



INTER-OFFICE CORRESPONDENCE  
Los Angeles Unified School District

INFORMATIVE

April 11, 2011

TO: Members, Board of Education  
Ramon Cortines, Superintendent  
John Deasy, Superintendent-Elect

FROM: Cynthia Lim, Executive Director  
Office of Data and Accountability

SUBJECT: RELEASE OF SCHOOL LEVEL ACADEMIC GROWTH OVER TIME  
RESULTS

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**The results in this informative are embargoed until April 13.**

On April 13, school level Academic Growth over Time (AGT) results will be released on the following website: <http://agt.lausd.net>. This memo provides a description of how the scores are calculated and a summary of the results.

**Background**

Academic Growth over Time is a statistical method used to identify the individual impact of a teacher (or school leader or entire school) on student learning. Academic Growth over Time compares the performance of each teacher's students to that of teachers with similar students. AGT allows us to examine the impact that schools and educators have on student learning outcomes and uses a value-added method that controls for external factors which often influence student test results.

Current state and federal accountability measures, such as Adequate Yearly Progress (AYP) and the Academic Performance Index (API) look at achievement or attainment scores only. For example, the API in an elementary school is calculated by using the distribution of students in different performance bands in grades 2-5. This distribution is compared to the distribution of students in grades 2-5 from the previous year to calculate "growth," but does not follow the same cohort of students from one year to the next. We have also used the term "growth" to indicate percentage point gains in the number of students scoring proficient or advanced from one year to the next. However, when we reference percentage point gain, we are comparing third graders from last year to a different group of third graders in the current year.

Academic Growth over Time or value-added measures follow the progress of the same students over time. By examining achievement and growth data together, we have a more complete picture of how our students are doing and *how we are doing at improving student learning over time*, as illustrated by Figure 1.

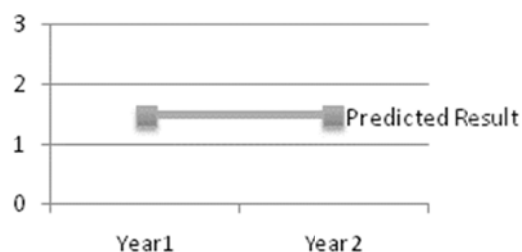
Figure 1



### Calculation of Academic Growth over Time

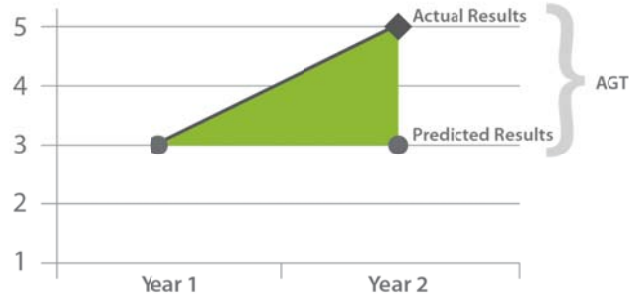
The academic growth over time measure uses a value-added approach where a student's prior year achievement on the CST English language arts and math tests is used to predict future performance on the CST. The difference between the "predicted" and "actual" score is considered the "value-added" score. The following basic steps are used to calculate AGT:

- **Step 1 – Predict student learning results:** Using prior achievement and other student factors related to learning outcomes (e.g., Free or Reduced Priced Lunch status, Special Education status), value-added models generate a prediction of each student's learning results for a given assessment (e.g., math California Standards Test results). For some students it is not possible to calculate an AGT result. This includes students who have not spent enough time in an individual teacher's classroom due to mobility issues, as well as students that do not have a prior year score to use for predicting purposes. In this initial round of school level results, we only included students who were continuously enrolled in school from October census day through spring testing for the California Standards Tests.

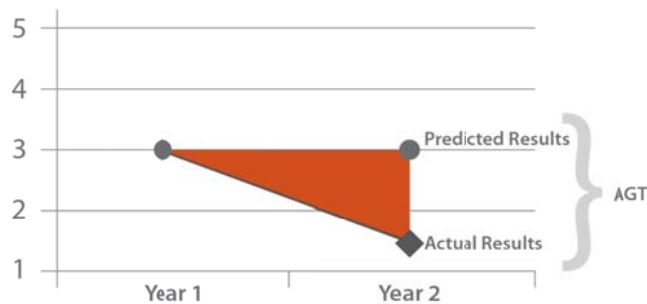


- **Step 2 – Compare predicted results to actual results:** By comparing a group of students' actual results to their predicted results, we calculate an AGT (value-added) estimate for the teacher or school serving those students.

- If the students perform higher than predicted, the AGT estimate is above the district average of “3.”



- If the students perform lower than predicted, the AGT estimate is below the district average of “3.”



- **Step 3 – Aggregation of results (e.g., school, grade level team, teacher):** Individual student estimates can be aggregated for an overall AGT result for teachers, grade level teams, schools or specific groups of students (e.g., English Language Learners in a school).
- **Step 4 – Discard results for entities where information is insufficient:** In LAUSD, we are only sharing results where there are at least 10 individual student estimates in the result. This both protects the anonymity of students and increases the likelihood we can have statistical confidence that results are accurate.

### LAUSD’s Model

Currently, a variety of value-added models are being used by school districts throughout the nation. LAUSD contracted with the University of Wisconsin’s Value-Added Research Center (VARC) to develop the AGT model and calculate scores for schools and teachers. With input from stakeholders and a Technical Advisory Group that includes national and regional experts on these methods, LAUSD incorporated and “controlled for” a variety of factors, as shown in Table 2.

