In Equity Issues, Should the Texas K-12 Accountability System Become a National Model?

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Outline

➢ The Majority–Minority Academic Performance Gap

➢ Underrepresentation of Women

➢ Texas Solution

◆ The TAAS

◆ SAT and AP

➢ Digital Divide

Gap at the Top: Ph.D's

Severe underrepresentation of minorities in science, engineering, mathematics, and technology.

	1977	1998
Total	9,003	12,051
White	85.5%	75.5%
Asian	7.0%	15.0%
Black	**1.2%**	**2.5%**
Hispanic	**1.2%**	**3.5%**
N. Amer	0.2%	0.4%
Other	4.9%	1.4%

Percent of the doctoral degrees in science, math, engineering, and technology earned by people of various races/ethnicities, 1977-1998.

Gap at the Top: Bachelor's Degrees

	1975	1995
Af. Am, His, N.Am,	**6%**	**8%**

Of all degrees earned

But grown to approximately **25%** of population.

What % of students taking AP Tests were girls?

1. AB Calculus?

47%

2. Biology?

56%

3. Physics?

28%

4. Chemistry?

32%

5. Computer Science?

QUIZ

10-year Differences How Far Have We Come?

Exam	1989	1999	Points Change
Calculus	41	47	+ 6
Chemistry	31	42	+11
Biology	51	56	+ 5
Physics	24	34	+10
Computer Science	16	17	+ 1

Intended Major - SAT DATA

	%	M	F	Verbal	Math
Bio. Sc.	6	36	64	545	545
Business	14	52	48	487	506
C Sc.		6	77	23	500 528
Education	9	23	77	483	479
Engineering	8	81	19	526	572
Health	16	27	73	497	503
Mathematics	1	55	45	555	631
Phys. Sci.	1	60	40	570	590

At the University Level

➢ Science and engineering bachelors degrees awarded to women in most fields are increasing, but

➢ Decreasing in Computer Science

➢ Women went from earning **36%** of CS degrees in 1985 to only **28%** in 1995. A full report on these statistics was published by the National Science Foundation.

➢ Exceptions: <u>Women at SCS</u> at Carnegie Mellon, University of Vancouver, University of Pittsburgh (Usually where there are women computer scientists) Note: Same reason Rice has produced minority computational scientists

Consequences

No first-world nation can maintain the health of its economy or society when such a large part of its population remains outside all scientific and technological endeavors

This becomes more and more true as minority population escalates and as the knowledge age advances.

Texas Solution: Texas Accountability System

➢ Used by the Texas Education Agency (TEA) to evaluate the performance of public school districts and campuses through ratings, acknowledgments, rewards, sanctions, and reports.

➢ Integrates the statewide curriculum; the state criterion-referenced assessment system; district and campus ratings; district and campus recognition for high performance and significant increases in performance; sanctions for performance.

Accountability System Guiding Principles

➢ STUDENT PERFORMANCE
  designed to improve student performance.

➢ RECOGNITION OF DIVERSITY
  recognizes diversity among schools and students.

➢ APPROPRIATE CONSEQUENCES reasonable standards, identifies and publicly recognizes high levels an inadequate levels of performance improvement.

Texas Assessment of Academic Skills TAAS

➢ Cornerstone of Accountability System

◆ TAAS Hysteria.

◆ Scores come out in newspapers like sports stats.

◆ Real estate agents advertise TAAS scores of neighborhood school.

◆ Many students say "in every class all we do is TAAS."

"All teachers are expected to teach TAAS. Which means Social Studies, Science, and electives are all dropped for TAAS."

-- A teacher

What TAAS Contributed

➤ At-risk students are no longer ignored.

