Evidence from prison inmates, arrests, and self reports. *The American Economic Review*, 94(1), 155-189.

A one-year increase in average years of schooling would reduce crime rates.

¹⁵ Belfield, C. & Levin, H. (2007). *The return on investment for improving California's high school graduation rate*. Santa Barbara, CA: California Dropout Research Project, University of California at Santa Barbara.

¹⁶ Felner, R.D., Ginter, M. & Primavera, J. (1982). Primary prevention during school transitions: Social support and environmental structure. *American Journal of Community Psychology*, 10(3), 277-290; Felner, R.D. & Adan, A.M. (1988). The School Transitional Environment Project: An ecological intervention and evaluation. In R.H. Price, E.L. Cowen, R.P. Lorion, and J. Ramos-McKay (Eds.), *14 ounces of prevention: A casebook for practitioners* (pp. 111-122). Washington, DC: American Psychological Association.

¹⁷ Schweinhart, L.J., Barnes, H.V., & Weikart, D.P. (1993). *Significant benefits: The High/Scope Perry Preschool study through age 27*. Ypsilanti, MI: High/Scope Press.

¹⁸ Reynolds, A.J., Temple, J.A., Robertson, D.L., & Mann, E.A. (2001). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest: A 15-year follow-up of low-income children in public schools. *Journal of the American Medical Association*, 285(18), 2339-2346.

Reynolds, A.J., Temple, J.A., Ou, S., Robertson, D.L., Mersky, J.P., Topitzes, J.W., & Niles, M.D. (2007). Effects of a school-based, early childhood intervention on adult health and well-being: A 19-year follow-up of low-income families. *Archives of Pediatrics & Adolescent Medicine*, 161(8), 730-739.

¹⁹ Schweinhart, L.J., Montie, J., Xiang, Z., Barnett, W.S., Belfield, C.R., & Nores, M. (2004). *Lifetime effects: The High/Scope Perry Preschool study through age 40*. High/Scope Educational Research Foundation. Ypsilanti MI: High/Scope Press.

²⁰ Schweinhart, L.J., Montie, J., Xiang, Z., Barnett, W.S., Belfield, C.R., & Nores, M. (2005). *Lifetime effects: The High/Scope Perry Preschool study through age 40*. Ypsilanti, MI: High/Scope Press.

²¹ Belfield, C. & Levin, H. (2007). *The return on investment for improving California's high school graduation rate*. Santa Barbara, CA: California Dropout Research Project, University of California at Santa Barbara.

²² Reynolds, A.J., Temple, J.A., Ou, S., Robertson, D.L., Mersky, J.P., Topitzes, J.W., & Niles, M.D. (2007). Effects of a school-based, early childhood intervention on adult health and well-being: A 19-year follow-up of low-income families. *Archives of Pediatrics & Adolescent Medicine*, 161(8), 730-739.

²³ Reynolds, A.J., Temple, J.A., Robertson, D.L., & Mann, E.A. (2001). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest. *Journal of the American Medical Association*, 285(12), 2339-2380.

²⁴ Belfield, C. & Levin, H. (2007). *The return on investment for improving California's high school graduation rate*. Santa Barbara, CA: California Dropout Research Project, University of California at Santa Barbara.

²⁵ What Works Clearinghouse. (2007). *Check & Connect*. Retrieved on June 7, 2007 from http://ies.ed.gov/ncee/wwc/pdf/WWC_Check_Connect_092106.pdf

Check & Connect was cited in a forum by researcher Mark Dynarski, of Mathematica Policy Research, as being among the most effective programs in preventing dropouts. Albert Shanker Institute Forum on Dropout Prevention, May 3, 2007, Washington, D.C.

For the original studies, see Sinclair, M.F., Christenson, S.L., Evelo, D.L., & Hurley, C.M. (1998). Dropout prevention for youth with disabilities: Efficacy of a sustained school engagement procedure. *Exceptional Children*, 65(1), 7-21; and Sinclair, M.F., Christenson, S.L., & Thurlow, M.L. (2005). Promoting school completion of urban secondary youth with emotional or behavioral disabilities. *Exceptional Children*, 71(4), 465-482.