Table 2  
Variables Used in LAUSD’s Academic Growth over Time Model

Individual Student Control Variables	Classroom Average Control Variables
<ul style="list-style-type: none"> <li>• Prior year math achievement</li> <li>• Prior year ELA achievement</li> <li>• Ethnicity</li> <li>• Gender</li> <li>• Free or reduced priced lunch status</li> <li>• Special Education status               <ul style="list-style-type: none"> <li>– Mild (SLDs and SLIs)</li> <li>– Moderate to Severe (All others)</li> </ul> </li> <li>• Homelessness</li> <li>• ELL status</li> <li>• Continuous enrollment (meets the enrollment standard to be included in the school’s API calculation – continuously enrolled from October to test day)</li> </ul>	<ul style="list-style-type: none"> <li>• Average prior year math achievement</li> <li>• Average prior year ELA achievement</li> <li>• Average ethnicity</li> <li>• Average gender</li> <li>• Average free or reduced priced lunch status</li> <li>• Average Special Education status               <ul style="list-style-type: none"> <li>– Mild (SLDs and SLIs)</li> <li>– Moderate to Severe (All others)</li> </ul> </li> <li>• Average homelessness</li> <li>• Average ELL status</li> </ul>

**Summary of Findings**

The April 13 release includes Academic Growth over Time measures at the school level in English Language Arts and Math for the following grades:

- Grades 3 to 8
  - English Language Arts (ELA)
  - Mathematics
- Grade 9 (for first time 9<sup>th</sup> graders only)
  - English Language Arts (ELA)

Growth estimates are provided for each school and grade level compared to the District average. Schools are categorized into five categories:

1. Far Above Predicted AGT (blue)
2. Above Predicted AGT (green)
3. Within the predicted Range (gray)
4. Below Predicted AGT (yellow)
5. Far Below Predicted AGT (red)

As shown in Tables 3 and 4, the school level AGT results were most commonly found to be within the predicted range in both English Language Arts and Math. Nine schools were far above the predicted range in English language arts and eight schools were far above the predicted range in Math, given their students’ prior performance and demographic characteristics.

Table 3  
Distribution of Schools in English Language Arts, 2009-10

	Far Below Predicted Range	Below Predicted Range	Within Predicted Range	Above Predicted Range	Far Above Predicted Range
Elementary	2	88	294	84	3
Middle	2	20	43	24	2
High School (Grade 9 only)	3	18	30	19	4
TOTAL*	6	126	361	122	9

\*Note: Total number of schools may add to more than 100% because some schools are counted as more than one school type, e.g., as an elementary and middle school.

Table 4  
Distribution of Schools in Mathematics, 2009-10

	Far Below Predicted Range	Below Predicted Range	Within Predicted Range	Above Predicted Range	Far Above Predicted Range
Elementary	6	127	212	117	8
Middle	3	26	28	34	0
TOTAL*	8	151	234	148	8

\*Note: Total number of schools may add to more than 100% because some schools are counted as more than one school type, e.g., as an elementary and middle school.

Chart 5  
Distribution of Schools in English Language Arts, 2009-10

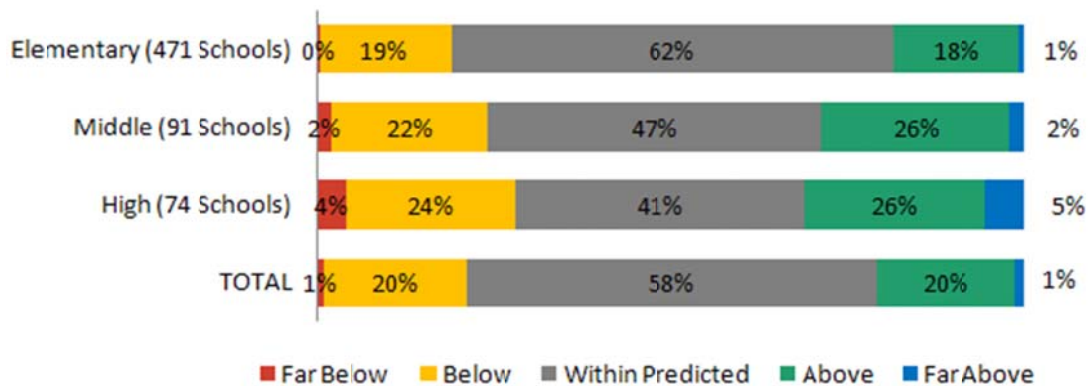
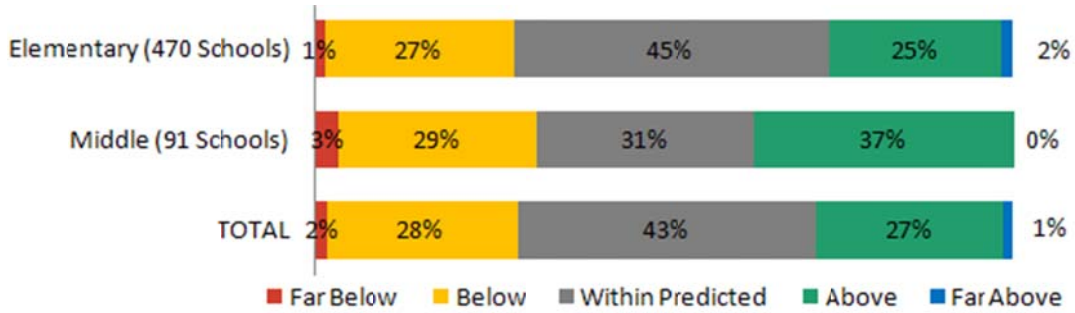


Chart 6  
Distribution of Schools in Mathematics, 2009-10



Charts 7 and 8 provide the distribution of schools by subject and Local District. Schools with AGT results far above the predicted range were located throughout the district. The distribution of schools in each of the five categories was fairly even across all local districts.

