Forecasting K-12 Supply and Demand
During An Era of
Public Education Investment & Academic Improvement

Afternoon Roundtable Presentation

USC/SCAG 25th Annual Demographic Workshop

"DEMOGRAPHICS OF POVERTY AND PROGRESS AFTER THE RECESSION"

Valerie Edwards, Chief Enrollment Analysis Coordinator
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June 9, 2014

Post-Recession Investment
in Public Education Funding

Highest education funding increase in California history

o Proposition 30 – 2012

o Local Control Funding Formula (LCFF) – 2013

The combination of passing Proposition 30 in 2012, the Governor's financing reform of 2013, and restoring Proposition 98 funding reductions and deferments is resulting in the highest increase ever proposed for educational funding in the history of California.

Post-Recession Investment
in Public Education Funding

Highest education funding increase in California history

o Proposition 30 – 2012
  o Funding Sources: Income tax + State sales tax

o   Local Control Funding Formula (LCFF) – 2013

Proposition 30 was passed in 2012. It created larger funding pools for public education, consisting of a temporary tax increase for individuals earning over $250,000, plus a Statewide sales tax increase.

Post-Recession Investment
in Public Education Funding

Highest education funding increase in California history

o Proposition 30 – 2012
- oFunding Sources: Income tax + State sales tax

o Local Control Funding Formula (LCFF) – 2013
- o Targets "higher-needs" students

Local Control Funding Formula (LCFF) is the law as of 2013. The Formula equitably distributes funds and supports the education of students meeting specific criteria.

Post-Recession Investment in Public Education Funding

Highest education funding increase in California history

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    o Funding Sources: Income tax + State sales tax

o Local Control Funding Formula (LCFF) – 2013

    o Targets "higher-needs" students

    o Minimum funding = SY 2012-13 levels

When fully implemented, every District will receive at least as much funding as it did in School Year 2012-13.

Post-Recession Investment
in Public Education Funding

Highest education funding increase in California history

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  o Targets "higher-needs" students

  o Minimum funding = SY 2012-13 levels

  o Local Education Agencies (LEAs) control spending

Local Education Agencies (LEAs) have greater control of how funds are spent.

Post-Recession Investment
in Public Education Funding

Highest education funding increase in California history

o Proposition 30 – 2012
   o Funding Sources: Income tax + State sales tax

o Local Control Funding Formula (LCFF) – 2013

   o Targets "higher-needs" students

   o Minimum funding = SY 2012-13 levels

   o Local Education Agencies (LEAs) control spending

   o Local Control Accountability Plans (LCAPs) required

Stakeholders must be engaged in the planning and oversight of how funds are spent. Developing a Local Control Accountability Plan (LCAP) is required for planning & oversight.
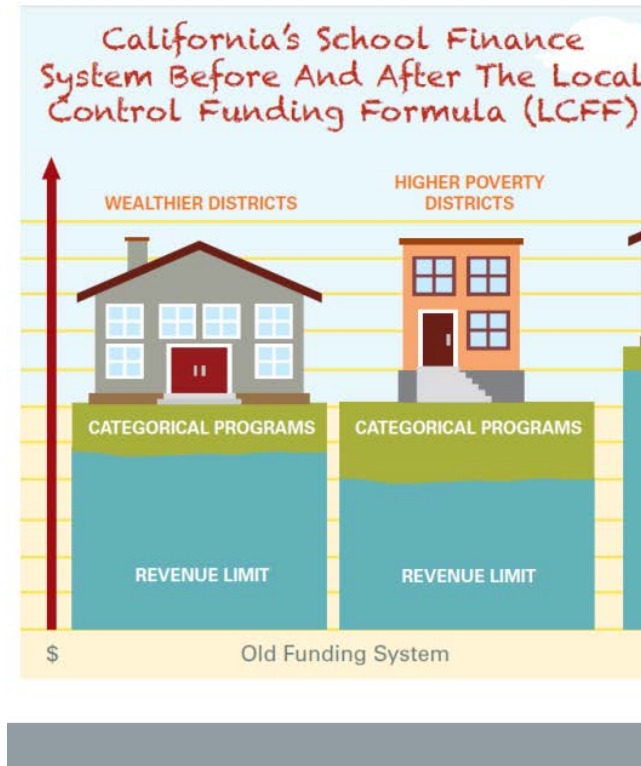
The Local Control Funding Formula

"Equal treatment for children in unequal situations is not justice." – *Governor Jerry Brown, January 2013 State of the State speech*

The main goal of the LCFF is to increase funding to make sure that every public school student is prepared to succeed in college and the workforce. The centerpiece of the Governor's education reform is the implementation of the Local Control Funding Formula (LCFF) (AB 97). The LCFF aims to increase funding to "higher needs" students who are foster youth, are classified as English Learners, are eligible to receive free or reduced-price meals, or are any combination of these.
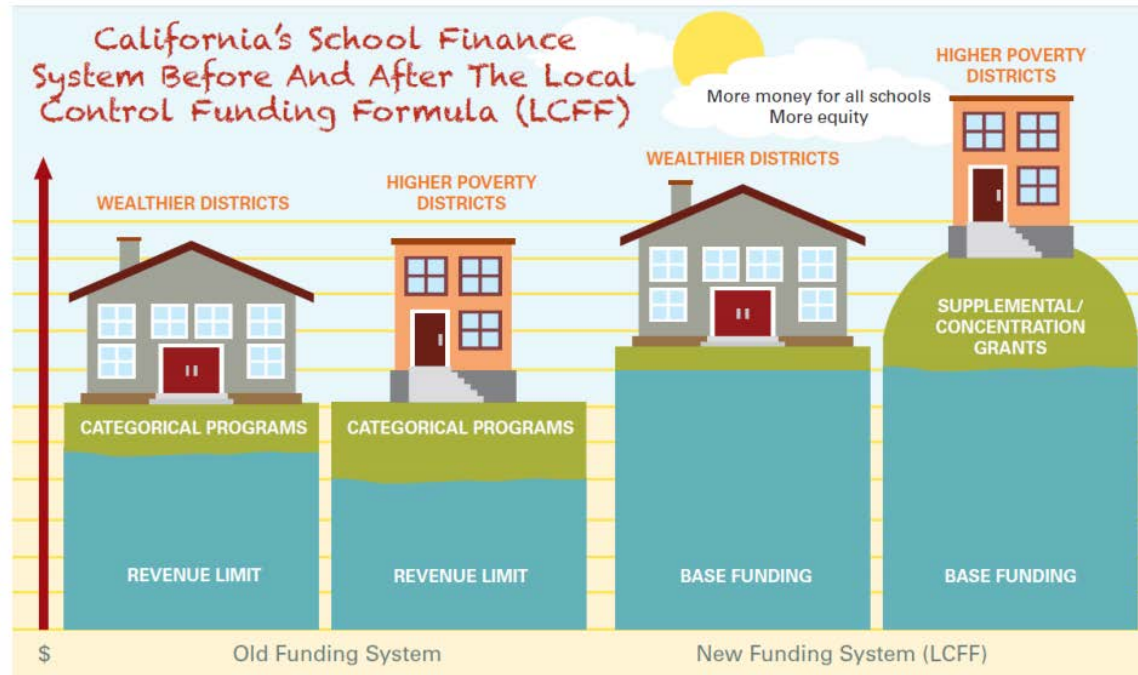
The Local Control Funding Formula

California's School Finance System Before And After The Local Control Funding Formula (LCFF)

"Equal treatment for children in unequal situations is not justice." – Governor Jerry Brown, January 2013 State of the State speech

Under the old funding system, which consisted of categorical aid + revenue limit, a district received funding based on Proposition 98 Revenue Limits. Additional funding was tied to specific types of categorical aid programs that restricted how the funding could be spent.
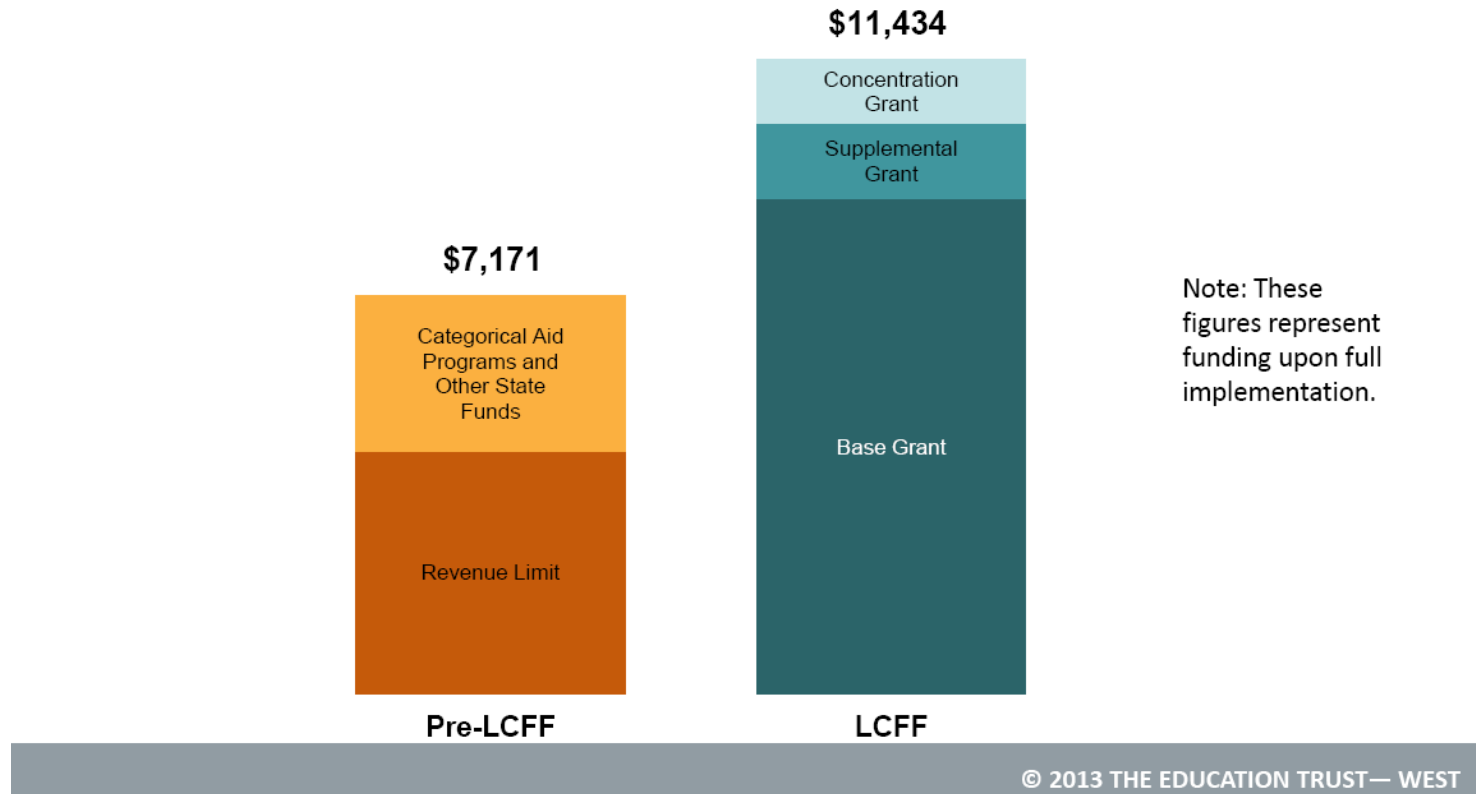
The Local Control Funding Formula

California's School Finance System Before And After The Local Control Funding Formula (LCFF)

More money for all schools
More equity

Old Funding System — New Funding System (LCFF)

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"Equal treatment for children in unequal situations is not justice." – Governor Jerry Brown, January 2013 State of the State speech

Under the new funding system, an overall higher amount of Base funding is provided for all districts. The LCFF then provides additional supplemental and concentration grants to districts with higher concentrations of high-needs students. LCFF funds generated through supplemental and concentration grants must be spent to "increase or improve services" for high-needs students, and is designed to be more flexible and more streamlined than the funding models of the past.

