

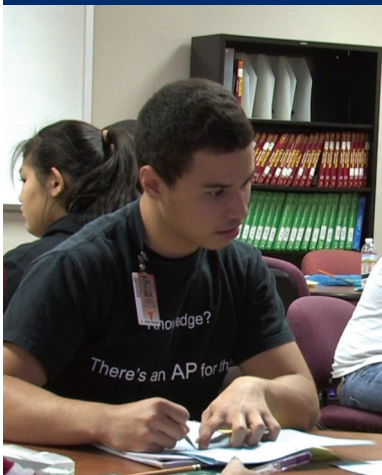


a division of the  
**National Math +  
Science Initiative**

# Pasadena ISD Creates Systemic Change in Pre-AP and AP Program

*All reform movements begin with a vision for changing the status quo. Enacting and maintaining systematic change, however, is where the reformers' hard work begins.*

## PASADENA ISD AT A GLANCE



- Pasadena, Texas
- 52,000 students
- Student composition<sup>1</sup>:  
*African American: 6.2%*  
*Hispanic: 81.7%*  
*White: 8.3%*  
*American Indian: 0.2%*  
*Asian: 2.7%*  
*Pacific Islander: 0.1%*  
*Two or More Races: 0.8%*  
*Economically Disadvantaged: 78%*
- 602 LTF-trained teachers
- 9 LTF Trainers
- Began LTF Training in 2005

## PASADENA'S CHALLENGE: HIGH POVERTY AND LITTLE FOCUS ON COLLEGE READINESS

Pasadena Independent School District had a vision for changing the high-poverty area it served. In the early 2000s, the district served over 50,000 students, the majority of whom came from economically disadvantaged circumstances. Superintendent Rick Schneider and his successor Kirk Lewis thought that the best way to help students and their families move out of poverty was to show students the possibilities a college education could provide them.

However, Superintendent Lewis realized early in his tenure that Pasadena ISD did not have a college-going culture. "Most of our students are first-generation college students," Lewis said. "Not only must we provide them the curriculum they need in order to be successful at college, we also need to create that dream they are going to need to envision college as a possibility for themselves."

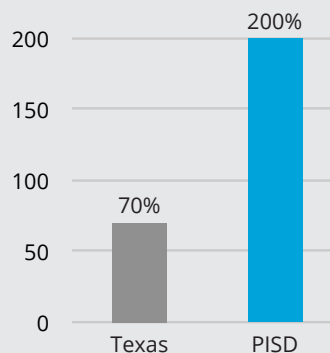
Prior to 2005, only students meeting certain grade and test score requirements were eligible to enroll in AP classes. The early 2000s ushered in a new national focus on college readiness, and administrators decided that if they wanted students to see college education as a realistic possibility, they needed to expand their college-preparatory focus. To this end, the district opened its AP classes to any student who wished to take advantage of a more rigorous curriculum.

## PASADENA'S SOLUTION: OPEN ENROLLMENT AP CLASSES AND EFFECTIVE TEACHER TRAINING

Initially, teachers were skeptical that students who never had experienced the demands of Pre-AP and AP classes could realistically handle the new expectations. It was not that teachers believed their students did not have the potential to succeed, according to Superintendent Lewis. Instead, "teachers realized that they needed new and better skills to make that happen," Lewis said. It was obvious that Pasadena ISD staff needed its own rigorous, intensive professional development plan.

"There's a little bit of a challenge and a degree of fear that teachers have when you start asking them to take their content to a different level," said Superintendent Lewis. "So we spent some time initially just talking about what we needed and what we wanted for our kids before we ever got into the training."

**Percent Growth in Number of AP Scholars in All Subjects  
2005-2011**



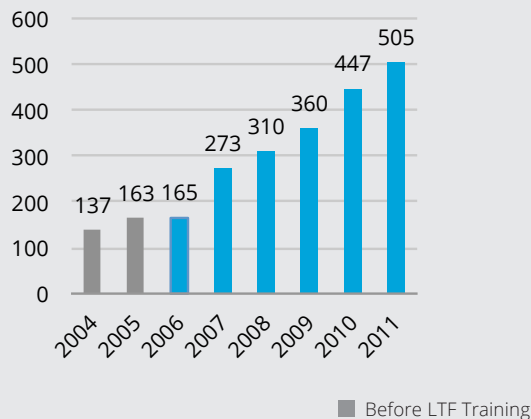
The AP Scholar award recognizes students who earn scores of three or higher on three or more AP exams.