Chart 7  
Distribution of Schools by Local District in English Language Arts, 2009-10

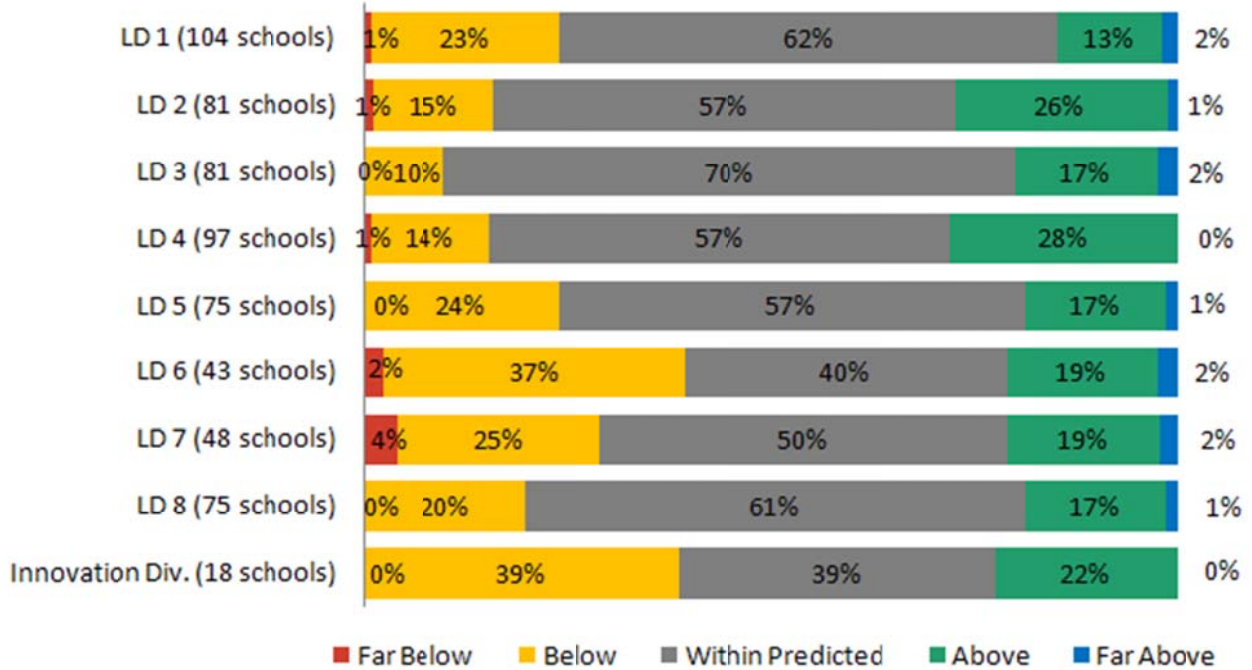
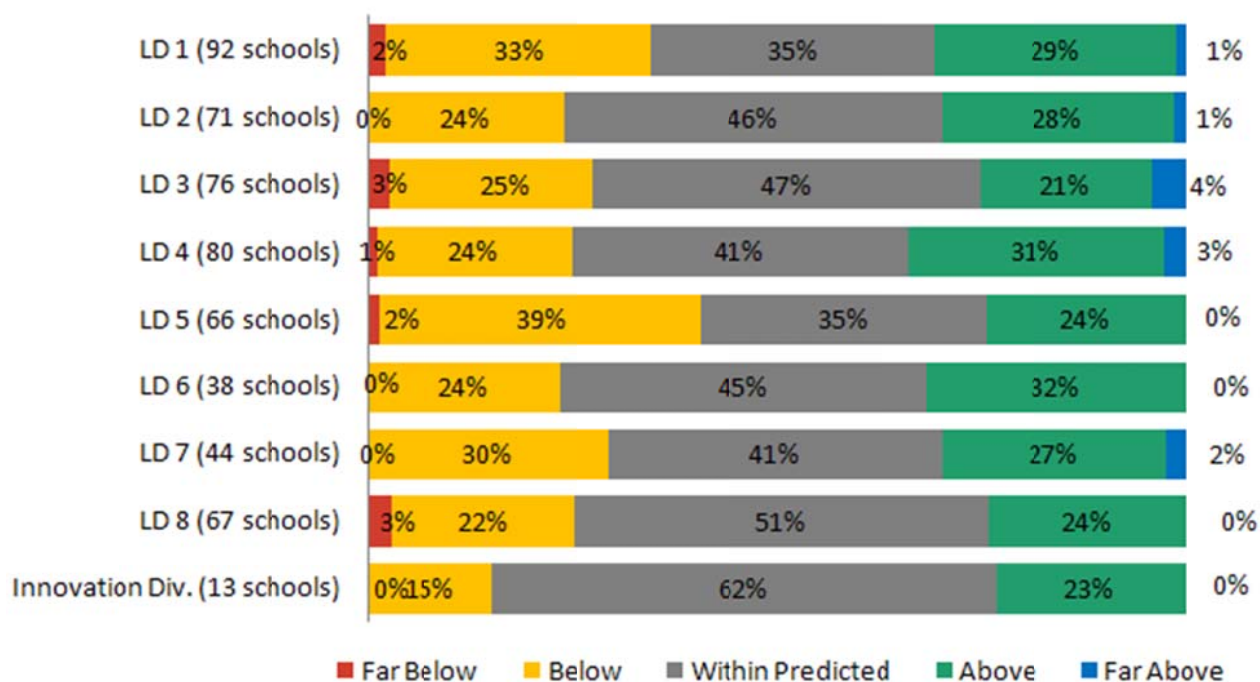


Chart 8

Distribution of Schools by Local District in Mathematics, 2009-10



Schools with AGT scores far above the predicted range are listed in Table 9. These results are aggregated across all grade levels in the school. Four high schools had results far above the predicted range in English language arts for ninth graders: Canoga Park, Garfield, Maywood and Reseda.

