

Next Generation Assessment and Accountability

What We Need



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Page 1

Tim Tauer and Paul Haeberlen bring the lessons that they learned in the private sector to public education.

Paul utilized mathematical models of complex processes in the upstream and downstream oil industry to optimize profitability. He developed an industry standard yield accounting model that is used worldwide by the process industry to measure how raw materials are converted to finished products. This concept applies to public education as the raw materials are pre-school students and the finished product is a high school graduate.

Tim Tauer specialized in business turn-arounds. Tim learned that businesses were failing not because the employees were not working hard, but that they were working on the wrong things. These lessons apply to public education as school districts and campuses "fail" not because the staff is not working hard, but that the staff is working on tasks that do not create effective student outcomes.

How difficult is the job of creating an accountability system?

Let's start with a paradox.

If you were in charge of the phone company in 1960, when it was regulated, what regulation could you write to create the Next Generation phone? Answer, none. Regulations do not create new ideas like an iPhone. If you did write regulations, it would not matter, since the iPhone was created by the computer industry, not the phone company.

The paradox is, that without regulations, the iPhone would not happen either.

We need to know what is working, and what is not working. We need to know who the best practitioners are. We need to know if we are getting better or worse, and in which areas.

Public Education in Texas



ARTICLE 7. EDUCATION

Sec. 1. SUPPORT AND MAINTENANCE OF SYSTEM OF PUBLIC FREE SCHOOLS.

A general diffusion of knowledge being essential to the preservation of the liberties and rights of the people, it shall be the duty of the Legislature of the State to establish and make suitable provision for the support and maintenance of an efficient system of public free schools.

Sec. 8.002. PURPOSE. Regional education service centers shall:

- (1) assist school districts in **improving student performance** in each region of the system;*
- (2) enable school districts to **operate more efficiently** and economically; and*
- (3) implement initiatives assigned by the legislature or the commissioner.*

The Texas Constitution establishes the groundwork for an efficient system of public free schools.

The Texas Education Code sets explicit priorities for learning and efficient operations.

The Accountability System should support these goals.

What is the Purpose of Accountability?



Accountability

- Set goals and monitor progress
- Guide improvement
 - Rewards and sanctions?
 - Cycle time?

Assessment

- The measurement framework

Measurement frameworks are a way of structuring metrics and those all-important key performance indicators (KPIs) around the strategy, goals, and objectives of the organization.

Next Generation implies “new and improved.” What is broken? Is the accountability system broken or is the incentive system broken?

High stakes are a function of how important the outcome is to the person or organization in question. If an assessment or any other measure determines whether my son or daughter gets into the desired university, then the stakes are high. Stakes can be high (e.g. did I get the job?) regardless of whether assessment measures exist.

State, District, Campus, and Classroom goals must be clear to all stakeholders. Goals must be measurable.

Guiding improvement is more important than rating. Leaders must have detailed, current, accurate information on performance.

The key compliance measures for enforcing accountability are rewards and sanctions. Rewards are few and far between. Sanctions are plentiful. Are they working? Should we have rewards that offer real incentives to alter performance?

How fast can the Accountability System adapt to changes in the workforce?
The workforce is changing much faster than the system that prepares students
for the workforce.

We need to measure the adults and not just the students.

Definition of Terms



What should an Accountability System “account for?”

- Achievement
- Performance (Outcomes adjusted for differences in student demographics)
- Efficiency
- Productivity

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Page 4

The **District Achievement Index** is based on the reported values for each of the core academic metrics. Since the units of measure for each of these metrics are different, the District Achievement Index is defined as the weighted average of the percentiles of these core metrics according to the graphic on the left. Higher values for the District Achievement Index indicate better the overall academic achievement.

The **District Performance Index** is based on demographically adjusted values for each of the core academic metrics. Achievement is heavily influence by the socio-economic status of the students and by itself, cannot provide a clear measurement of the quality of the campus leadership nor the effectiveness of their programs.

Weighting the Academic Indexes:

- 20% on Index I
- 30% on STAAR at Postsecondary Readiness
- 30% on STAAR at Final
- 20% on Index IV

The **District Financial Index** represents the cost to educate a student so that districts can be compared to each other without regard to regional cost differences and differences in demographic makeup of the student body. A negative value indicates that the district operated efficiently and spent less than expected. A positive value indicates that the district spent more than expected. Operating Services includes expenditures from the Instructional Services, Leadership Services, Non-Student Services, and Student Services groups.

The **District Productivity Index** defines how the organization takes resources and turns those resources into student outcomes. Productivity includes both the cost to educate and the resulting student outcomes.

Performance Versus Achievement



Achievement

Measures students.