  ◆ Better teachers in "low-level" classes
  ◆ Principals *really* care

➤ Accountability disaggregated by ethnicity. (Not by gender?)
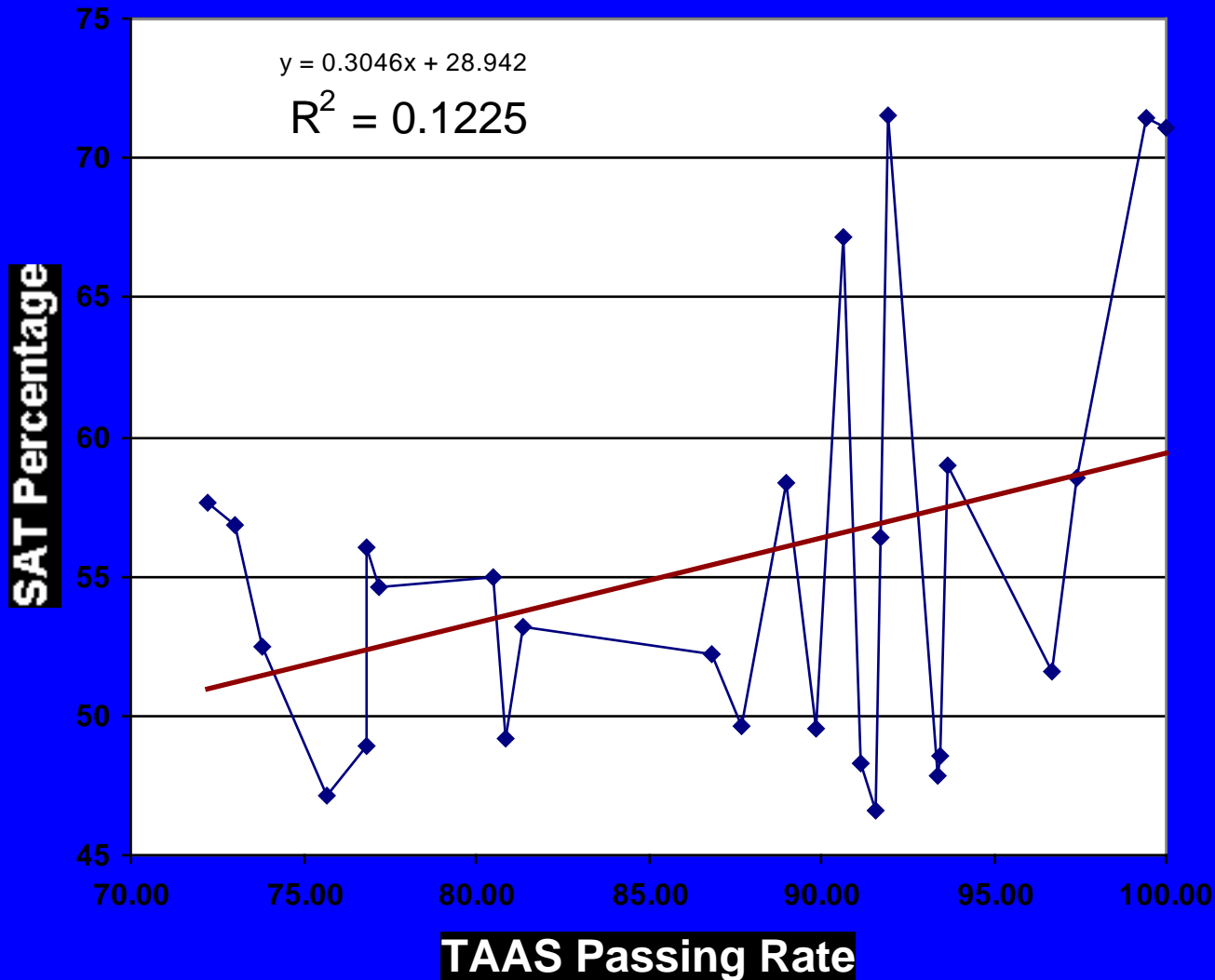
Report Card

HOUSTON AREA SCHOOLS

HOUSTON CHRONICLE ◆ MARCH 11, 2001

➢What does the public

➢think when they see TAAS scores?