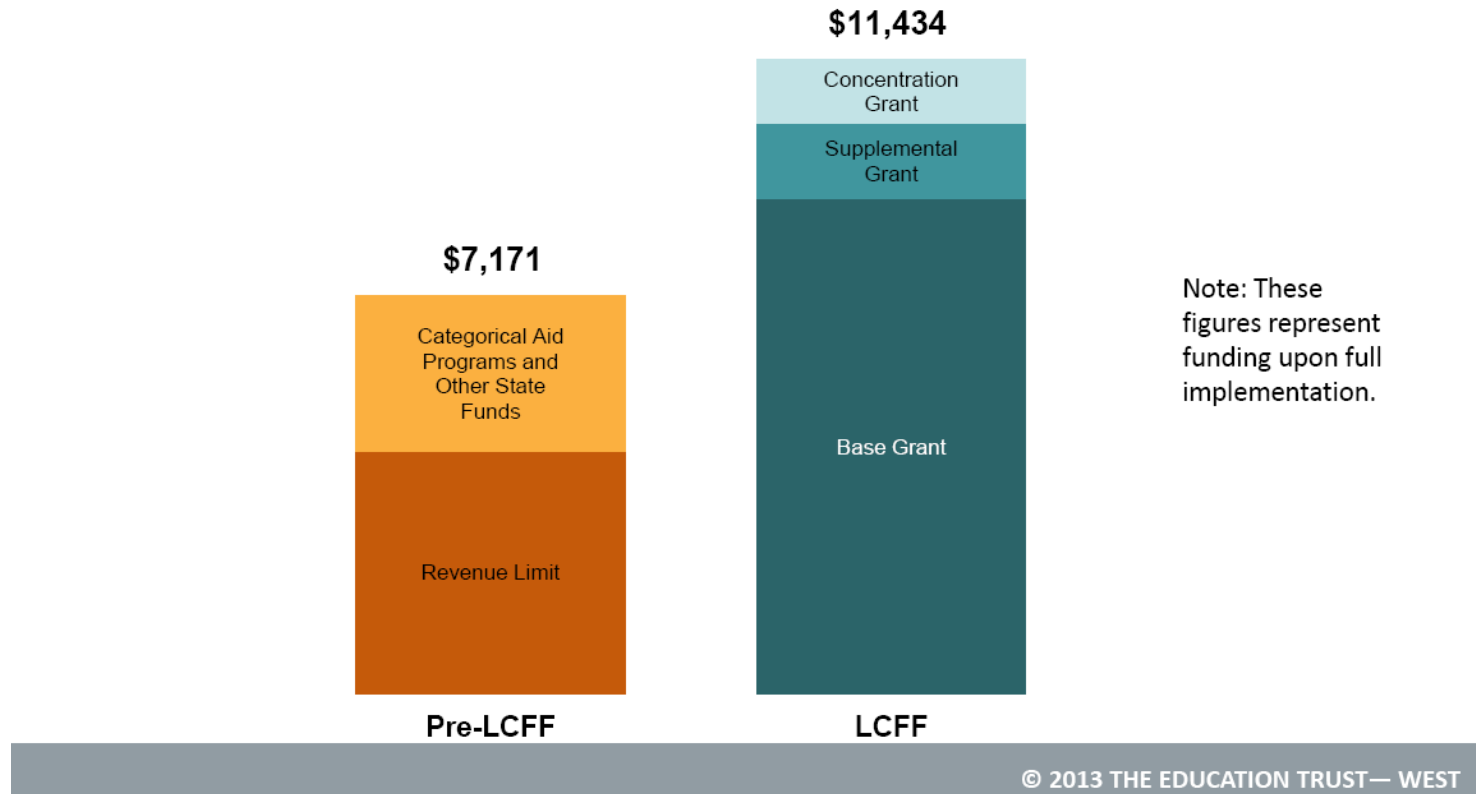# *Sample Per-Pupil Funding for a High-Need California District*

(one that is 80% low-income, English language learner, and/or foster youth)

$11,434

Concentration Grant

Supplemental Grant

Base Grant

Note: These figures represent funding upon full implementation.

$7,171

Categorical Aid Programs and Other State Funds

Revenue Limit

Pre-LCFF

LCFF

To help understand the impact, here is an example of a high-needs California district with 80% low-income, ESL and/or foster youth. The pre-LCFF bar on the left, with a revenue limit & categorical aid, would amount to about $7,100 per pupil. In the LCFF bar on the right, the Base Grant alone would amount to more than the total pre-LCFF funding. Adding in the Concentration & Supplemental grants would increase the amount to about $11,400 per pupil.

# Sample Per-Pupil Funding for a High-Need California District

(one that is 80% low-income, English language learner, and/or foster youth)

$11,434

Concentration Grant
Supplemental Grant
Base Grant

$7,171

Categorical Aid Programs and Other State Funds
Revenue Limit

Note: These figures represent funding upon full implementation.

Pre-LCFF   LCFF

Once fully implemented, high-needs districts could see 30% or more in additional per-pupil funding.

LCFF Funding Implications for LAUSD

o *Higher Needs* = free/reduced lunch, ESL, foster youth

o Over 85% of LAUSD students qualify as *Higher-Needs*

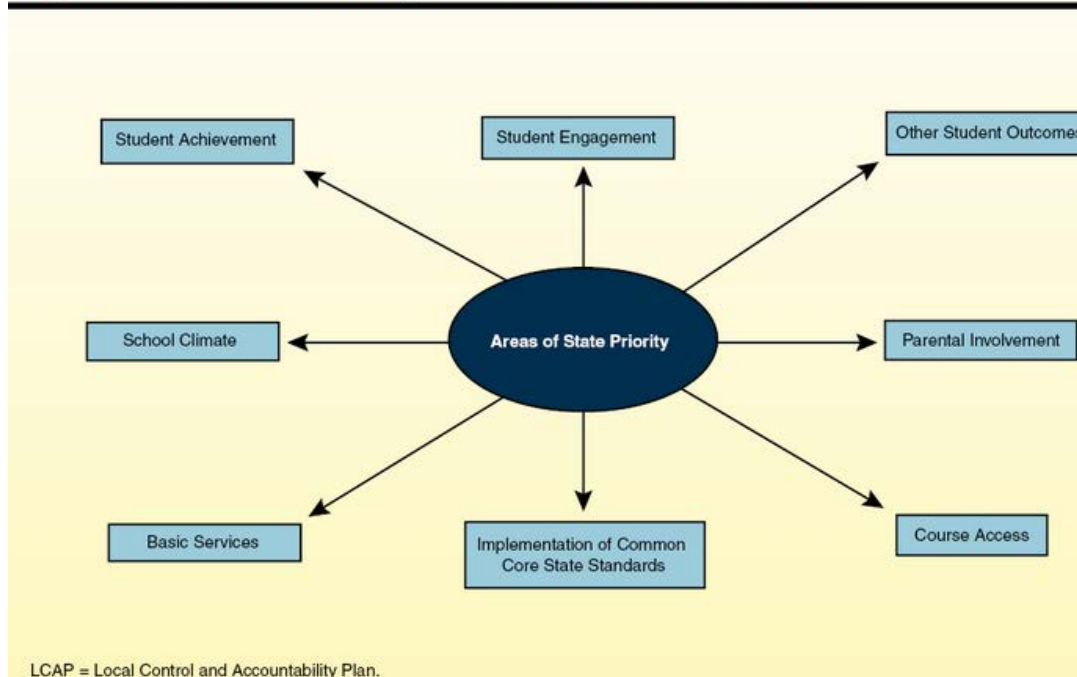o LAUSD expected to add $837m in SY 2014-15
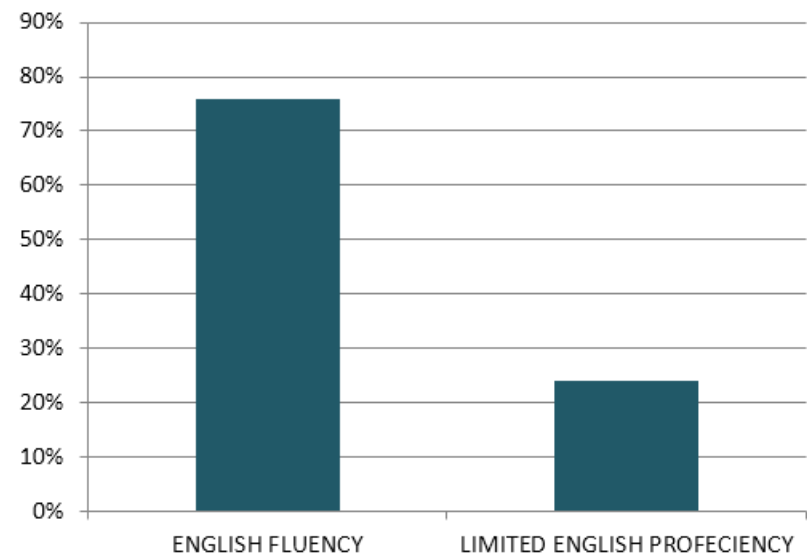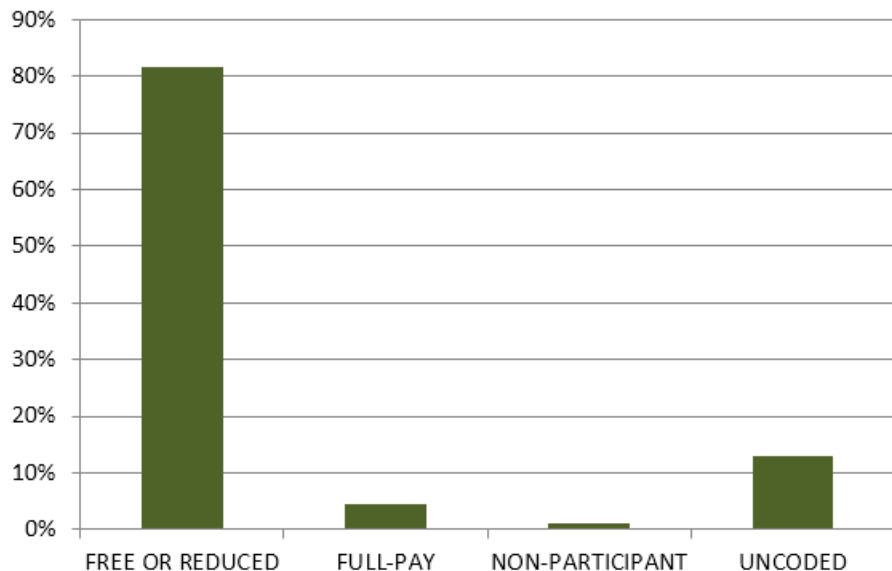
"We are…directing the money where the need and challenge is greatest." – *Governor Jerry Brown, July 2013*

LAUSD is expected to benefit from the LCFF because more than 85% of LAUSD's students qualify as *higher-needs* students, either as % free or reduced-fee lunch recipients (family income 130% or 185% of Federal Poverty Guidelines), or as % English-language learners. Because of LCFF, LAUSD expects to gain $837 million in funding in SY 2014-15.