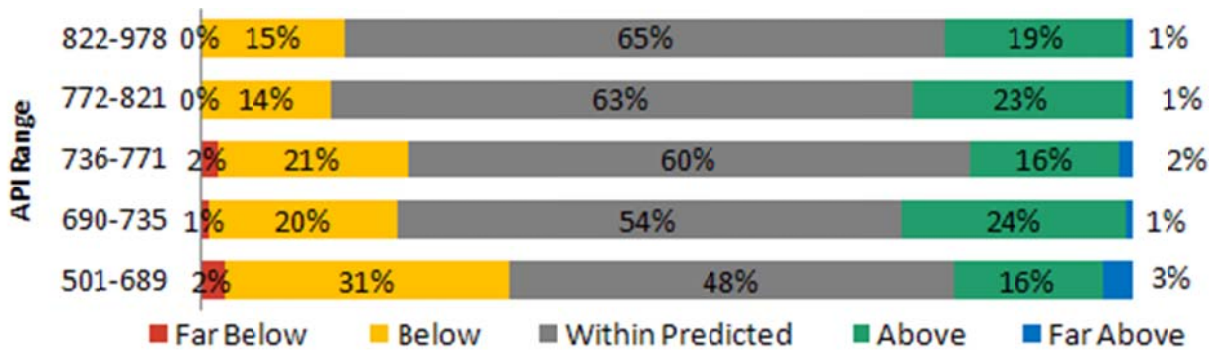
Table 9  
Schools With Far Above Predicted AGT Results Schoolwide

LOCN	School Name	LD	BD	2010 API Growth
English Language Arts				
3795	59TH ST EL	3	1	740
8028	AUDUBON MS	3	1	666
5562	BARRETT EL	7	7	780
8571	CANOGA PARK SH	1	3	678
8679	GARFIELD SH	5	5	630
8882	MAYWOOD ACADEMY SH	6	5	676
8321	PACOIMA MS	2	6	696
6137	PT FERMIN MAR SCI	8	7	838
8814	RESEDA SH	1	3	740
Math				
5740	118TH ST EL	7	7	752
3795	59TH ST EL	3	1	740
2082	ALTA LOMA EL	3	1	777
2534	BROADWAY EL	3	4	855
3340	DARBY EL	1	3	871
3630	ERWIN EL	2	3	805
5205	MAYBERRY EL	4	5	791
2542	WHITE EL	4	2	768



Chart 10 displays API scores and AGT scores. The API scores for LAUSD schools were ranked and used to create five groups of schools, each with an equal number of schools. The addition of AGT scores allows us to see schools with high API scores and high AGT, as well as schools with low API scores but evidencing high AGT scores. The chart also displays schools with far less than predicted growth scores. All of the schools with far below predicted AGT results were in the lowest 3 of the 5 API groups. However, there were schools from all API groups that fell into the remaining categories of AGT results, ranging from below predicted to far above predicted.

Chart 10  
Distribution of AGT Results by API, 2009-10



### AGT Results for Grade 3

AGT results are also available by grade level and subject area. One of the district’s goals is to raise proficiency rates for third graders. AGT provides a valuable tool for examining which schools are having the most impact on their students’ growth in third grade proficiency.

Chart 11 shows the relationship between average CST score, i.e., achievement, and AGT results for third grade English Language Arts (ELA). As show in the chart, growth is not synonymous with achievement. Although many schools have high achievement on the third grade CST, (e.g., an average scale score of 350 or higher), not all high achievement schools showed high growth. Chart 11 shows schools that are high achieving and exhibited high growth (labeled “High Achievement and High Growth” in the upper right quadrant). Also notable are schools in the lower right quadrant labeled “Low Achievement and High Growth,” where students performed above the District average on growth. These are schools that are exhibiting positive progress on growth with third grade students. Table 12 provides the list of schools that had AGT results far above the predicted range.



Chart 11  
Distribution of AGT Results by CST Performance in Third Grade ELA, 2009-10