➢Do improving TAAS scores imply that school quality is also improving?

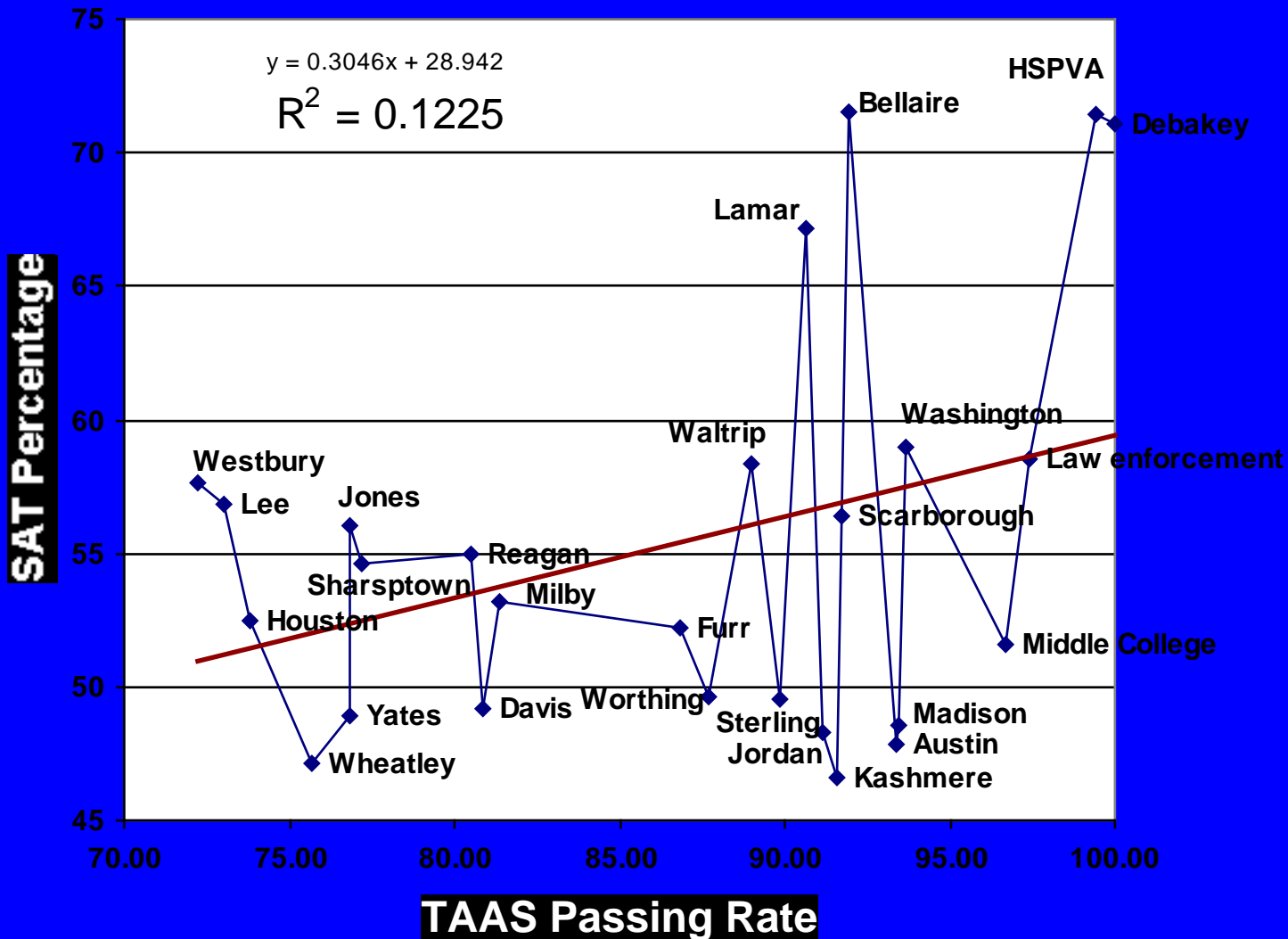➢Or are they really good at playing the TAAS Game?