<sup>1</sup> From 2010-2011 AEIS Report

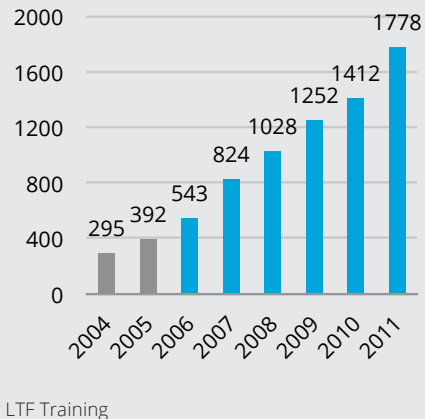


# Pasadena ISD Creates Systemic Change in Pre-AP and AP Program

**PISD Total Number of Qualifying Scores on Math, Science, and English AP Exams**



**PISD Total Number of AP Exams Taken in Math, Science, and English**



In 2005, the Michael & Susan Dell Foundation (MSDF) awarded Pasadena ISD a multi-million dollar, five-year grant to provide training for all Pre-AP and AP math, science, and English teachers in grades six through twelve. The grant was administered by Advanced Placement Strategies (APS), the parent company of Laying the Foundation (LTF). LTF, the professional development arm of APS, provided the district's Pre-AP and AP teachers with on-going, long-term teacher training, mentoring, classroom lessons, labs, and model assessments.

The change resulting from the district's intensive multi-year training commitment took collaboration across classrooms, grades, and campuses. Teachers began adopting the LTF strategies and incorporating the lessons into their classrooms. Kathleen Walker Murrell, AP Mathematics Lead Teacher for PISD, found the LTF program transformative. "LTF Training gave me a whole different set of strategies and a whole different set of lessons we could use," Murrell said. "There were strategies, there were lessons, there were assessments, and there was all the support that we needed to be able to make this a program we could take directly into the classroom."

Whatever teacher skepticism existed at the beginning of the grant gradually disappeared as teachers began feeling more comfortable with the increasing instructional rigor and raising student expectations. "I think probably the single biggest factor in the success of LTF in this district has been the teacher buy-in," said Murrell. Pre-AP Algebra One teacher Crissy Higham echoed Murrell's point. "I was skeptical at first," said Higham. "But as I went to more training and as I felt more comfortable with the program, I knew I would be able to really prepare my kids."

Many teachers began to reassess the way they approached their instructional delivery. Sixth-grade Pre-AP math teacher Barbara Poche observed that LTF's focus on effective teaching strategies and scaffolded lessons created "a tremendous ripple effect" among the teachers at her school. "Teachers look at other teachers doing the harder material and think, 'Well, I could do that, too,'" said Poche.

Superintendent Lewis said, "I think once teachers began to implement some of the strategies that LTF brings to the table they began to see real change—not only in themselves and what they could offer kids, but also in how the kids were responding."

## PASADENA'S RESULTS: CULTURE OF HIGH EXPECTATIONS AND RESULTING GROWTH IN STUDENT ACHIEVEMENT

As the new "college-ready" attitude spread through the faculty, the number of students willing to attempt AP work steadily increased. Prior to the training program, a limited number of students took AP courses and AP tests, but every year that number grew, commented Superintendent Lewis. "Nearly 3,000 AP tests were administered last year. That's pretty impressive considering when we started LTF only about 800 students registered to take AP tests."

With the expanded student interest in AP coursework, the district was able to offer more opportunities for students to obtain college-preparatory experience. "Seven years ago there was only one AP science course at South Houston High School and it had five students enrolled," said Paul Gutierrez, AP Science Lead Teacher. Now, Gutierrez states with pride that South Houston's Science Department offers a full range of AP classes, including multiple sections of AP Biology, AP Physics, and AP Chemistry.