The Local Control Accountability Plan

o   Each LEA must develop an LCAP
o   LCAP must engage parents, students staff & community

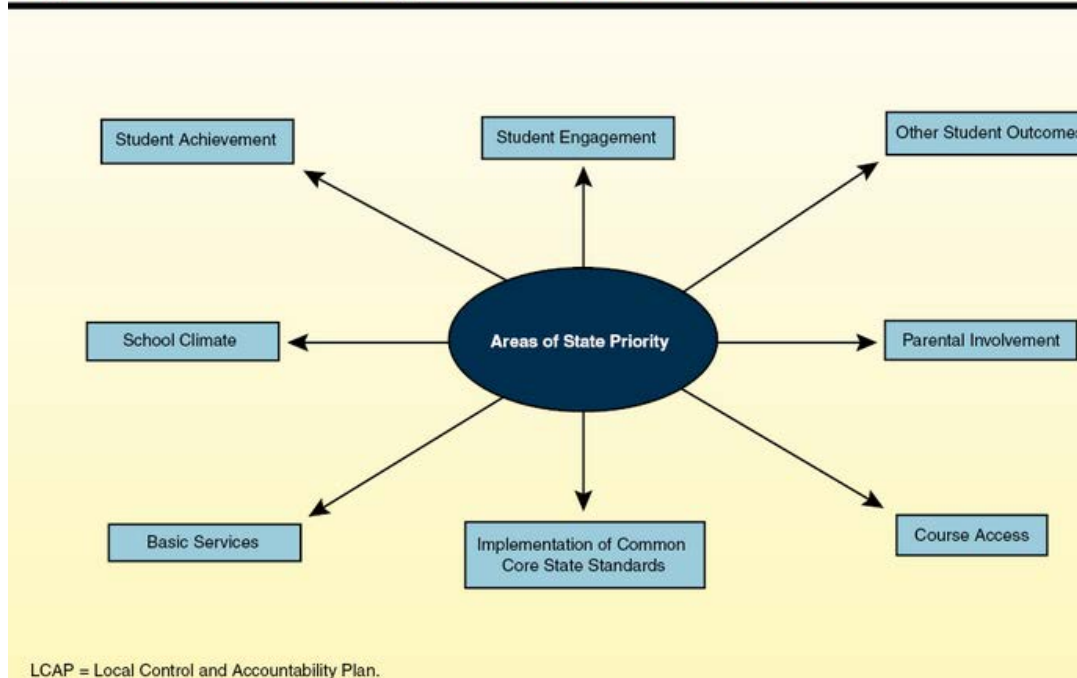**Eight Areas of State Priority Must Be Addressed in LCAPs**

Student Achievement

Student Engagement

Other Student Outcomes

School Climate

Areas of State Priority

Parental Involvement

Basic Services

Implementation of Common Core State Standards

Course Access

LCAP = Local Control and Accountability Plan.

" We are bringing government closer to the people, to the classroom where real decisions are made…"   *– Governor Jerry Brown*

As part of the LCFF, each Local Education Agency (LEA) must develop a Local Control Accountability Plan (LCAP). An LCAP is a comprehensive planning tool based on eight priority areas that aim to address factors both inside and outside of the classroom. A core requirement for developing an LCAP is to engage parents, students, district staff, and community members.

The Local Control Accountability Plan

o   Each District decides how to address 8 priority areas
o   LAUSD developing its own LCAP

Eight Areas of State Priority Must Be Addressed in LCAPs

|		
Student Achievement	Student Engagement	Other Student Outcomes
School Climate	**Areas of State Priority**	Parental Involvement
Basic Services	Implementation of Common Core State Standards	Course Access

LCAP = Local Control and Accountability Plan.

" We are bringing government closer to the people, to the classroom where real decisions are made…" – Governor Jerry Brown

The plan must make sure that a District's goals and actions are connected and ensure transparency in how the funds are spent. How to address the State's eight priority areas is left up to each District. LAUSD is in the midst of developing it's own LCAP in time for the July 1st deadline.

Academic Progress: CA Graduation Rates

## California Graduation Rates, 2001-2 thru 2011-12
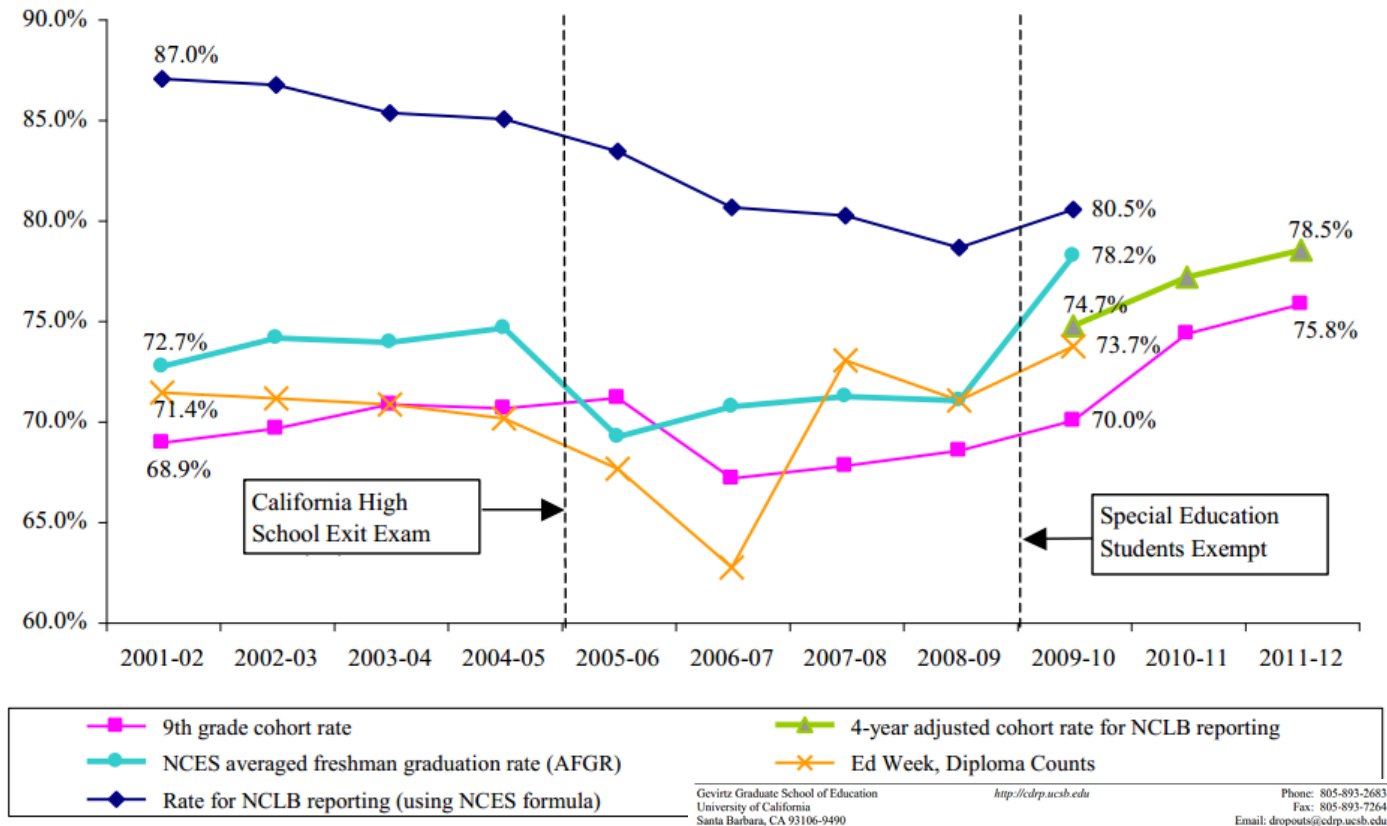
"*California's high school graduation rate passes 80% for the first time*" — *LA Times, April 28,2014*