Frustration!

How Does SAT Correlate with TAAS?
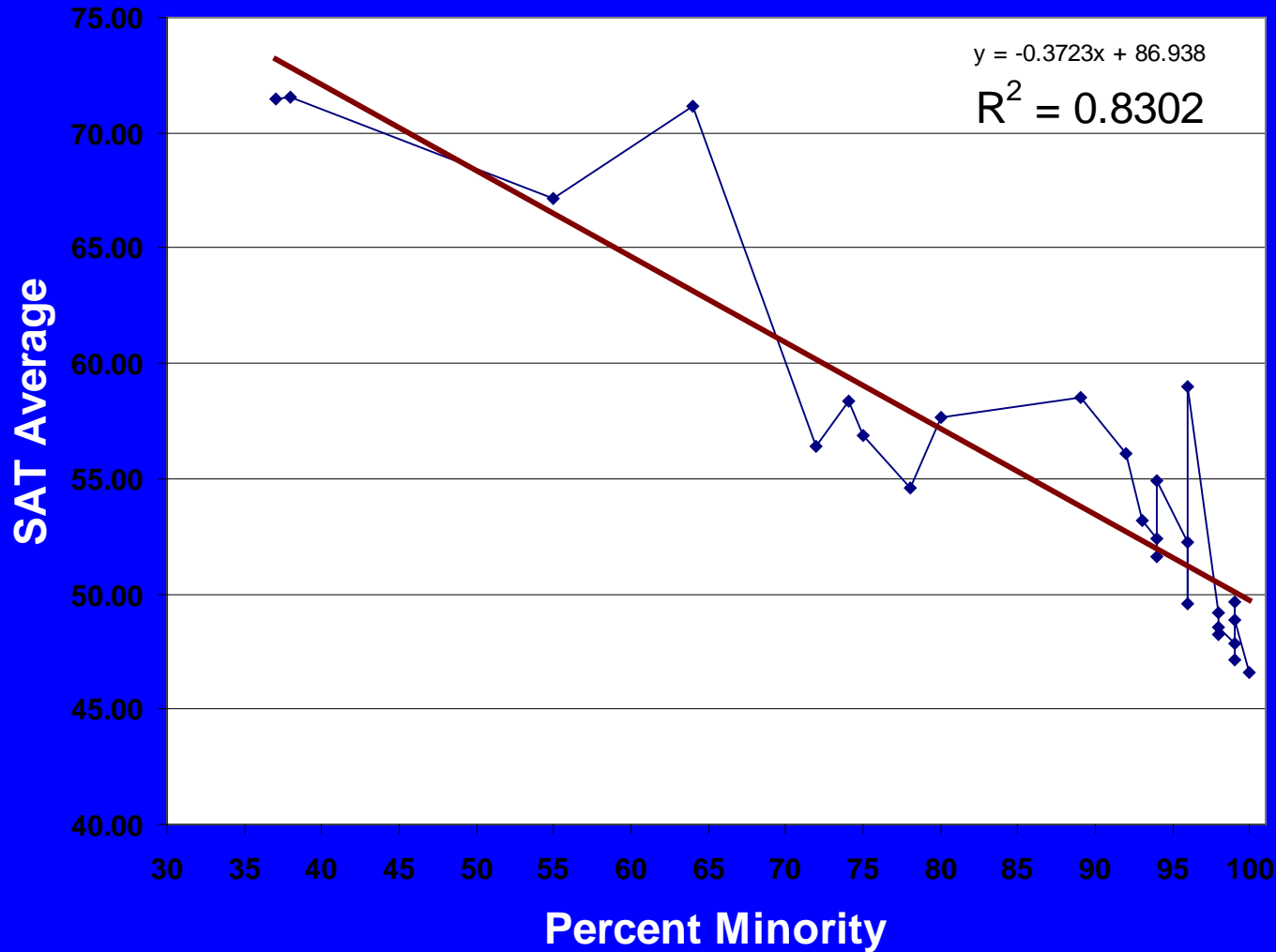
Houston ISD 2000 SAT vs. TAAS

$y = 0.3046x + 28.942$

$R^2 = 0.1225$

How Does SAT Correlate with TAAS?