Performance

Measures organizations.

Schools do not fail, but school leadership can fail.

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Page 5

Accountability is about not doing the wrong things. **Performance** is about doing the right things. We need both. We have only one.

Any benchmark system compares apples to apples and in public education, this requires that we adjust for differences in student demographics to allow fair comparisons.

The accountability system has to be focused at the top so that we understand the qualities of high performing leaders and we can develop those qualities on the next generation of leaders.

What is a Performance Framework?

High Academics	High Academics	High Academics	High Academics
High Cost	High Cost	Low Cost	Low Cost
Low Academics	Low Academics	Low Academics	Low Academics
High Cost	High Cost	Low Cost	Low Cost

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Page 6

A Performance Framework helps communicate the performance and progress of school districts and campuses.

The Matrix integrates the utilization of resources and their relationship to student outcomes. This format helps with clarity and transparency.

The “Green Box” defines Best Practice districts and campuses.

Performance and Achievement Framework

High Performance	High Performance	High Performance	High Performance
Low Achievement	Low Achievement	High Achievement	High Achievement
Low Performance	Low Performance	Low Performance	Low Performance
Low Achievement	Low Achievement	High Achievement	High Achievement

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Page 7

The Matrix can have programmable axis. This Matrix has Performance on the “Y” axis and Achievement on the “X axis. Underachieving and overachieving districts and campuses are easily identifiable using this Matrix.

Top 10

Top Achievement		Top Performance		Top Productivity	
1	Carroll	1	Valley View	1	Hurst-Euless-Bedford
2	Eanes	2	Los Fresnos Consolidated	2	Cypress-Fairbanks
3	Highland Park	3	Roma	3	Everman
4	Lake Travis	4	Brownsville	4	Pearland
5	Friendswood	5	Sharyland	5	Richardson
6	Allen	6	Carroll	6	Socorro
7	Coppell	7	Ysleta	7	Conroe
8	Frisco	8	Edinburg Consolidated	8	Houston
9	Dripping Springs	9	Rio Grande City Consolidated	9	Carrollton-Farmers Branch
10	Plano	10	McAllen	10	Mesquite

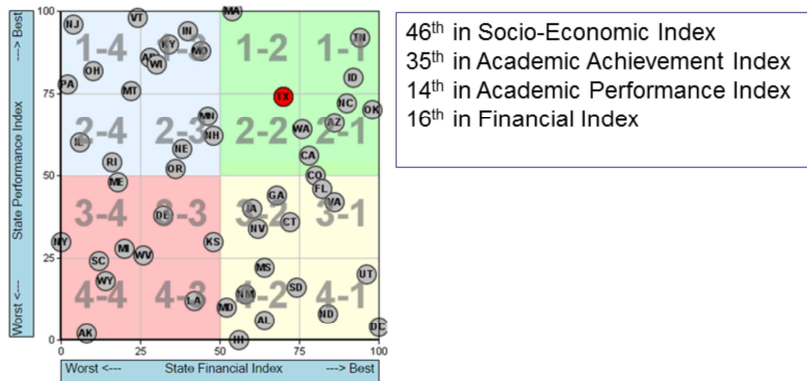
No district is on all 3 lists!

What qualities do we value? Up to now, Achievement has been the dominant quality through high pass rates on assessments, along with high graduation rates and scores on college readiness assessments.

Achievement is an excellent measure of student outcomes. Performance and Productivity are excellent measures of organizational effectiveness.

Does it matter if some school districts are able to accomplish higher student outcomes at lower costs? Since the accountability system does not measure this, we cannot identify those districts and campuses and we cannot learn from them.

Texas - How Are We Doing?



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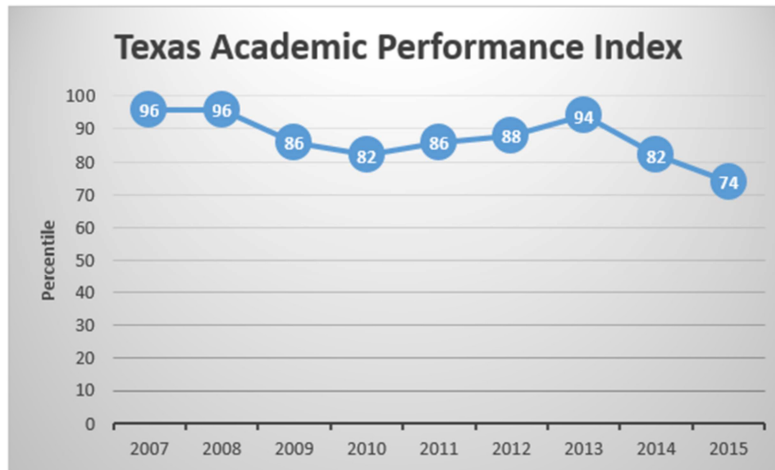
Page 9

Any accountability system should be able to answer the questions: “How is Texas doing?” “How is Texas trending?”

