The Journey Out of Darkness

How Smart Data, Intelligent Systems and a Big Dose of BRAVE are Changing Education in Dallas, Texas

Kerri Holt
Dallas Independent School District
Dallas ISD is BIG – 12th Largest District in the US

162,000 Students in 233 Schools

$1.6B Budget
52% Local Taxes
31% State Funding

384 Square Miles
encompassing the cities of
Dallas
Cockrell Hill
Seagoville
Addison
Wilmer

24,784 Total Employees
10,601 Teachers

and parts of
Carrollton
Cedar Hill
DeSoto
Duncanville
Farmers Branch
Garland
Grand Prairie
Highland Park
Hutchins
Lancaster and
Mesquite
Challenges

90% Economically Disadvantaged
40% Limited English

14.4% of Graduates are College-Ready

990 on the Reading & Math portion of the SAT
21 or higher on the ACT

Student Demographics

70% HISPANIC
24% AFRICAN AMERICAN
5% WHITE

Up to 20% Teacher Turnover

Passionate Opinions
DALLAS ISD is home to the **BEST** public high schools in the nation


**The Washington Post**s America’s Most Challenging High Schools
The right hand doesn’t know what the left hand is doing,” I told him.

But consider these bare facts: Dallas has the highest per-student expenditure and the lowest student test scores of any of the eight largest school districts in Texas. If Johnny could read this paragraph, he’d know in a minute that he isn’t getting his money’s worth.

“This is like a three-ring circus, only with five rings!”

This is your hissing, scratching, clawing melee in which the opponents have one goal: to draw blood. It is the type of ordeal that normally occurs in an alley. Or in the DISD board room.

school the best. There’s a DISD research department and its Ph.D. administrator whose multimillion-dollar budget has served mostly to bury the school district in paper, and there’s a strong-willed new superintendent who is struggling to sweep it up. There’s a school board that has justifiably been called “the worst elected governmental body that Dallas has ever seen” and there’s a not-so-modest proposal to usher them out of office.
In the past, administrators leveraged **INTUITION** and **EXPERIENCE** to make decisions.

In 2012, we couldn’t find the answers to these questions:

- How many math teachers do we need to hire?
- How many classroom vacancies do we have?
- What is the teacher attendance rate?
- How many of our students have other options?
- How many Out of School Suspensions were served by middle school students?
- How many students were retained last year?
- How many students were absent more than 10% of the school year?
- Which magnet schools have the highest demand?
- What schools have a utilization rate of less than 75%?
- What percent of our buses arrive at the school on time?

“**Or could it be that they had no idea then and have no idea now of the true number of teacher vacancies?** The only way to know for sure will be for parents and students to check their classes when they arrive at school on the first day.” – DISD Community Blog 2011
**What Businesses are we in besides Educating Children?**

- **IT** - $37M and 200 employees
  - 87 Desktop Services
  - 40 Network Services
  - **2 DBAs** - $87,000

- **Food Services** – Breakfast & Lunch for 160,000 students at $117M per year

- **Real Estate** – over 250 Buildings

- **Police & Security** - $14.7M and 222 Employees

- **Operations** - $94M and 700 Employees
  - Grounds Maintenance, Plumbing, Glass & Windows, Electrical, Roof, Key & Lock, Waste Management, HVAC

- **Maintenance & Construction** - $221M Repairs

- **Transportation** - $33M for 882 Bus Routes

- **Custodial** – more than 1000 employees

- **Fleet Maintenance** – 80 employees

- **Furniture** – 9000 Classrooms

- **Textbooks** – 54,000 Courses

- **Finance** – 163 Employees

- **Tax & Appraisal** - $884M collected in Local Taxes

- **Administration** – 32 different buildings

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Dallas ISD Operations and IT Headquarters
It gets complicated – there are 120 different student-facing systems

- Attendance – 26M records
- Truancy – 1.7M records
- Master Course Catalog – 87,112 courses
- Campus Scheduling – 5.3M records
- Assignments – 82.3M records
- Grades – 12.8M records
- Student Health & Nursing – 470,000 records
- State Assessments – 380,817 annually
- Semester Exams – 57,000 Classes
- Advanced Placement – 32,913 Students
- College Applications – 37,000 Students
- Financial Aid – 7000 Students
Past Attempt at a District-wide Dashboard - $14M FAIL

“But there’s no way to understand what’s going on, because there’s not enough data analysis, not enough data being collected, and nobody there to analyze it,” according to Panorama Education co-founder Aaron Feuer.