Houston ISD 2000 SAT vs. TAAS

How Does SAT Correlate with School Ethnicity?

SAT vs. Ethnicity

$y = -0.3723x + 86.938$

$R^2 = 0.8302$

How Does TAAS Correlate to School Ethnicity?

TAAS vs. Ethnicity

$y = -0.1346x + 98.073$

$R^2 = 0.0822$
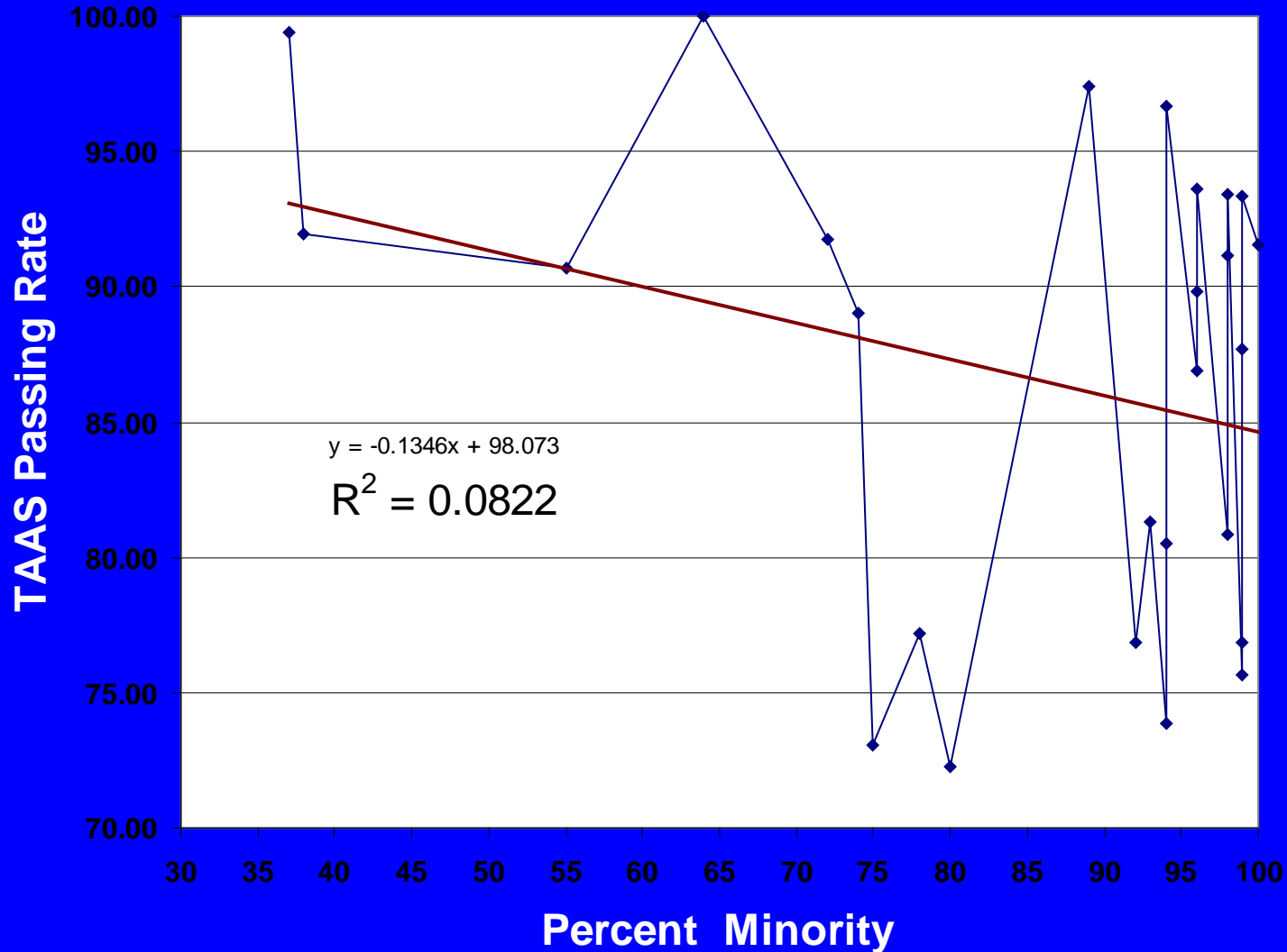
Coming to a State Near You