Texas is ranked 35th in Achievement and 14th in Performance. Why is it important for us to know both measures?

Texas is in the “Green Box” of Best Practice states. Who in Texas is aware of this fact? Should this knowledge inform our policies?

Texas - How Are We Trending?



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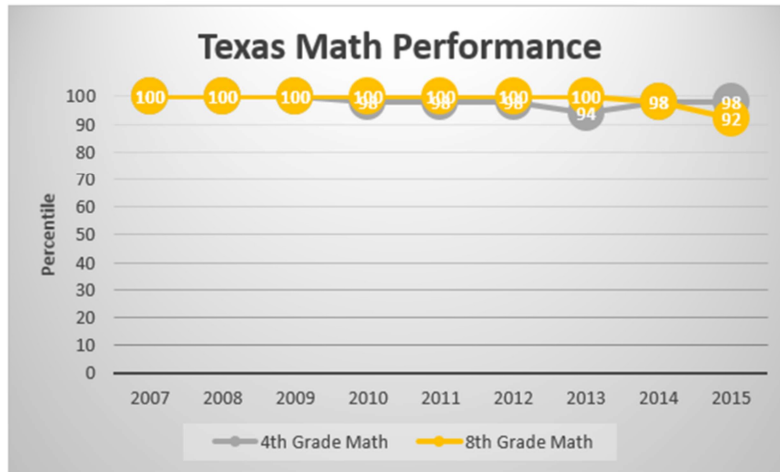
Page 10

The Academic Performance Index is the “Y-Axis” on the Performance Matrix. The goal is to be #1, at the top of the Matrix.

Texas is now in the 2nd quartile, being out of the 1st quartile for the first time since 2007. Texas declined by 20 percentiles (10 ranking positions) between 2013 and 2015. Do we know why?

What is contributing to the decline? What can we do to reverse the decline?

Math - How Are We Trending?



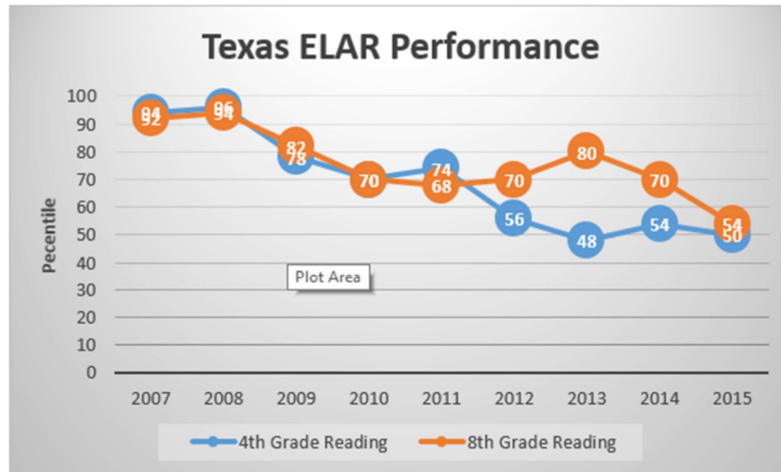
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Page 11

Texas has consistently high performance on 4th and 8th grade math NEAP scores after adjusting for differences in student demographics.

We recently revised the Math TEKS? What is the expectation for improvement in math scores are a result of the change? Are the scores improving?

ELAR - How Are We Trending?



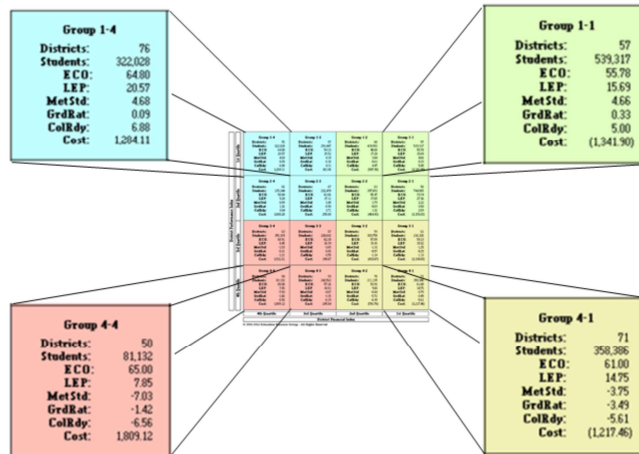
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Page 12

ELAR scores are declining, even after adjusting for differences in student demographics.