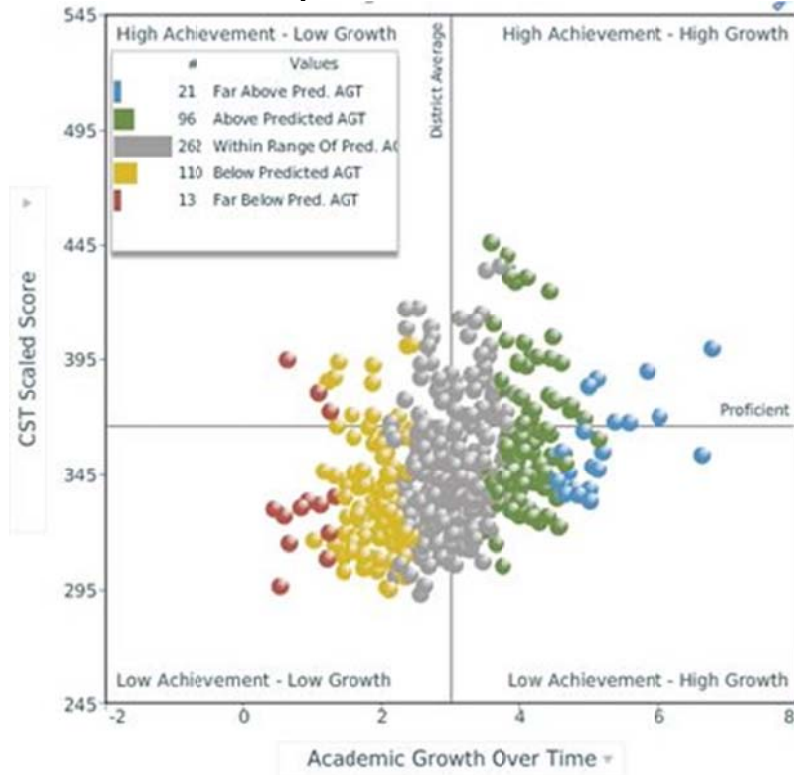


Table 12  
Schools With Far Above Predicted AGT Results, Third Grade English Language Arts

LOCN	School Name	LD	BD	2010 API Growth
3781	54TH ST EL	3	1	780
3795	59TH ST EL	3	1	740
2041	ALEXANDRIA EL	4	2	712
2219	ASCOT EL	5	7	732
5562	BARRETT EL	7	7	780
2329	BEACHY EL	2	6	734
2534	BROADWAY EL	3	4	855
2562	BROOKLYN AVE EL	5	5	799
4680	LIZARRAGA EL	5	7	738
4918	LOMA VISTA EL	6	5	750
5219	MELROSE M/S/T MAG	4	4	839
5397	MORNINGSIDE EL	2	6	766
2372	OCHOA LC	6	5	696
3247	PLASENCIA EL	4	2	774
6137	PT FERMIN MAR SCI	8	7	838
7479	VERMONT EL	7	1	778
7534	VINE EL	4	1	758
7548	VINEDALE EL	2	6	723
7151	WEEMES EL	7	1	735
7959	YORKDALE EL	4	5	774

## AGT Results for Grade 8 Algebra

Increasing proficiency in Algebra is also a focus of the District. Chart 13 provides the distribution of average CST and AGT results for eighth grade algebra in 2009-10. As was the case for third grade reading, there are schools in all five AGT categories among both high and low performing schools. The list of schools with far above predicted growth in algebra is provided in Table 14.

Chart 13  
Distribution of AGT Results by CST Performance in Eighth Grade Algebra, 2009-10

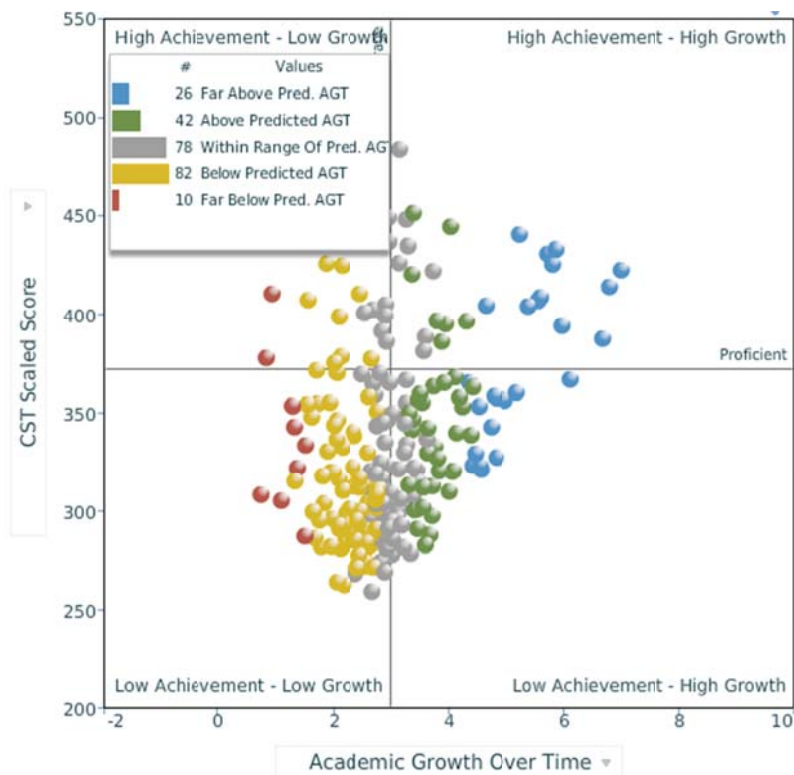


Table 14  
Schools With Far Above Predicted AGT Results, Eighth Grade Algebra, 2009-10

LOCN	School Name	LD	BD	2010 API Growth
8057	BERENDO MS	4	2	661
8060	BETHUNE MS	7	1	619
3548	ELIZABETH LC	6	5	692
8255	MUIR MS	7	1	567
4980	PIO PICO EL	3	1	717
8396	SUN VALLEY MS	2	6	643
7370	UTAH EL	5	2	763
8487	WHITE MS	8	7	754

## AGT Results for Subgroups

Academic Growth over Time results can also be used to identify schools making positive progress with specific subgroups of students. Chart 14 provides the distribution of AGT results for both English Learners and African Americans. Table 15 provides the lists of schools with results far above the predicted range for African-American students and Table 16 provides a similar list of schools with positive results for English learners. These schools can provide examples of successful practices with African-American students and English learners.