Texas Education Agency PRESS RELEASE, December 29, 2000

President-elect Bush hits homerun with appointment of Rod Paige

President-elect Bush hit a homerun with the selection of Houston Sup. Rod Paige as Sec. of Ed. Houston ISD a model for urban school reform. He will insist that the federal department focus on results, not process. "Texas' loss is a great gain for America's schoolchildren."

1Foot Vs. 6 Feet

TAAS is fine at telling us what percentage of our kids can jump a foot. But what about the question, how high can all kids jump? Nothing is telling us that. Nothing with any bite anyway. As long as it's just okay for all kids to jump a foot, and we're not accountable to ensure that the kid who *can* jump 6 feet *is* jumping 6 feet, then the standards will continue to drop (with the **accompanying hype** about how we're improving). We need an accountability system with the same bite where principals think they might lose their jobs if that really smart kid isn't jumping 6 feet.

Conclusion

The Texas TAAS accountability system is seriously flawed; it closes a meaningless gap. It should not be considered a national model until it's fixed.

TAAS Shortcomings Recognized

"There is general agreement that the accountability system as implemented to date does not yet reflect appropriate standards of performance for all rating levels..."

2001 Accountability Manual
http://www.tea.state.tx.us/perfreport/account/2001/   l/sec13.pdf

Finally an Overhaul - TAAS II

➢ Senate Bill 103 of 76th TX Leg. in 1999.

➢ New assessment to replace the TAAS.

➢ To be first administered in 2002-2003.

➢ Exit-level in Grade 11.

➢ Exit-level will consist of tests in mathematics, science, social studies, and English language arts.

➢ Grade 10 test to be a predictor of performance on the Grade 11 test.

What About SAT, Unfair Measure?

➢ Low Vs High.

➢ President Atkinson of CA recommends dropping the main SAT as an admission requirement.

➢ Rice model an alternative - Threshold Approach.

What about AP?

➢ AP is a measure in the Accountability System, but has no bite.

➢ Does AP have the potential to close the gap at the top?

➢ Will re-naming a course make it better?

The College Board

ADVANCED PLACEMENT PROGRAM®

What about AP?

➢ Many Students come to high school behind.

➢ Pockets of success have taught us that given sufficient time and effort, inner-city kids can excel, even to the AP level.

➢ AP - an external standard that judges students equally and rewards hard work.

➢ New initiatives to increase minority AP participation.   **But… AP Debate**

AP Debate

➢ AP Calculus is considered the pinnacle course, so students think that calculus is the really important course - that everything else is just a prelude to prepare them for calculus.

➢ This de-emphasis on other courses has extreme negative consequences- TIMSS US AP Calculus students did very poorly, not on Calculus, but on pre-calculus. Are students being rushed through the requisite courses -- Geometry, Algebra, and Trigonometry -- to get to the "really important course" calculus?

GirlTECH

➤ Teachers Training Teachers

➤ Technology Training and Gender Awareness

➤ Technology For All.

GirlTECH

The Technology Gap--
The New Boys' Club

➢ Girls are significantly more likely than boys to enroll in clerical and data-entry classes, the 1990s version of typing.