“This would never be acceptable at a company, because nobody would know what’s going on.”
Timeline

- January 2014 – Assigned Dashboard Project
- April 2014 – Qlikview Software Acquired
- May 2014 – Dashboards Released to Staff
- June 2014 – Dashboards Released to Board Members

4 Months!
Finding the Data in Real-time

- So many different systems in many different buildings
- Manual Scrubbing
- Record of Truth
- Time Dimension
- Drill through by School ID, Student ID, Course ID and Employee ID
- Data Mart
- Interfaces and Nightly Refresh
- Interactive Visualizations with export to Excel
Dallas ISD Performance Management Dashboards
Lessons Learned

• No such thing as too much analysis
• But – users do not have the time or skills to see
  • Trends
  • Out of Bounds Conditions
  • Inconsistencies
• Do not take No for an answer
• Skill sets required were not on staff
• LOTS of manual data cleansing at first
• Need more than 2 DBAs 😊
Think Differently. Act Courageously.

- Provided **ACCESS** to data that had never been available previously
- Data from over 140 different systems are now linked together in real-time
- Major issues that have been masked in the past are now visible
- **EMPOWER** teams & individuals to do their own analysis
- **FOCUS** on the right issues - Outcomes driven
- **ACT!**
- Data is leveraged to make policy changes to enable efficiency and effectiveness
- Answers are available when and where it is needed
- Now that we have data, leading indicators demonstrate status before it's too late
The Dallas Miracle
Within the ERG Matrix, Dallas ISD* has been consistently in the 3-1 box, meaning that academic performance fell into the third quartile and financial performance fell into the first quartile except for years ‘03, ‘08, ‘09 and ‘11 where financial performance was in the second quartile. For the year ‘13, Dallas is now ranked in the 2-1 box.

*Note - numbers in boxes represent the academic year
The Dallas Miracle

The charts and table at the top of this post show just that. But look at what happened in 2013: Dallas ISD, the second-largest ISD in the state, one which has never moved out of the third quartile, shot to mid-second quartile, placing 69th among the 200 largest districts in Texas. For comparison, Houston ISD, a current Broad Award winner, is ranked 62nd.

“What happened in 2013?” Haeberlen asks. “The district improved across the board.” In other words, in six of the seven metrics measured, DISD showed improvement. For a district this size, that’s astonishing.
Entering the 2014-15 School Year – Encouraging Results

- $300 Million Fund Balance
- 14 Teacher Vacancies on the First Day of School
  - 2012: 860 vacancies out of 9600 Teachers
  - 2013: 334 vacancies out of 10,040 Teachers
  - 2014: 14 vacancies out of 10,642 Teachers
- 793 Buses transported 30,000 students on-time with no incidents
- All schools were operable and had working air conditioning
- Record first week of school attendance
- All kids eat free – breakfast & lunch

All Dallas ISD students will now get free breakfast and lunch

By Matthew Haag  Follow @matthewhaag
mhaag@dallasnews.com
1:19 pm on October 1, 2013 | Permalink
Other Accomplishments backed by Data

- Principal Evaluation Plan tied to Compensation
- Teacher Excellence Initiative – Support, Feedback, Performance Pay
- 20GB Fiber Optic Network – “Fence to Fence” Wireless Access
- 1:1 Device Initiative at 33 Schools
- Installed free DISD wireless access in high density locations
- Destination 2020 Metrics
On 22 May 2014, the Board approved the Teacher Excellence Initiative, allowing for the start of this rigorous teacher evaluation system in August 2014. This initiative will tie teacher evaluations to student achievement and performance results. It will also differentiate compensation, awarding higher salaries to teachers who get stronger results.
2014-15 Data Projects

• Insights → Suggested Actions and Automate or Accelerate where possible
• Personalized Learning – Opening 4-8 schools in 2015-16
• Equitable Access to Effective Teachers
• Counselor Evaluations with Strategic Pay By Cohort
  • Individual Performance – 50%
  • Team Performance – 15%
  • Student Outcomes – 35%
• Coaching Accountability
  • Participation & Team Performance
  • Lost Instruction Time
  • Academic Performance
  • On Track to Graduate
• Finance & HCM Deep Dive Dashboards
• Post Secondary Education, Career, Trade and Military Stats
Personalized Learning

- Learner Profiles
  - Voice & Choice
  - Learning Preferences
- Personalized Learning Paths
  - Diverse & Relevant Learning Experiences
- Individual Mastery
  - Demonstrate Mastery
  - Embedded Assessments
- Flexible Learning Environments
Thanks!
Watch us succeed at
www.dallasisd.org