A main goal of the LCFF is to ensure that students succeed. Using graduation rates as a measure of success, California has seen a general upward trend, even through the deep funding cuts of the California recession. Even among the varying methods of measuring graduation, there is general agreement that rates are improving. By 2013 California's statewide high school graduation rates were above 80%, a first in California's history.
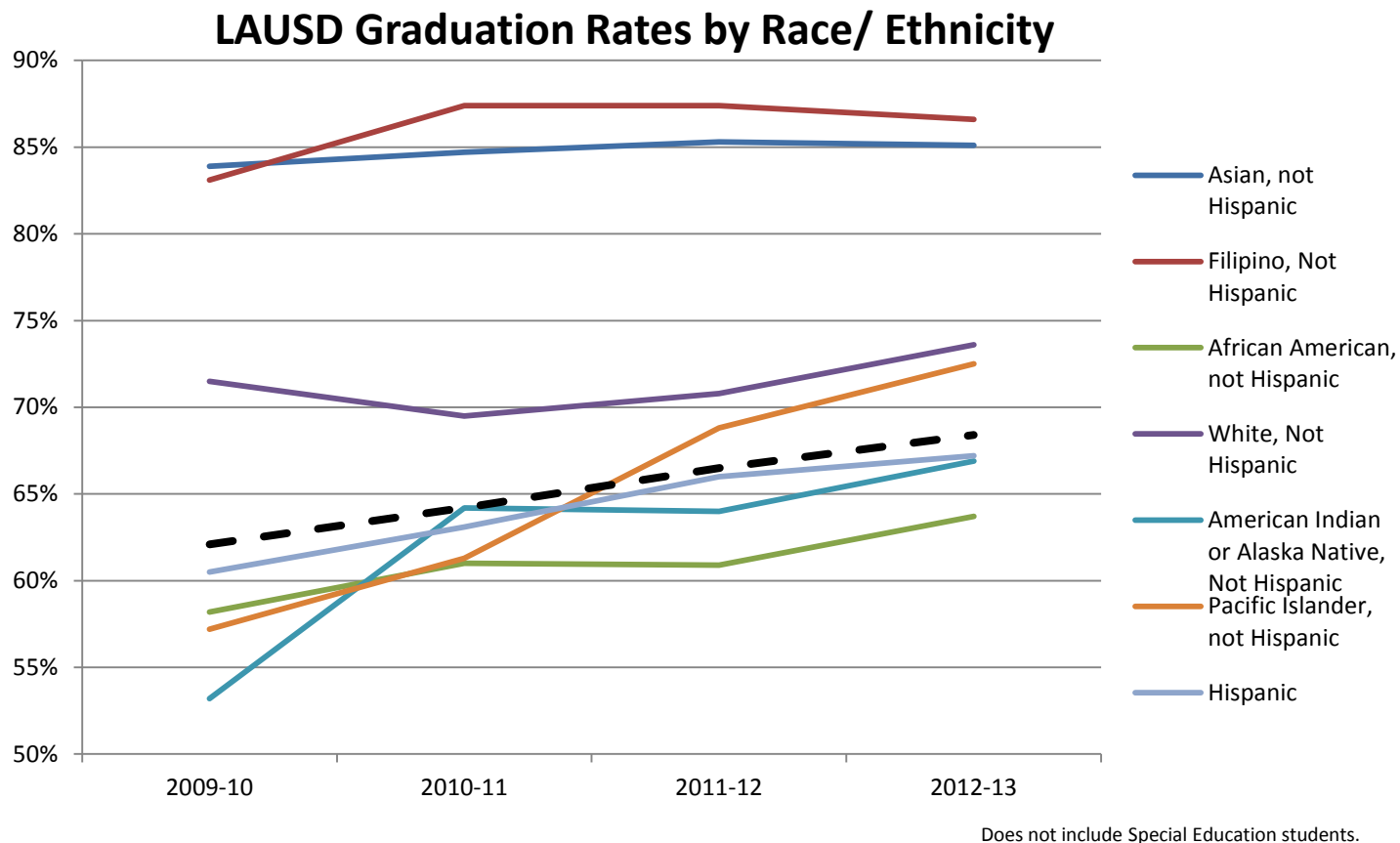
Academic Progress: LAUSD Graduation Rates

Graduation Rates SY 2009-10 through SY 2012-13 (CDE)

CDE 4-year adjusted cohort
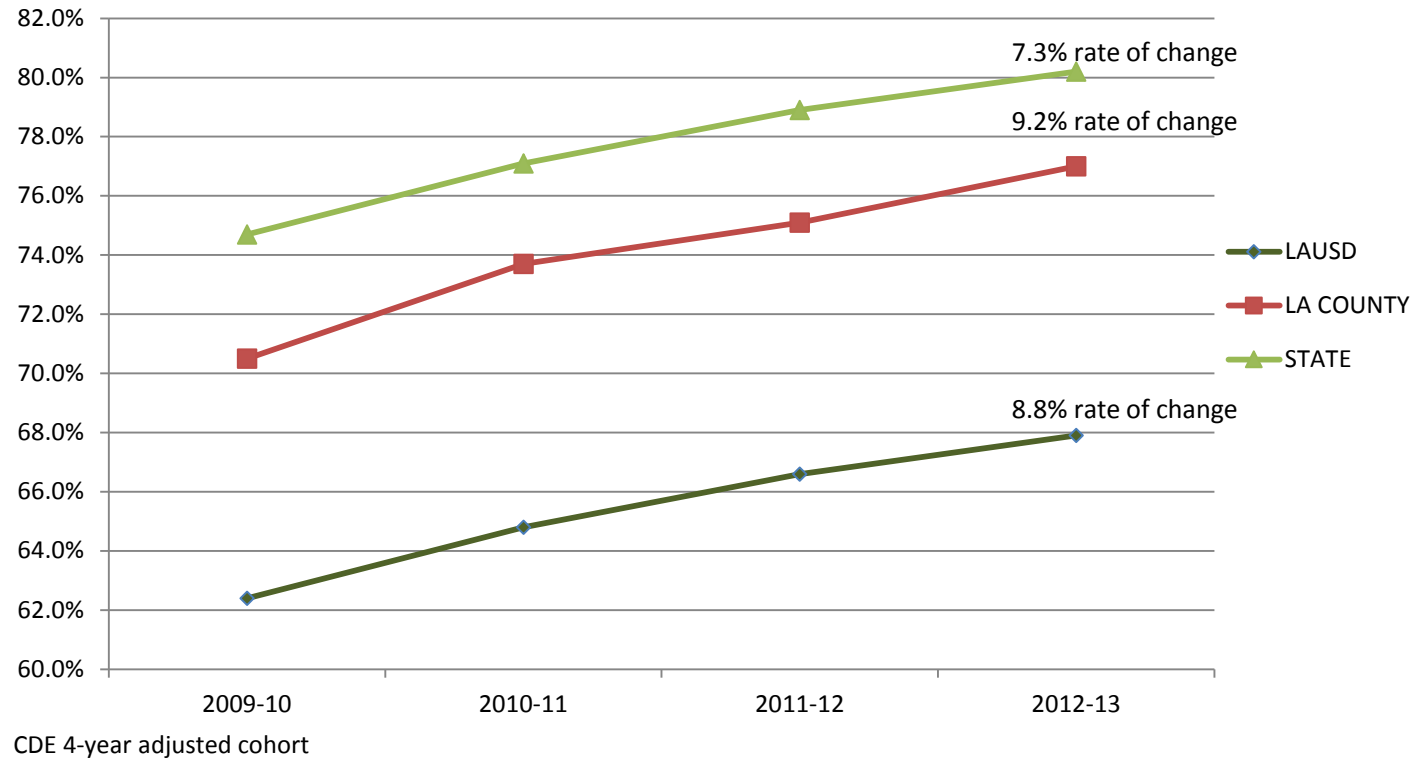
"These [LAUSD] results came at the absolute bottom of all cuts, and we still saw improvement" – *LAUSD Supt. John Deasy*

LAUSD aims to build on it's continued success with the increased funding from the LCFF. LAUSD's graduation rates (CDE 4-year adjusted rates) are trending up, alongside the Statewide trend. While LAUSD lags behind LA County and the State in it's overall graduation rate, the District has experienced a higher rate of change than the State since SY 2009-10.
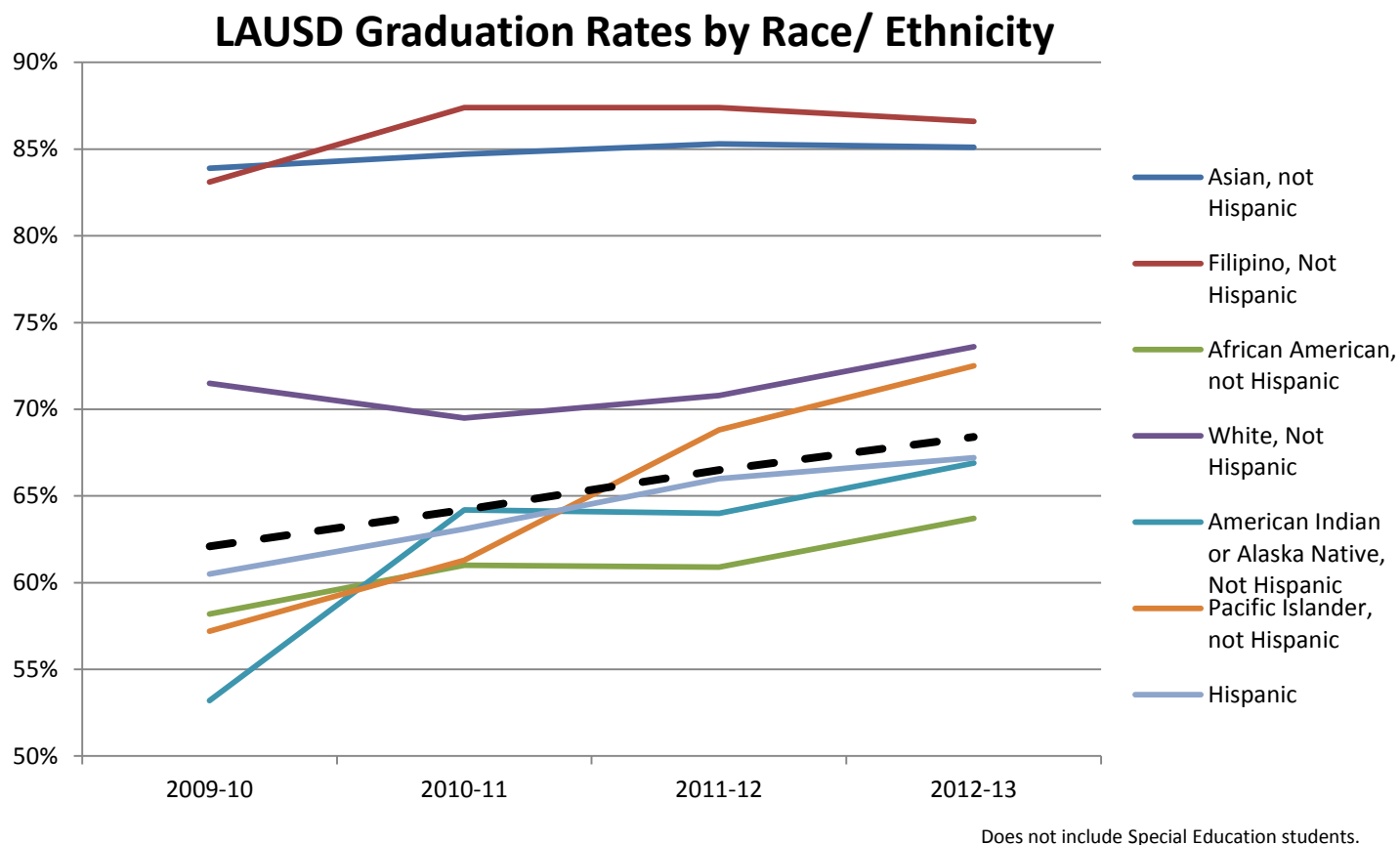
LAUSD Graduation Rates: High School Tenure

LAUSD Graduation Rates by Race/ Ethnicity

Legend:
- Asian, not Hispanic
- Filipino, Not Hispanic
- African American, not Hispanic
- White, Not Hispanic
- American Indian or Alaska Native, Not Hispanic
- Pacific Islander, not Hispanic
- Hispanic

Does not include Special Education students.