➢ Boys are more likely to enroll in advanced computer science and graphics courses.

➢ School software programs often reinforce gender bias and stereotypical gender roles.

➢ Girls consistently rate themselves significantly lower than boys on computer ability, and boys exhibit higher self-confidence and a more positive attitude about computers than do girls.

➢ Girls use computers less often outside of school. Boys enter the classroom with more prior experience with

Commission Recommendations

➢ Transform pink software.

➢ Look to girls and women to fill the IT job shortage.

➢ Prepare tech-savvy teachers.

➢ Educate girls to be designers, not users.

➢ Change the public face of computing.

➢ Create a family computer.

➢ Set a new standard for gender equity.

GirlTECH

Coming to a City Near You!

TeacherTECH

2001, San Diego, Rozeanne Steckler, SDSC

2001, Boston, Raquell Holmes, Boston, University

2001, Washington, Cynthia Lanius, AAUW

2002, Chicago, Lisa Bievenue, University of Illinois

2002, **Your City, Your Name, Your Institution**

Contributors to Underrepresentation

➤ Digital Divide

➤ Educational Divide

➤ Diminished Self-worth

Divide in Schools - No Surprise

School Access to Technology

➤ There are major differences among schools in their access to different kinds of educational technology.

➤ Students attending poor and high-minority schools have less access to most types of technology than students attending other schools.

Resource:Computers and Classrooms:

The Status of Technology in U.S. Schools

Digital Divide: Check Point

- ☑ Does the Digital Divide contribute to the underrepresentation problem?
- ☒ Will solving the Digital Divide solve the underrepresentation problem?
- ☑ Is there a bigger divide - the Educational Divide that has an even greater impact?

Cities and the Educational Divide

➢ Underrepresented minorities = cities.

➢ Majority of minorities live in cities.

➢ In many of the country's major cities, minorities comprise the majority.

Major Cities' Sch. Dist. Compared

	Chicago	Houston	New York	Los Angeles
Latino	**34.2%**	**52.5%**	**37.7%**	**69.1%**
Af-Am	**52.5%**	**34.1%**	**35.7%**	**13.6%**
Asian	3.2%	2.8%	10.8%	6.5%
Na-Am	0.2%	0.1%	0.3%	0.3%

Urban Culture

➤ Every school district above (except New York at 73%) was 85-90% underrepresented minorities. If we bail out on underrepresentation, we bail out on our nation's big-city school districts.

➤ Urban schools are entrenched in urban culture. One reason underrepresentation is such a hard problem is because it is intertwined with so many other cultural and social problems associated with the nation's cities.

➤ Culture of inner city.

➤ Culture of ethnic/racial group.

Violence, for example

As long as teen violence remained confined to cities, it was not seen as an American problem, just a big-city one? We expect urban minority kids to be violent. Not until teen violence emerged in rural and small-town white America did the country see it in crisis proportions.

Expectations

What do we as a nation believe about cities (and we really mean inner-cities), and how much of the cities' failures do we merely accept as a consequence of minority culture? None of us see cities as just very big small towns. Cities and city schools are driven by parallel minority cultures. Do we just expect them to be

Heartbreak - Dropout

Visiting 2nd Graders -

➢ All love learning and school (and us)

➢ The heartache is that for Mexican Americans, a large % of them will never finish high school.   HM   HF   AAM   AAF WM WF

Dropout rate   31%   26%   12%   13%   7%

(National Rate)

➢ How is Texas doing on Dropout?

How is Texas doing on Dropout?

Who Knows?

Data is suspect and hard to compare.

Conclusion

There clearly are no simple solutions to the underrepresentation problem. The nation's almost 17 million underrepresented minority students (including Texas') still lag in their preparation all up and down the K-Graduate continuum. They are not receiving an education that prepares them or motivates them for a career in science or technology. Public policy must address these systematic inequalities, not with a crutch or a flawed accountability system, but with a