Chart 14

Distribution of AGT Results for English Learners and African Americans, 2009-10

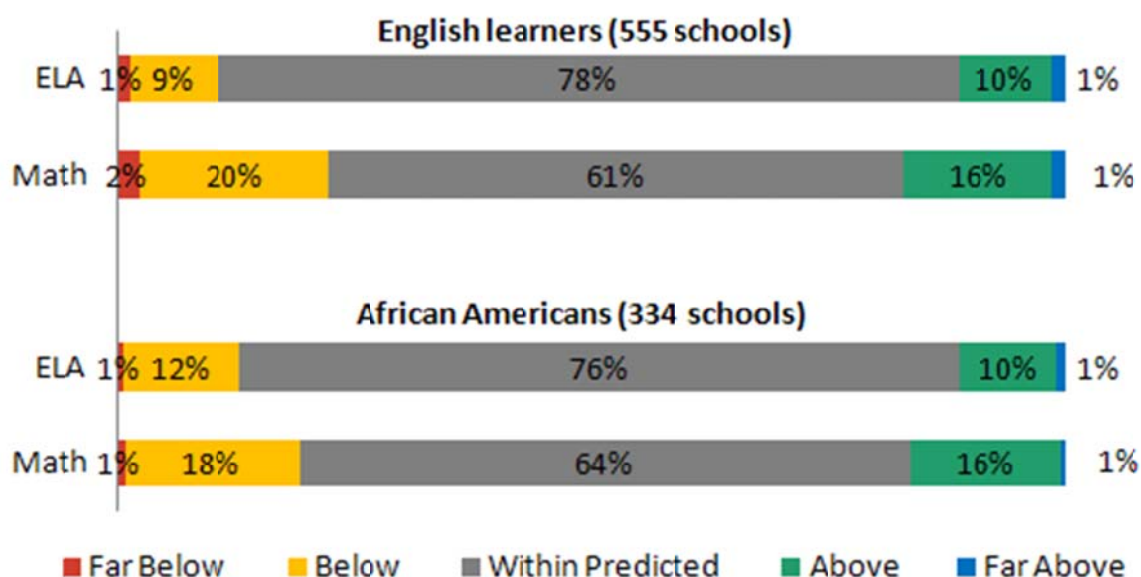


Table 15

Schools With Far Above Predicted AGT Results, African-American Students, 2009-10

LOCN	School Name	LD	BD	2010 API Growth
<b>English Language Arts</b>				
3795	59TH ST EL	3	1	740
8028	AUDUBON MS	3	1	666
5562	BARRETT EL	7	7	780
8571	CANOGA PARK SH	1	3	678
6137	PT FERMIN MAR SCI	8	7	838
<b>Math</b>				
5740	118TH ST EL	7	7	752
3795	59TH ST EL	3	1	740
2534	BROADWAY EL	3	4	855
3630	ERWIN EL	2	3	805

Table 16  
Schools With Far Above Predicted AGT Results, English Learner Students, 2009-10

LOCN	School Name	LD	BD	2010 API Growth
English Language Arts				
3795	59TH ST EL	3	1	740
8028	AUDUBON MS	3	1	666
5562	BARRETT EL	7	7	780
8679	GARFIELD SH	5	5	630
8882	MAYWOOD ACADEMY SH	6	5	676
Math				
3795	59TH ST EL	3	1	740
2096	AMESTOY EL	8	7	803
4445	HART ST EL	1	3	814
2542	WHITE EL	4	2	768

### **Implications for Policy and Practice**

Academic Growth over Time provides ‘apples to apples’ comparisons of schools, grade level teams and teachers. There are several implications for policy and practice to consider.

- **Using Data to Drive Standards Based Instruction – A new metric for our toolkit:** Academic Growth over Time provides a new way for us to look at student assessment results. In addition to examining student achievement against state level benchmarks, which is essential, we will now have more precise information about where we are having success at taking students from point A to point B. Schools will have the ability to examine strengths, challenges and opportunities. We will have the ability to identify, study and learn from excellence.
- **Creating and Supporting Quality Schools:** As a more precise way to examine the impact of schools on student achievement, over the coming months, we will be looking at how best to use AGT data as part of our multiple measure accountability and support system for schools.
- **Supporting All Employees:** Based upon the recommendations of the Teacher Effective Task Force and at the direction of the Board of Education, we intend to include AGT a fractional, yet important part of the multiple measure performance review process for teachers and school leaders.

### **Future Plans for AGT**

On April 13, school level reports will be available at <http://agt.lausd.net>. In late May 2011, teachers will receive their individual results confidentially.

Phase 2 results will be released in October 2011 and will incorporate 2010-2011 CST results. In addition, this data will be included in the School Report Card next year. Phase 2 models will also involve modeling enhancements in order to expand the grade levels and subject matter addressed. We will explore the following range of grade levels and subjects for Phase 2:

- Grades 3 to 11
  - English Language Arts (ELA)
  - Mathematics
  - Science (secondary only)
  - Social Science (secondary only)

Attachment A lists the participants in the Technical Advisory Group who provided guidance on the AGT model. Attachment B provides a sample school level report.