"With improving graduation rates and fewer drop outs, will LAUSD need more seats?" – LAUSD Stakeholders

Overall, LAUSD has also seen improvement in graduation rates occurring among individual ethnic/racial groups. However, improvement varies across racial/ethnic dimensions as well as across socio-economic dimensions. While Latinos and African-American students, many of whom live at or below the poverty line and/or are English Learners, are making gains, theirs are still among the lowest graduation rates in the District. The LCFF seeks to address disparities like these.
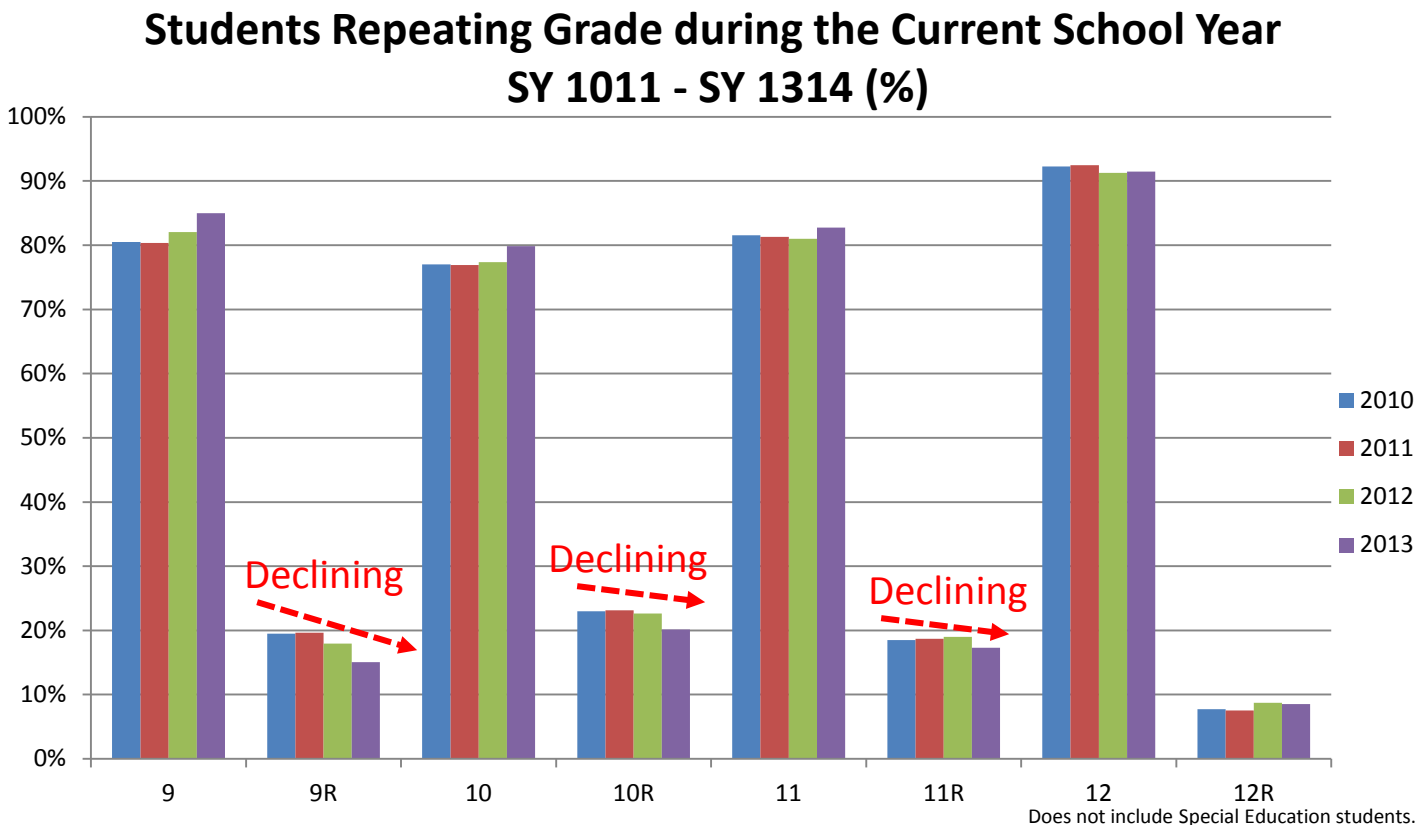
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"With improving graduation rates and fewer drop outs, will LAUSD need more seats?" – LAUSD Stakeholders

While graduation rates are a typical way of looking at academic progress, MPD is exploring student cohorts and their grade-to-grade progression throughout their high school careers, not just at the starting and ending points. In other words, MPD is investigating students' entire "high school tenure".
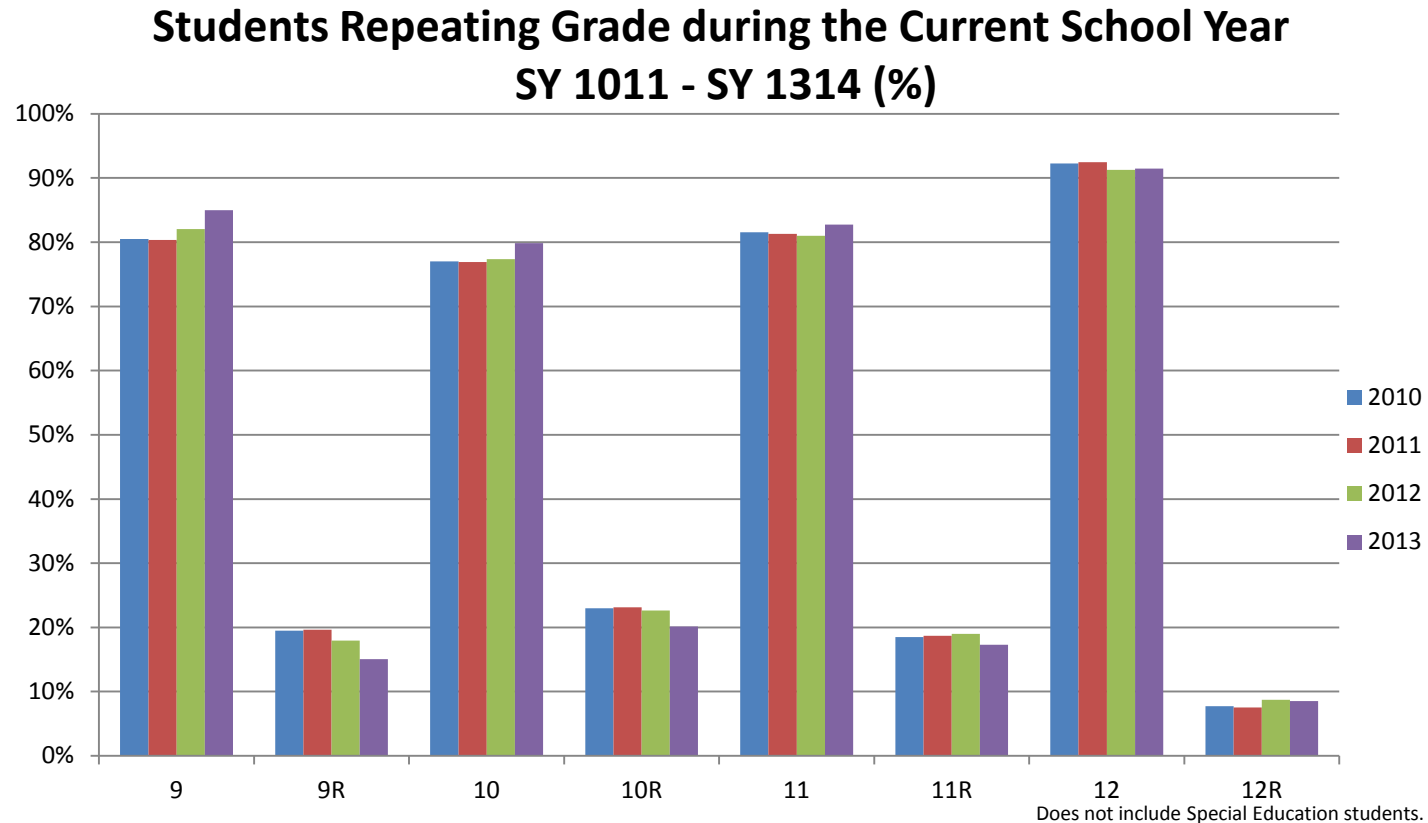
LAUSD Graduation Rates: High School Tenure

Students Repeating Grade during the Current School Year SY 1011 - SY 1314 (%)

Declining

Declining

Declining

Legend: 2010, 2011, 2012, 2013

Does not include Special Education students.

"With improving graduation rates and fewer drop outs, will LAUSD need more seats?" – LAUSD Stakeholders

A key way to understand tenure is to observe how many students repeat grades, which most methods for calculating graduation rates don't typically account for. In general, the percentage of LAUSD HS students repeating grades has been declining. From these patterns we better understand how grade-to-grade progression affects future graduation and drop-out rates, which in turn affect short- and long-range supply (seating capacity) and demand (student enrollment).
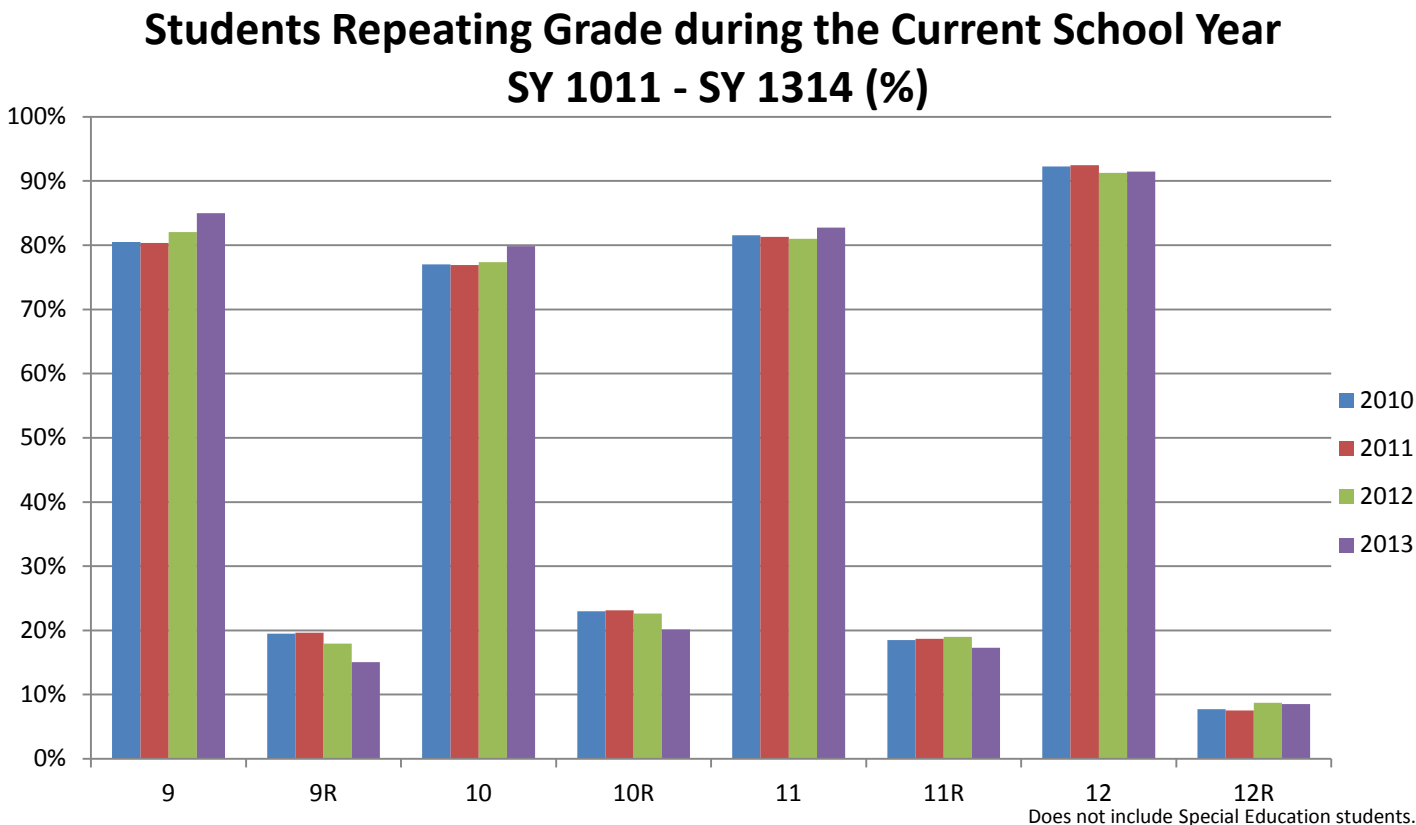
LAUSD Graduation Rates: High School Tenure