²⁶ Sinclair, M.F., Christenson, S.L., & Thurlow, M.L. (2005). Promoting school completion of urban secondary youth with emotional or behavioral disabilities. *Exceptional Children*, 71(4), 465-482.

²⁷ Sinclair, M.F., Christenson, S.L., Evelo, D.L., & Hurley, C.M. (1998). Dropout prevention for youth with disabilities: Efficacy of a sustained school engagement procedure. *Exceptional Children*, 65(1), 7-21.

²⁸ Finn, J.D., Gerber, S.B., & Boyd-Zaharias, J. (2005). Small classes in the early grades, academic achievement, and graduating from high school. *Journal of Education Psychology*, 97(2), 214-223.

²⁹ Finn, J.D., Gerber, S.B., & Boyd-Zaharias, J. (2005). Small classes in the early grades, academic achievement, and graduating from high school. *Journal of Education Psychology*, 97(2), 214-223.

When low-income and higher-income kids are placed in regular full-sized classes, the graduation rate for higher-income kids was 19% higher than the graduation rate for low-income kids (83.7% vs. 70.2%, respectively). By contrast, for youth in smaller classes, 87% of higher-income kids graduated compared to 88.2% of lower-income.

³⁰ Belfield, C. & Levin, H. (2007). *The return on investment for improving California's high school graduation rate*. Santa Barbara, CA: California Dropout Research Project, University of California at Santa Barbara.

³¹ Loeb, S. & Page, M.E. (2000). Examining the link between teacher wages and student outcomes: the importance of alternative labor market opportunities and non-pecuniary variation. *The Review of Economics and Statistics*, 82(2), 393-408.

³² Belfield, C. & Levin, H. (2007). *The return on investment for improving California's high school graduation rate*. Santa Barbara, CA: California Dropout Research Project, University of California at Santa Barbara.

³³ Kemple, J.J. & Snipes, J.C. (2000). *Career Academies: Impacts on students' engagement and performance in high school*. Retrieved on November 21, 2007 from <http://www.mdr.org/publications/41/full.pdf>

Four of the nine academies studied were in California and received state California Partnership Academies funding.

Machelle Martin, Analyst, California Department of Education. (November 26, 2005). Personal Communication.

³⁴ Charles Dayton, Coordinator, UC Berkeley Career Academy Support Network. (November 21, 2007). Personal Communication.

³⁵ ConnectEd: The California Center for College and Career & Career Academy Support Network, University of California, Berkeley. (2007). *A Profile of the California Partnership Academies, 2004-2005*. Retrieved on December 3, 2007 from http://casn.berkeley.edu/resources/profile_of_the_cpas.pdf

Additional evaluations of the California Partnership Academies were conducted (e.g., Dayton and Stern, 1990), but lacked a rigorous evaluation design. A multi-year study of academies in a large urban school district in California, some receiving state CPA funding, found that students who were not in academies had dropout rates that were over two times higher than those for students in academies.

Maxwell, N.L. & Rubin, V. (2000). *High school career academies: A pathway to educational reform in urban school districts?* Kalamazoo, MI: W.E. Upjohn Institute; Maxwell, N.L. & Rubin, V. (2001). *Career academy programs in California: Outcomes and implementation*. Berkeley, CA: California Policy Research Center, University of California. Retrieved November 25, 2007 from http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/1a/3f/8d.pdf

Nan Maxwell, Chair, Department of Economics, California State University, East Bay. (December 2, 2007). Personal communication.

Some evaluations had design flaws, such as a comparison group that became less comparable over

time due to selective subject attrition, that make their results less valid. Dayton, C. & Stern, D. (1990). Graduate follow-up survey of the June 1988 graduates of the California Partnership Academies. Retrieved on November 21, 2007 from http://pace.berkeley.edu/reports/PP90-1-Jan_1990.pdf

³⁶ Bill Fennessy, Site Coordinator, BlairLEARNS Afterschool Program. (October 31, 2007). Personal communication.