If there are additional questions, please contact me at (213) 241-2460 or Noah Bookman at (213) 241-2022.

c: Michelle King  
Judy Elliott  
Sharon V. Robinson  
Matt Hill  
Jefferson Crain  
Local District Superintendents

**Appendix A**  
**Technical Advisory Group (TAG) Members**

<b>Name</b>	<b>Title</b>	<b>Affiliation</b>	<b>Nomination</b>
Damian Betebenner	Senior Associate	National Center for the Improvement of Educational Assessment	Los Angeles Unified School District
Julian Betts	Professor and Department Chair	University of California, San Diego -- Department of Economics	Los Angeles Unified School District
Anthony Bryk	President	Carnegie Foundation for the Advancement of Teaching	Los Angeles Unified School District
Steve Cantrell	Senior Program Officer- Research and Evaluation	Bill & Melinda Gates Foundation	Los Angeles Unified School District
Susie Chow	National Board Certification Coordinator	The Support Network	United Teachers Los Angeles
Janet Davis	Salary Point Credit Advisor	Los Angeles Unified School District	United Teachers Los Angeles
Ken Futernick	Director, School Turnaround Center	WestEd	United Teachers Los Angeles
Cami George	Head Staff, Professional Development	United Teachers Los Angeles	United Teachers Los Angeles
Jackie Goldberg	Former Member/Former President	-California State Assembly - Los Angeles Unified School District Board of Education	Los Angeles Unified School District
Dan Goldhaber	Director	University of Washington, Center for Education Data and Research	Los Angeles Unified School District
Pete Goldschmidt	Senior Researcher/Associate Professor	- Center for the Study of Evaluation, UCLA Graduate School of Education & Information Studies - Michael D. Eisner College of Education, California State University Northridge	Los Angeles Unified School District
Susanna Loeb	Professor	Stanford University	Los Angeles Unified School District
Felipe Martinez	Assistant Professor	Social Research Methodology Division, UCLA Graduate School of Education & Information Studies	Los Angeles Unified School District
Daniel McCaffrey	Senior Statistician	RAND	Los Angeles Unified School District
Craig Nelson	Emeritus	California Teachers Association	United Teachers Los Angeles
Sean Reardon	Associate Professor	Stanford University	Los Angeles Unified School District
Denise Rockwell-Woods	Director, Operations and Organizational Services	United Teachers Los Angeles	United Teachers Los Angeles
David Steele	Chief Information & Technology Officer	Hillsborough County Public Schools	Los Angeles Unified School District
Katharine Strunk	Assistant Professor of Education & Policy	Rossier School of Education, University of Southern California	Los Angeles Unified School District
Rob Weil	Director of Field Program, Educational Issues Department	American Federation of Teachers	United Teachers Los Angeles
Ross Wiener	Executive Director, Education and Society Program	Aspen Institute	Los Angeles Unified School District



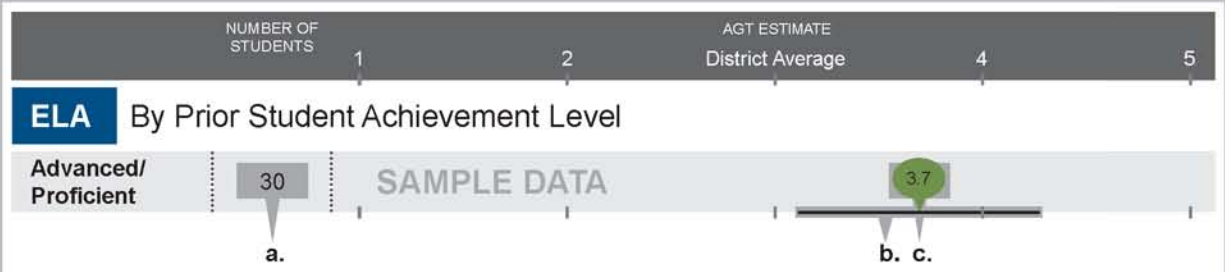
### 2010 AGT School Report

This report provides 2010 Academic Growth over Time (AGT) data. The results reported here measure your school's impact on the academic growth of students at both the school and grade levels for ELA and Math. In addition to the overall results, AGT Estimates are also provided for specific groups of students, based on Student Achievement Level and ELL Status. For each student group, the AGT Estimate compares the actual achievement of students in your school to the predicted achievement of those students. All AGT results account for prior California Standards Tests (CST) score, and with the aim to make the results regarding your school's impact as fair and accurate as possible a number of demographic variables are also included in the calculation. For more information on the demographic variables, please see the last page of this report.

### Report Contents

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- ▶ Page 2 - School-Level and Grade-Level AGT Results
- ▶ Page 3 - School-Level and Grade-Level Achievement Results
- ▶ Page 4-7 - School-Level and Grade-Level AGT Results with Student Groups
- ▶ Page 8 - More Information on Student Group AGT

### How to Read the School AGT Report



- a. Number of Students:** This is the number of students included in the calculation. Estimates are not reported if the number of students is less than 10.
- b. Confidence Interval Range:** The line under the bubble is the statistical confidence interval for that Estimate. We are 95% confident that the AGT results fall within the confidence interval.
- c. AGT Estimate:** On each line, the red, yellow, gray, green and blue bubbles include your standardized AGT Estimate between 1 through 5. The District average has been set to 3.  
To put the Tiers into context:
  1. Roughly 68% of AGT Estimates will fall between 2 and 4.
  2. Roughly 95% of AGT Estimates will fall between 1 and 5.
  3. Roughly 5% of AGT Estimates will be less than 1 or greater than 5.

- 4.8 Blue** - Far Above Predicted AGT: AGT Estimate is significantly more than 4.
- 4.1 Green** - Above Predicted AGT: AGT Estimate is significantly above the District Average (3).
- 2.7 Gray** - Within the range of Predicted AGT: AGT Estimate is not significantly different from the District Average (3).
- 2.2 Yellow** - Below Predicted AGT: AGT Estimate is significantly below the District Average (3).
- 1.3 Red** - Far Below Predicted AGT: AGT Estimate is significantly less than 2.

Important Note: When looking at AGT Estimates it is important to consider the confidence interval around the Estimate. While the AGT Estimate is the best approximation of your AGT, it is possible that your AGT could fall anywhere along the line of the confidence interval, with the probability diminishing as you move farther from the AGT Estimate.