Students Repeating Grade during the Current School Year
SY 1011 - SY 1314 (%)

Does not include Special Education students.

"With improving graduation rates and fewer drop outs, will LAUSD need more seats?" – LAUSD Stakeholders

Studying these trends helps to answer planning questions such as, "As graduation rates improve, will LAUSD need more seating capacity?" If fewer students are repeating grades, and at the same time fewer students are dropping out, won't that cause overcrowding? Not if the increase in the number of students exiting the system (i.e., graduating) exceeds the number of students remaining in the system (i.e., not dropping out).

LAUSD Graduation Rates: High School Tenure

Students Repeating Grade during the Current School Year
SY 1011 - SY 1314 (%)

Does not include Special Education students.

"With improving graduation rates and fewer drop outs, will LAUSD need more seats?" – LAUSD Stakeholders

But what if smaller class sizes are also implemented concurrently? By understanding trends in student tenure, we can better model the relationships between supply and demand. Examining a 1-year trend vs. a 2-year or 3-year trend in a model allows us to explore and test different forecasting assumptions.

LAUSD High School Tenure: 12th Grade Cohort

Number of Years 12th Graders Enrolled in HS
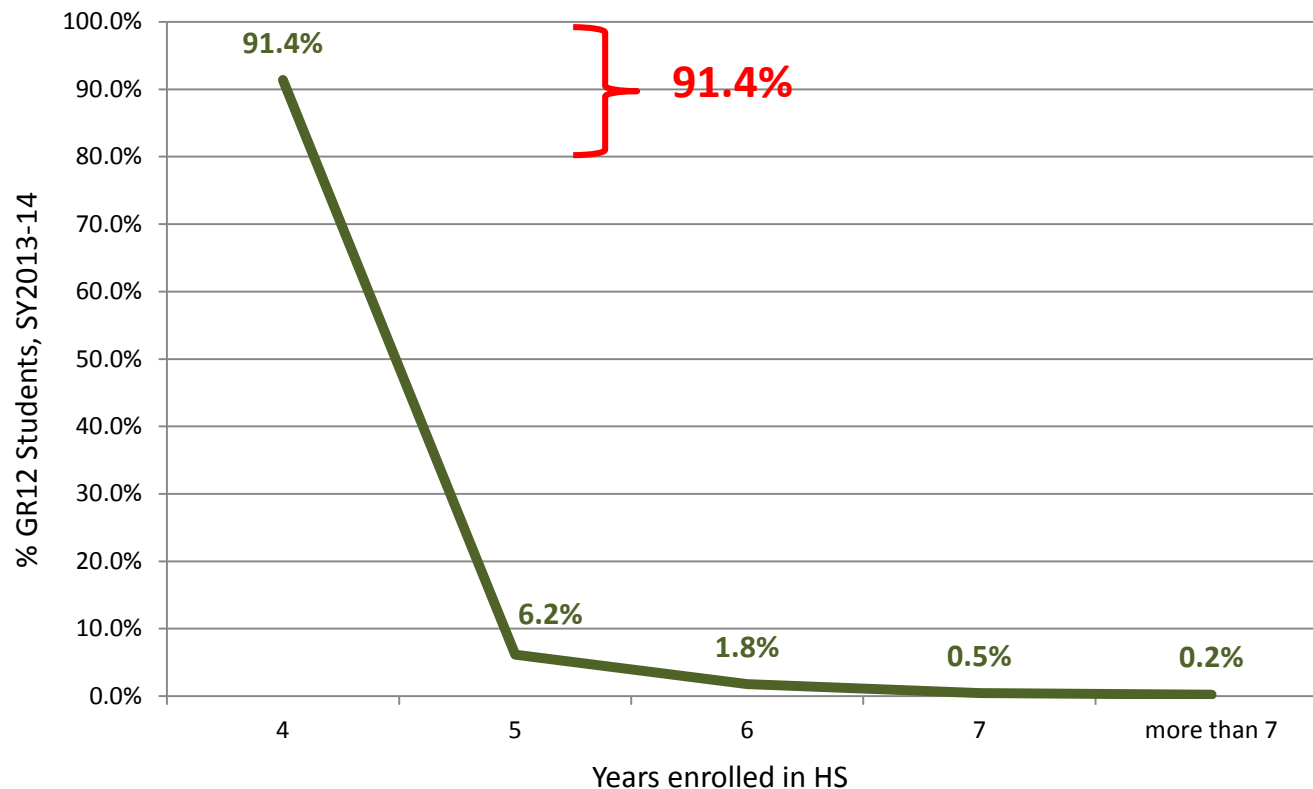**(% in SY13-14)**
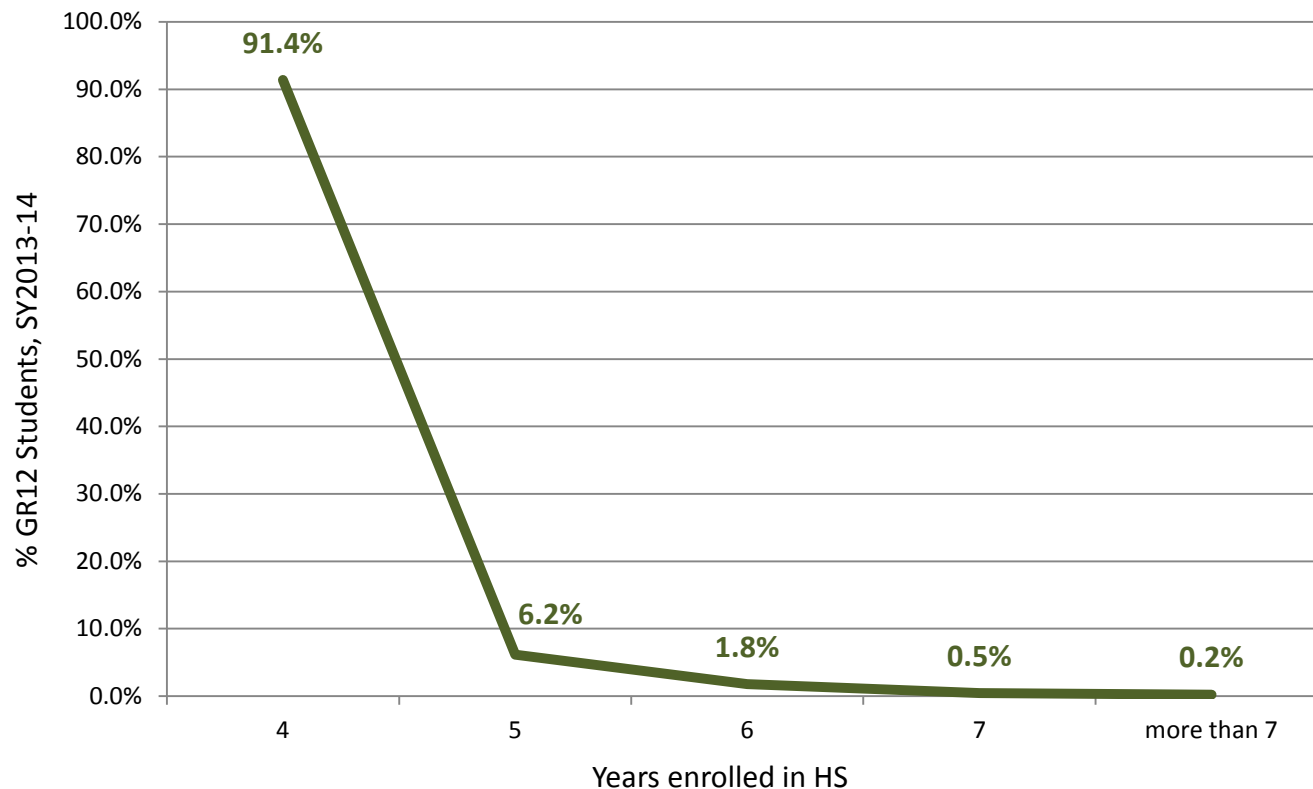
"The [State] is…examining whether to use five-and six-year graduation rates…" – *CA State Auditor HS Graduation Report, 2012*

Looking specifically at HS tenure among 12th graders helps determine the number of seats needed, not only for students who are 'on track' to graduate but also those who need additional time to complete high school. Tracking students who need more than 4 years to complete high school (which is beyond the State's official requirement for graduation) may help with measuring academic progress.