The marked increase in state and national testing scores validated the administrators' and teachers' sense that instructional rigor had improved and students were better prepared. "We began to see the scores on state exams begin to rise because of LTF Training," said Gutierrez. "Within two years of implementing LTF on this campus, the number of commended scores on TAKS (Texas state assessment) in science rose by 14 percentage points. The only change that occurred during that two-year period is that we implemented LTF. Because of LTF Training, our Pre-AP teachers began to teach at a higher level."

Patricia Sermas, Director of Advanced Academics, AVID, and Student Assessment, also observed an exciting improvement in student performance. "The icing on the cake is our SAT scores have gone up," Sermas said. "That is significant because we have had a steady decline in our SAT scores and all of a sudden the state's scores go down, the nation goes down, but not Pasadena. Our scores have gone up tremendously."



## Pasadena ISD Creates Systemic Change in Pre-AP and AP Program

“I attribute our success on SAT scores to LTF mainly because our students are doing more literary analysis. They are reading more,” said Sermas. “Also, in science and math classes, their reasoning skills have grown tremendously, which puts students on the road to success on the AP exam. A by-product of students’ success on AP exams is they will also be successful on their SATs.”

The students noticed the change LTF brought to their classrooms as well. “One of the biggest benefits to kids is that whether it was a math, science, or English class, they are better prepared for what they see when they walk out of our doors,” said Melissa Allen, Assistant Principal at Dobie High School and AP Coordinator. “When they come back and speak to us, the critical piece is that they feel prepared.”

“Doing the LTF Training is just worth it,” said Steve Jamail, retired principal of Dobie High School. “If you really are concentrating on getting your kids ready to take on some tough college classes, LTF Training pays big dividends. We get feedback from students already in college saying sometimes their college classes are easy compared to what their AP classes in high school were. Our kids never would have been ready for those AP and college classes without the training the teachers received from LTF.”

Since the grant’s inception, 602 Pasadena ISD teachers have received LTF Training. District leaders see such an investment in their teaching corps as vital to sustaining the success of their AP program and to providing rigorous instruction to all students. In addition, nine PISD teachers have become LTF Trainers themselves, an outcome the district views as a positive indicator for how well the program has been accepted and a way to sustain the program over time.

Today, administrators and teachers know that hard-won, systemic change must be supported; otherwise, the district can lapse back into less effective, less equitable practices. Superintendent Lewis said “I think it’s important that we continue training every year so we can sustain it over time. The training is critical. The focus is critical. It has to be carried on in the future. We’ll find a way to make that happen.”

Pasadena ISD offers school districts a model for how to articulate a vision for change, how to effectively implement that vision, and, ultimately, how to sustain positive results. Systemic change never comes easily, but as Pasadena ISD’s AP results suggest, visionary educational leaders and committed, well-trained teachers can work together to affect positive change in students’ lives.

### WHAT IS LAYING THE FOUNDATION?

When Pasadena teachers began the LTF Training program, they gained access to:

- teacher-to-teacher training that offers authentic solutions to classroom challenges
- classroom-ready lessons and labs
- content knowledge, pedagogy, and resources necessary to integrate rigorous coursework into their classes
- a focus on technology and technical literacy in science and math – specifically the use of graphing calculators, data collection devices, and computer graphing software
- embedded and project-based assessments
- AP-style pretests and posttests for each course
- online LTF forums allowing for collaboration with LTF staff and teachers across the country

The LTF program provides math, science, and English teachers in grades six through twelve with the content knowledge, teaching strategies, vertically aligned materials, and assessments required to emulate AP-level coursework in the lower grades. LTF materials can be integrated into any curriculum to raise instructional rigor.

Pasadena and LTF believe that training, mentoring, and empowering the teacher corps will lead to high standards of academic excellence for all students.

For more information on Laying the Foundation’s programs, visit:

[www.ltftraining.org](http://www.ltftraining.org)

For more research and results, visit:

[www.ltftraining.org/LearnMore/ResearchResults](http://www.ltftraining.org/LearnMore/ResearchResults)