## Academic Growth over Time: School-Level Results

The tables below provide School-Level AGT results for ELA and Math. Results are provided both for past academic year and for an average of the last 3 years.

	Past Academic Year 2009-2010					3 Year Average 2007-2010				
	NUMBER OF STUDENTS	AGT ESTIMATE				NUMBER OF STUDENTS	AGT ESTIMATE			
	1	2	District Average	4	5	1	2	District Average	4	5
<b>ELA</b> School-Level AGT										
Overall	360				4.4	1080			3.7	
<b>MATH</b> School-Level AGT										
Overall	360		1.8			1080			3.2	

## Grade-Level Results

The tables below provide Grade-Level AGT results for ELA and Math. Results are provided both for past academic year and for an average of the last 3 years.

	Past Academic Year 2009-2010					3 Year Average 2007-2010				
	NUMBER OF STUDENTS	AGT ESTIMATE				NUMBER OF STUDENTS	AGT ESTIMATE			
	1	2	District Average	4	5	1	2	District Average	4	5
<b>ELA</b> Grade-Level AGT										
Grade 3	120			3.3		360			2.6	
Grade 4	120				4.7	360			4.1	
Grade 5	120				5.3	360				4.7
<b>MATH</b> Grade-Level AGT										
Grade 3	120		2.0			360			3.7	
Grade 4	120		1.8			360			3.9	
Grade 5	120		1.7			360		1.9		



## Academic Growth over Time: School-Level Results with Specific Groups of Students

The tables below provide School-Level AGT results for specific groups of students. Results are provided both for past academic year and for an average of the last 3 years.

By prior achievement level of students: Each student is placed into a group based on the student's CST score within the overall distribution of scores in the LAUSD.

By ELL status: Results are based on English Language Learner (ELL) status of students.

By SPED status: Results are based on Special Education (SPED) status of students.

	Past Academic Year 2009-2010					3 Year Average 2007-2010						
	NUMBER OF STUDENTS	1	2	AGT ESTIMATE District Average	4	5	NUMBER OF STUDENTS	1	2	AGT ESTIMATE District Average	4	5
<b>ELA</b>	<b>By Prior Student Achievement Level</b>											
Advanced/ Proficient	100			3.0			300			3.1		
Basic	220				4.8		660			3.8		
Below Basic/ Far Below Basic	40					5.5	120				4.8	
<b>ELA</b>	<b>By ELL Status</b>											
ELL	160				4.5		480			3.6		
Non-ELL	200				4.3		600			3.8		
<b>ELA</b>	<b>By SPED Status</b>											
SPED	30			3.7			90				4.8	
Non-SPED	330				4.4		990			3.6		



## Academic Growth over Time: School-Level Results with Specific Groups of Students

The tables below provide School-Level AGT results for specific groups of students. Results are provided both for past academic year and for an average of the last 3 years.

By Gender: Results are based on Gender of students.

By Race: Results are based on race of students.

	Past Academic Year 2009-2010					3 Year Average 2007-2010						
	NUMBER OF STUDENTS	1	2	AGT ESTIMATE	4	5	NUMBER OF STUDENTS	1	2	AGT ESTIMATE	4	5
<b>ELA By Gender</b>												
Male	180			4.4			540			3.5		
Female	180			4.4			540			3.6		
<b>ELA By Race</b>												
Afr. American	20					4.9	60			3.8		
American Indian	10					4.7	30			3.8		
Asian	40					3.7	120			2.8		
Filipino	0						0					
Latino	120					3.8	360			3.7		
Pacific Islander	10					3.9	30			2.8		
White	160					4.9	480			4.1		



## More Information on Student Group AGT

### Differences Between Specific Groups of Students

Readers may want to compare two student groups to each other. For example, let's say you see the following on your report:



In the case above, it is not necessarily true that students in the “Below Basic/Far Below Basic” grouping grew more than students in the “Advanced/Proficient” grouping. Instead the table above indicates that your “Below Basic/Far Below Basic” students grew more, on average, than similar “Below Basic/Far Below Basic” students from across the LAUSD. Your “Advanced/Proficient” students grew, on average, about the same as similar, “Advanced/Proficient” students from across the LAUSD.

### Prior Achievement Level for Student Groups

The prior achievement level groupings in this report are “Advanced/Proficient”, “Basic” and “Below Basic/ Far Below Basic.” These groups are based on where the students pretest score (CST scale score from the prior year) fell in relation to other students within the LAUSD. These groupings do not mean that one-third of the students will be in each group. The purpose of this calculation is to measure the impact of teachers on students from across the achievement spectrum.

The groupings were created using the cut points below. Students were placed into one of the three groups based on their CST scale score from the prior year.

Below/Far Below	Basic	Adv./Proficient
150 to 299	300 to 349	350 to 600

### Control Variables used in the AGT Model

The AGT Model uses statistical techniques to separate the impact of schooling from other factors that may influence growth; the following variables are controlled for in the AGT Model:

- |                        |                     |
|------------------------|---------------------|
| 1.Prior CST ELA score  | 6.Low-Income Status |
| 2.Prior CST Math score | 7.ELL Status        |
| 3.Grade Level          | 8.IEP Status        |
| 4.Gender               | 9.Mobility          |
| 5.Race/Ethnicity       |                     |

It is important to note that controlling for demographic characteristics does not mean a lowering of expectations for any grouping of students addressed by a control variable.

For more information on Academic Growth over Time (AGT), please refer to the companion professional development piece titled, “Understanding and using Academic Growth over Time (AGT) Results.”