LAUSD High School Tenure: 12th Grade Cohort

Number of Years 12th Graders Enrolled in HS
(% in SY13-14)

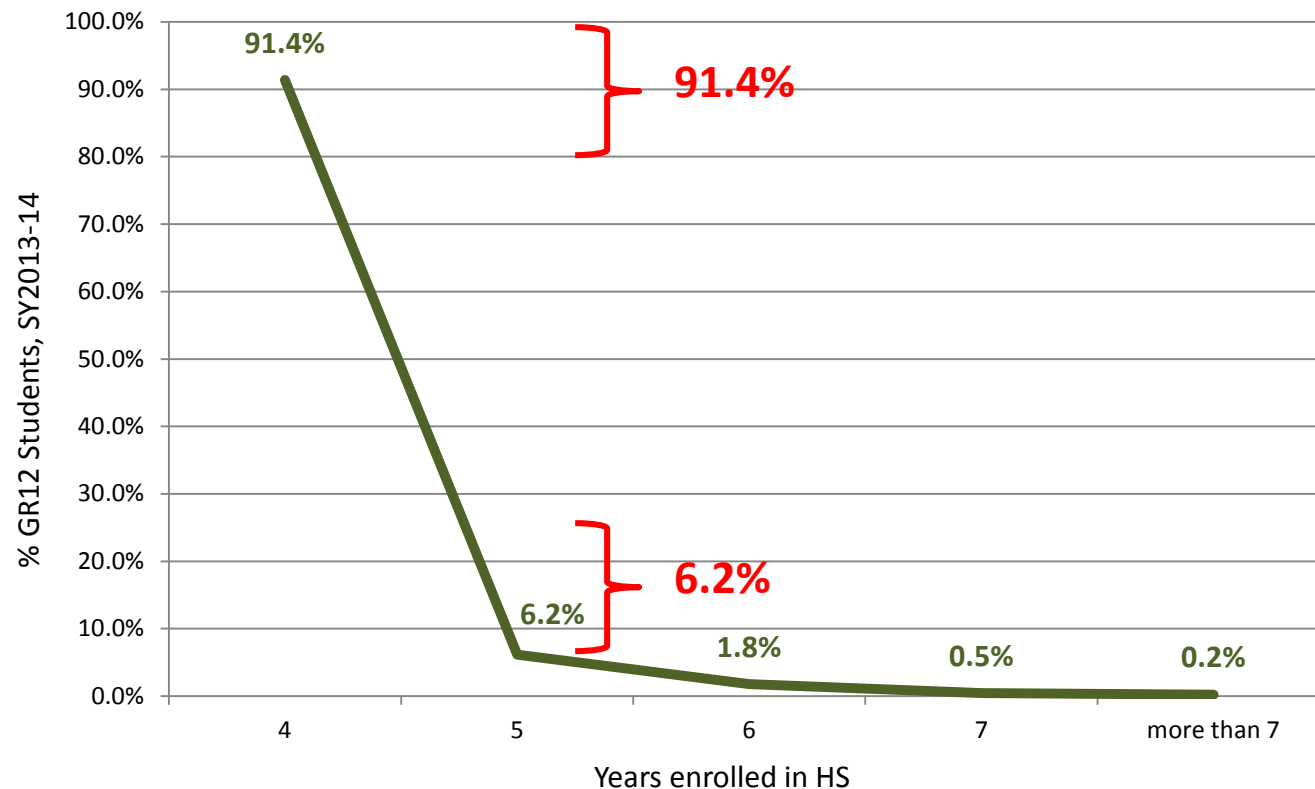*"The [State] is…examining whether to use five-and six-year graduation rates…"*   *– CA State Auditor HS Graduation Report, 2012*

Most 12th graders (91.4%) have been enrolled in high school for 4 years. These are students who are currently 'on track' to graduate within California's official 4-year graduation timeframe.

LAUSD High School Tenure: 12th Grade Cohort

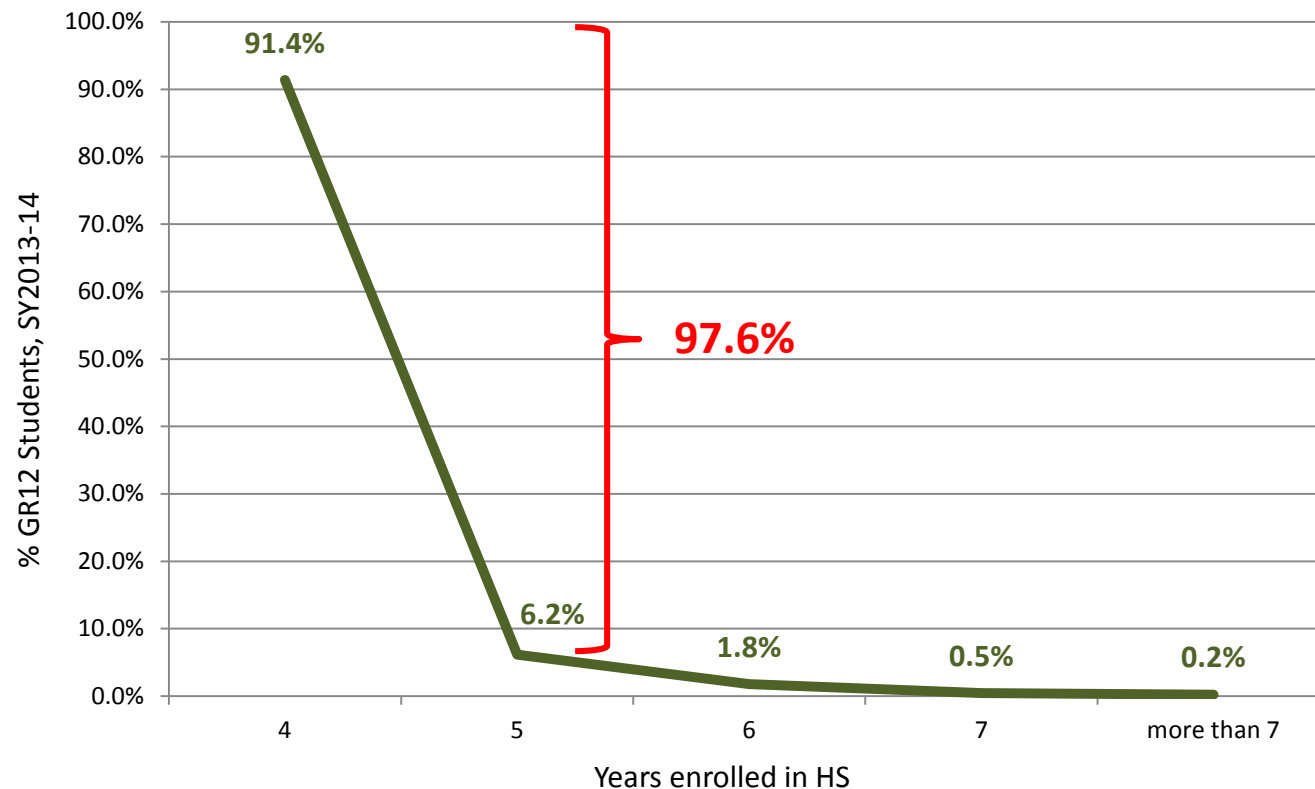**Number of Years 12th Graders Enrolled in HS
(% in SY13-14)**

"The [State] is…examining whether to use five-and six-year graduation rates…" – *CA State Auditor HS Graduation Report, 2012*

About 6.2% have had a high school tenure of 5 years, meaning they've repeated a grade at some point.

LAUSD High School Tenure: 12th Grade Cohort

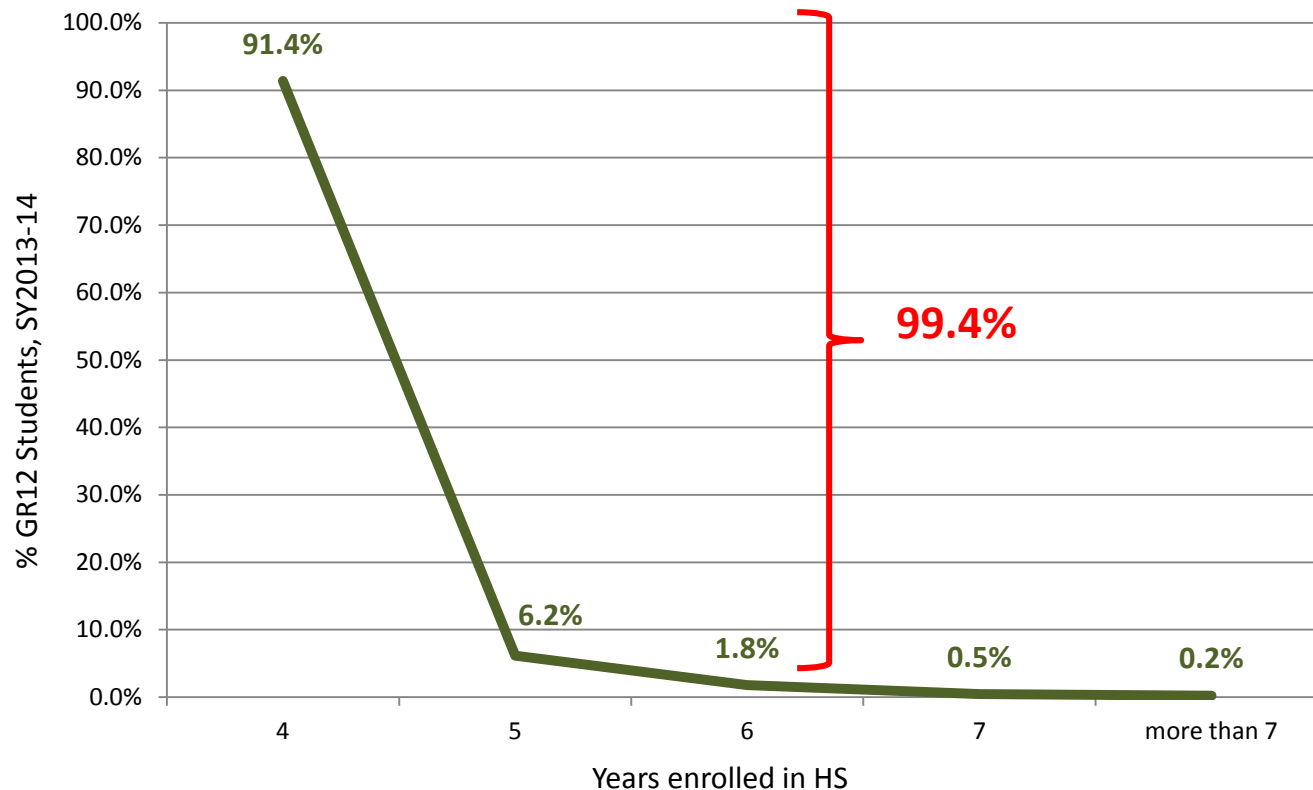## Number of Years 12th Graders Enrolled in HS
(% in SY13-14)

"The [State] is…examining whether to use five-and six-year graduation rates…" – *CA State Auditor HS Graduation Report, 2012*

If we add the 4-year & 5-year 12th graders together, it amounts to 97.6% of 12th current graders.