Other high-quality after-school programs have demonstrated the capacity to increase graduation rates. Four years after inner-city teens were randomly assigned to the Children's Aid Society/Carrera after-school program in New York City or to a control group, teens in the program were 34% more likely to graduate from high school than teens assigned to the control group. Of all participants, 67% of program students graduated high school vs. 50% of control group students. The Children's Aid Society/Carrera program operates five days a week after school for three hours each day. Participants receive academic support every day and rotate among four other activities including jobs, comprehensive family life and sex education, arts and sports. Participants receive stipends for job activities. The program also offers summer activities, mental health counseling and medical care.

Susan Philliber, Senior Partner, Philliber Research Associates. (August 6, 2003). Personal communication; Philliber, S., Kaye, J.W., Herrling, S., & West, E. (2002). Preventing pregnancy and improving health care access among teenagers: An evaluation of the Children's Aid Society-Carrera program. *Perspectives on Sexual and Reproductive Health*, 34(5), 244-251.

³⁷ Wilson High School. (2007). *Small learning communities newsletter*. Retrieved on November 15, 2007 from <http://www.wilsonmules.org/newsletter.pdf>

Maywood Academy in Maywood, California, began implementing First Things First in Fall 2007. A second school, Woodrow Wilson High School in Los Angeles, will begin implementing First Things First in Fall 2008.

³⁸ Karen Shores, Education Programs Consultant, California Department of Education. (November 1 & 15, 2007). Personal communication.

³⁹ ConnectEd: The California Center for College and Career & Career Academy Support Network, University of California, Berkeley. (2007). *A profile of the California Partnership Academies, 2004-2005*. Retrieved on November 21, 2007 from http://casn.berkeley.edu/resources/profile_of_the_cpas.pdf

California Department of Education. (n.d.). *California Partnership Academy Directory*. Retrieved on November 15, 2007 from <http://www.cde.ca.gov/ci/qs/hs/cpagen.asp>; California Department of Education. (n.d.). *School Directory*. Retrieved on November 15, 2007 from <http://www.cde.ca.gov/re/sd/>

Schools with CPAs are the number of schools with CPA programs. Total high schools includes only regular public schools (not charter, continuation or alternative schools since CPA programs are typically not at these types of high schools).

⁴⁰ Lee, B. & van der Does, L. (2005). *Public safety can't wait: California's preschool shortage, a missed opportunity for crime prevention*. Oakland, CA: Fight Crime: Invest in Kids California.

⁴¹ Karoly, L., Reardon, E., & Cho, M. (2007). *Early care and education in the golden state: Publicly funded programs serving California's preschool-age children*. Santa Monica, CA: RAND Corporation.

RAND estimates that 53% of eligible 4-year-olds and 25% of eligible 3-year-olds are currently served by federal and state-funded child development oriented programs.

⁴² Belfield, C. & Levin, H. (2007). *The return on investment for improving California's high school graduation rate*. Santa Barbara, CA: California Dropout Research Project, University of California at Santa Barbara.

⁴³ Belfield, C. & Levin, H. (2007). *The economic losses from high school dropouts in California*. Santa Barbara, CA: California Dropout Research Project, University of California at Santa Barbara.

⁴⁴ Belfield, C. & Levin, H. (2007). *The economic losses from high school dropouts in California*. Santa Barbara, CA: California Dropout Research Project, University of California at Santa Barbara.

Because this estimate only addresses economic losses to California, it excludes losses to the federal government including lost federal income taxes.

⁴⁵ Belfield, C. & Levin, H. (2007). *The return on investment for improving California's high school graduation rate*. Santa Barbara, CA: California Dropout Research Project, University of California at Santa Barbara.

This analysis includes taxpayer savings that would result from increased tax collection, as well as reduced crime, welfare and public health costs. It does not take into account benefits from academic enrichment to participants who would have graduated anyway or still fail to graduate.

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