What are the reasons for the decline? What strategies should we adopt to reverse the decline?

Texas District Performance Matrix



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Page 13

This Performance Matrix represents the relative performance of all school districts in Texas in spending (cost per student adjusted for demographic and regional cost differences) and academic outcomes (results over or under an expected value for a balanced scorecard of academic outcomes adjusted for differences in student demographics). In this image, the “Green Box” is in the upper right. Each of the 16 segments shows the summary results of all school districts in that segment.

Note the large differences in spending between segments along the right side (low spenders) of the Matrix and the left side (high spenders) that achieve similar academic outcomes. Note the large differences in academic outcomes between segments across the top (high performers) and those across the bottom (low achievers) that spend similar amounts. These gaps are independent of the differences in student demographics, and can be attributable to leadership effectiveness or lack of effectiveness.

Also take note of the fact that the percentage of economically disadvantaged students is similar in all of the 16 segments. Some districts with high percentages of economically disadvantaged students exhibit high academic outcomes. Some districts with low percentages of economically disadvantaged

students exhibit low academic outcomes.

Regional Service Centers Year to Year Change

	Achievement Percentile			Performance Percentile		
	2014	2015	Change	2014	2015	Change
ESC 01 - Edinburg	27.1	38.2	11.1	74.4	77.7	3.3
ESC 02 - Corpus Christi	30.8	33.5	2.7	22.6	30.9	8.3
ESC 03 - Victoria	36.2	34.9	-1.4	33.1	30.2	-3.0
ESC 04 - Houston	54.1	56.0	1.9	62.9	61.0	-1.9
ESC 05 - Beaumont	40.2	40.9	0.7	27.3	31.2	3.9
ESC 06 - Huntsville	61.2	58.4	-2.8	57.5	51.8	-5.7
ESC 07 - Kilgore	49.5	48.1	-1.4	56.5	52.3	-4.2
ESC 08 - Mount Pleasant	52.4	51.4	-1.0	68.9	68.2	-0.7
ESC 09 - Wichita Falls	57.4	48.7	-8.7	58.2	43.3	-14.9
ESC 10 - Richardson	54.3	57.6	3.3	63.0	70.9	7.8
ESC 11 - Fort Worth	59.0	57.5	-1.5	43.2	43.4	0.2
ESC 12 - Waco	44.4	42.2	-2.3	38.4	36.7	-1.7
ESC 13 - Austin	67.8	69.1	1.3	61.7	65.0	3.3
ESC 14 - Abilene	56.4	48.0	-8.4	61.2	45.1	-16.1
ESC 15 - San Angelo	46.3	43.2	-3.1	44.5	40.6	-4.0
ESC 16 - Amarillo	49.2	43.8	-5.4	51.6	41.2	-10.4
ESC 17 - Lubbock	45.6	48.7	3.1	48.4	51.5	3.1
ESC 18 - Midland	21.8	12.7	-9.1	6.5	5.8	-0.7
ESC 19 - El Paso	38.8	50.8	12.0	70.5	79.3	8.8
ESC 20 - San Antonio	44.5	49.1	4.6	49.7	56.8	7.1

The Education Resource Group, Inc. - April 20, 2016

Page 14

There are significant changes in performance from year to year throughout the state. An accountability system should highlight these for when corrective interventions are appropriate.

The image shows the aggregate performance of all districts in the respective Regional Service Centers. Each Regional Service Center would have a similar chart with the districts within the Region. Each district would have a similar chart for its campuses.

Relative Versus Absolute Performance



Absolute Performance

Score on a test
Graduation rate

Relative Performance

Score on a test relative to expected score

A height-weight chart is an example of a relative measure. The chart tells you whether you are under, over, or at an expected weight. This is the actionable information. How much you weight is not actionable without a reference to an expected value.

Most accountability systems, including ours, use absolute measures of student outcomes, primarily achievement.

This is important to understand because absolute measures can be “fuzzy.” What does college ready mean? What does workforce ready mean? What score defines a 4th grade level?

How can relative measures offer benefits?

Summary



Let the leaders lead.

An Accountability System should:

Have a common goal

Guide improved performance

Be simple and transparent

Be timely and consistent

Use the data more effectively!

There are several weaknesses in the current accountability system. Some are solvable without significant changes.

Start by providing actionable information to all districts and campuses. We spend lots of money collecting data and very little analyzing it and turning it into actionable information.

- All participants should share a common goal.
- Accountability starts at the top.
- Rigorously collect, analyze, publicize, and utilize the data.
- Be consistent from year to year so districts are not chasing a moving target.

No organization is tasked with analyzing statewide data and developing effective strategies. A Performance Center would fill this need.