LAUSD High School Tenure: 12th Grade Cohort

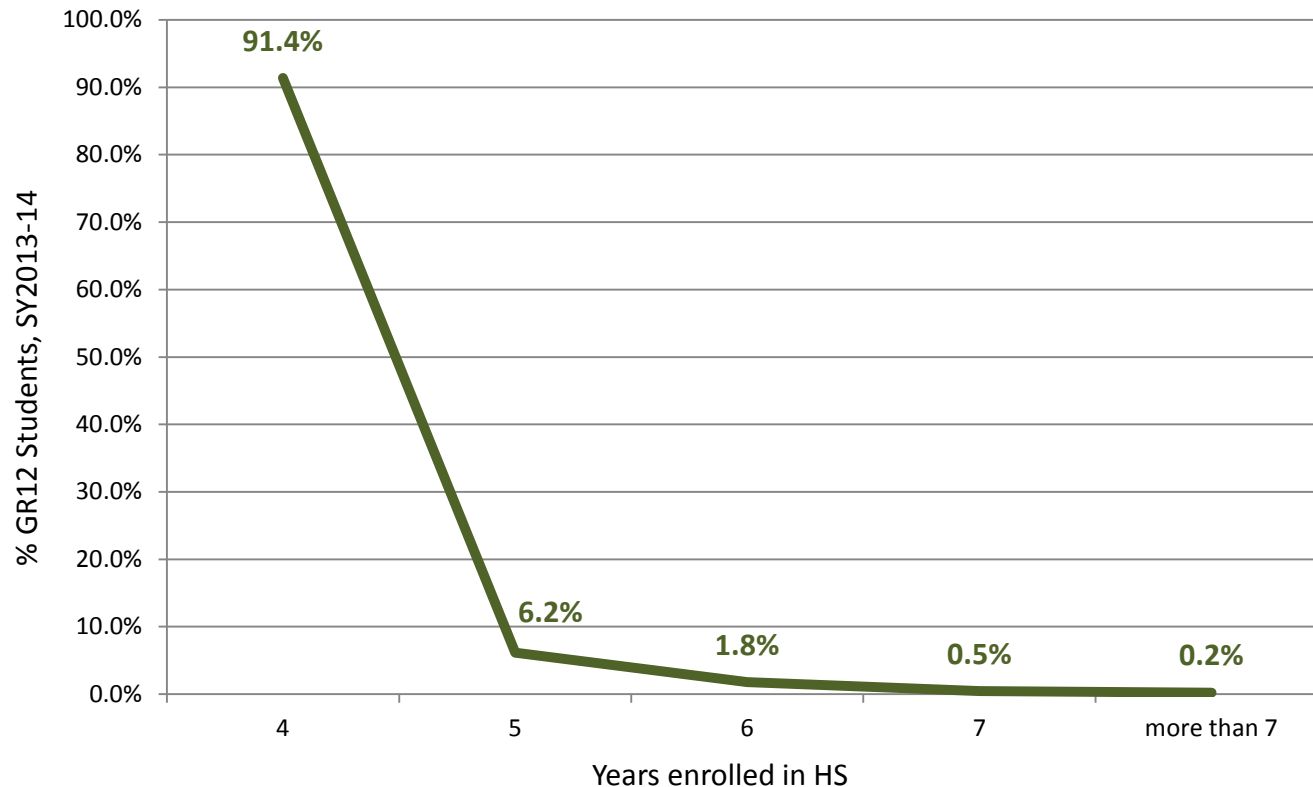## Number of Years 12th Graders Enrolled in HS
(% in SY13-14)

"The [State] is…examining whether to use five-and six-year graduation rates…" – *CA State Auditor HS Graduation Report, 2012*

If we also add the 6-year 12th graders, that accounts for 99.4% of all 12th graders. Considering that over 99% of 12th graders have a 4-6 year high school tenure, does it make sense for official statistics to recognize only those students who graduate within 4 years? Currently, California school districts do not get credit for 5th & 6th year graduates, either in official graduation rates or towards being able to demonstrate that they are meeting NCLB Adequate Yearly Progress goals.

LAUSD High School Tenure: 12th Grade Cohort

**Number of Years 12th Graders Enrolled in HS**
(% in SY13-14)

% GR12 Students, SY2013-14

- 91.4% at 4 years
- 6.2% at 5 years
- 1.8% at 6 years
- 0.5% at 7 years
- 0.2% at more than 7 years

Years enrolled in HS

"The [State] is…examining whether to use five-and six-year graduation rates…" – *CA State Auditor HS Graduation Report, 2012*

Paradoxically, from a capital planning perspective, those 5th- and 6th-year students are already enrolled and need seats in the classroom, regardless of whether official statistics acknowledge their presence. Bringing the official tabulation method into line with the in-classroom reality would seem to be warranted, and is something the State is currently considering.

LAUSD High School Tenure: Resident School

Repeating A Grade: Attending the Resident School?

Does not include Special Education students.
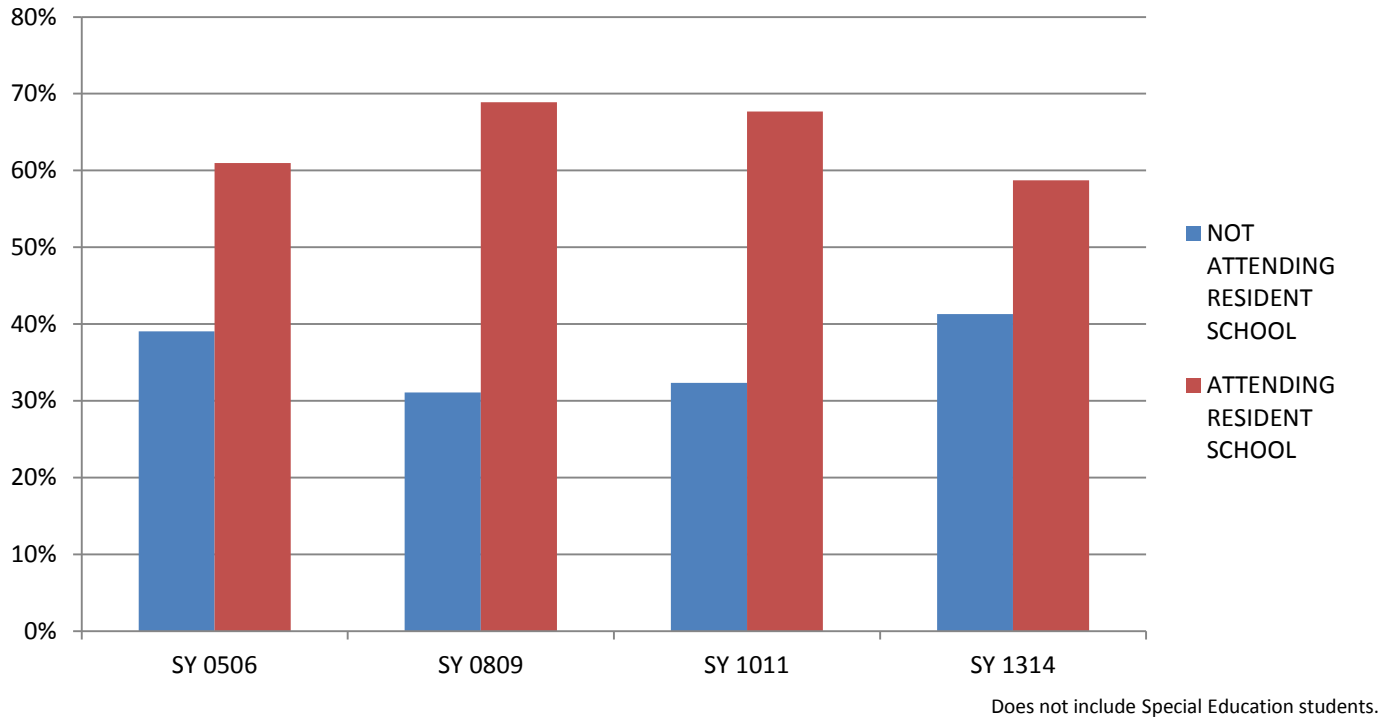
"What's happening at the neighborhood school?" – *MPD planning question*

LAUSD has undergone a massive, decade-long building program, which relieved overcrowding, re-instated single-track calendars, and opened up space for students to return to their resident schools. MPD is planning to explore HS tenure among students living in areas that have had new schools built, to determine whether any changes in academic progress, or other characteristics, can be detected through a study of resident vs. non-resident grade repeaters.

LAUSD High School Tenure: Resident School

Research Questions:

- In case studies of existing schools where overcrowding was relieved by new schools, have any measurable changes in HS tenure occurred among students enrolled at the existing school? At the new school?

- Has the building of new schools influenced academic progress, as measured by HS tenure and graduation rates?

- Are there any distinct characteristics of the resident schools that have high graduation and low drop out rates?

- Are there greater or fewer students choosing to attend non-resident schools? Is there a difference in supply and demand?

"What's happening at the neighborhood school?"   *–MPD planning question*

By revealing details about high school tenure that are otherwise obscured by considering graduation and drop-out rates alone, MPD is helping to ensure that LAUSD's capital planning efforts are bolstered by data-driven analysis.

Conclusions

- The creation of the Local Control Funding Formula (LCFF) seeks to deliver a more equitable education to all of California's youth.

- The LCFF addresses many of the flaws in the State's prior K–12 funding system.

- The LCFF requires local community engagement to develop plans for how funding is spent and to guarantee greater transparency for reaching goals and monitoring progress.

- MPD is supporting LCFF goals by providing data-driven analysis of academic progress (defined by high school tenure), including it's relationship to future supply (classroom seats) and demand (number of students enrolled).

Los Angeles Unified School District
John Deasy, Superintendent
Rena Perez, Director, Master Planning and Demographics

About the Master Planning and Demographics Unit

The Los Angeles Unified School District is the nation's second largest public school system, serving approximately 680,000 children in grades K-12. The Master Planning and Demographics Unit supports the Los Angeles Unified School District's mission to educate students through its dedication to the research and analysis utilized in the planning for the optimal utilization of existing schools and determining the need for new school facilities. For more information, please contact us at 213-241-8044 or visit us on the web at www.lausd.net or www.laschools.org/employee/mpd/.

About the Authors

Valerie Edwards, Chief Enrollment Analysis Coordinator

Ms. Edwards leads strategic planning and coordination of demographic analysis, enrollment projections, and initiatives that improve data analysis and operational processing. She heads **E-CAST**, LAUSD's online school forecasting review application, that successfully migrated the District's enrollment forecast review process from the annual on-site event known as "Roadshow" to an electronic web-based process in 2010, reducing Principals' forecast review time and corresponding District costs by over 70%. Ms. Edwards has extensive experience with school choice modeling. With her team at LAUSD, she developed the SABR (*School Assignment By Record*) Engine, which determines students' resident school assignments by using an algorithm that simulates school choice behavior for every student living in an option area. She holds a Master's degree in city planning from the Massachusetts Institute of Technology.

Mary Ehrenthal Prichard, Demographic Research and Planning Analyst II

Ms. Prichard's work has involved strategic planning for demographic analysis and student enrollment projections; production of short and long range enrollment forecasts for the District's 600+ schools; planning for and production of specialized demographic research and analysis, including analysis of internal LAUSD trends relative to general demographic trends. She has worked extensively with spatially referenced U.S. Census data within a GIS environment. She is responsible for obtaining confidential data, including individual birth records and state-wide student-level data. She is currently designing research intended to detail enrollment choices and trends among students entering and exiting the LAUSD. She is also involved with efforts to develop District-wide approaches aimed at improving student data collection and management. She holds B.A. and M.A. degrees in the field of Geography (Cal State, LA, 2001).

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