

Driving Decisions with Data (continued from front page) mathematical knowledge they don't have. But, in reality, people don't have to be statisticians to participate in data-driven decision-making.

Communities that successfully use data to drive school change use the process of collecting and analyzing data to bring educators and community members together. Organizing this kind of non-mathematical engagement process to improve schools is the first of seven lessons for using data according to The Education Trust's *Community Data Guide*.

A group effort to look at and make meaning of data helps ease anxiety and creates a place at the "data table" for parents, educators and community members, data experts and non-experts alike. Creating these efforts is a natural role for parent advocates.

T **Techniques that turn data into useful information**

When parent groups and schools do get into the process of data analysis, there are straightforward ways of computing data that produce useful, understandable information. Five of these methods are detailed in the *Community Data Guide*:

1. Percentage (a part of a whole expressed in hundredths)
 2. Ratio (the relative size of two quantities as a fraction)
 3. Rate (a quantitative measure of a part to a whole)
 4. Ranking (a particular order of position)
 5. Change over time (trends in performance over several years)
- None of these methods requires complex statistical knowledge. All are doable with simple mathematical computation, and all can be used to investigate gaps in student achievement and learn more about underlying reasons for low performance.

B **est Practices and Benchmarking**

Gathering data about what works, sometimes called "benchmarking," is another non-mathematical part of data-driven school improvement. By looking at successful schools with similar resources and demographics for strategies that work, schools can learn about best practices that they can modify or replicate to correct their own weaknesses.

As parents and educators move through the process of analyzing data and understanding achievement problems, they need to start looking into successful programs at other schools before they plan new strategies in their own schools.

Web-based databases, state report cards and reports from education organizations are valuable starting points in gathering information on high-performing schools. Telephone or personal visits, however, are necessary to understand what the programs are, why they are

successful and how they might be adapted for one's own school.

While a benchmarking process takes time, it goes a long way towards ensuring that quality programs are adopted and implemented. And parents don't need to be data experts to talk with educators or other parents about what is working and why and then bring that information back to a school improvement team.

G **etting at real achievement issues by looking deep into data**

At Chastain Middle School in Jackson, MS, a persistent group of parents on the site council urged the team to use data as a way to enlighten decisions and focus discussion on the core issue of academic achievement. Spurred by a new state accountability law (where schools will be individually accredited rather than accredited as an entire district) and with the principal's leadership, the council created a special Accountability and Accreditation Task Force—the only one of its kind in this district of 32,000 students.

The goal of the Task Force is to establish a school-based model for improving instruction by using timely data to drive decisions. Overall, the Task Force sees itself as vocal champions of change. The team's co-chairs spent the 2001 summer pulling together data on students, faculty, enrollment, and the facility to begin to build a thorough school profile. The Task Force (now more than 40 parents, teachers and administrators) meets twice a month to review a segment of the data and recommend strategies for improving instruction, school management, and community involvement.

Already the data are prompting the Task Force to focus on the alignment of curriculum and instruction between the middle school and its elementary feeder schools. A strength of the Task Force has been the collaboration fostered among parents, teachers, and administrators around teaching and learning.

"Data have offered a means for dialogue," says Brenda McIntyre, a task force parent member. "Data allowed teachers and parents to talk about expectations, what is currently happening in classrooms and what should be happening in classrooms. If we had never looked at the data, these conversations would not have taken place."

C **hanging the conversation by looking at data**

Members of the PPS Chapter in Portland, OR, are playing the role of critical friends for the school district. They participate on a team of educators, parents and diverse community representatives charged with investigating reasons for the achievement gap among Portland-area students.

This data team grew out of a community strategic planning process for the public schools. The completed plan sets out two specific objectives for student academic progress that require the district and community to gather, examine and use more than just test data and to look at performance data over several years.

Scott Bailey, past president of PPS Portland, explains that these new objectives—and the data-driven instruction and evaluation they demand—are changing the conversation in Portland about tests. "We are now able to raise the issue that standardized tests alone don't always provide the useful feedback classroom teacher need."

In an effort to find new sources of data that will help meet the district's new performance objectives, Bailey and others are advocating for quick and useful diagnostic assessments (sources of data) for classroom teachers.

Teachers need tools to help them know what to change about their instruction," says Bailey.

R **ole of parents and community members**

Parents have a role in all the key activities of data-driven decision-making: collecting, analyzing, communicating and using data.

To support schools in collecting and analyzing data, parents and community members can become data gatherers and analysts as they conduct surveys, interviews or Web searches, for example. Whether at the district level, as in Portland, or at the school level as in Jackson, parents can work as a team to organize data and work with school or district leaders to analyze the information and make better decisions about instruction and special programs.

Parents can play a big role in communicating data by helping to create, or at least advocate for, clear and parent-friendly data presentations by schools or districts. Parents can help schools "test" their presentations of data for clarity and effectiveness. If interested parents who grasp the power of data can't understand what's being presented, it's likely that most other parents won't either.

Both the Jackson and Portland PPS chapters have learned that parents' knowledge of how to use data is critical to the success of these teams. Now these chapters are helping parents, community members and educators use data to drive school improvement through training programs for site-based decision-making teams.

School improvement efforts and site-based decision-making teams are powerful entry points for parents to advocate for and participate in data-driven decision-making. "As soon as you talk about school improvement, you talk about data," says Bailey.

RESOURCES

Data-driven Decision Making

In its online "Library," the National Staff Development Council archives articles on data-driven decision making. www.nsd.org/library/data.html

Collecting, Analyzing and Using Data

The online Toolbox for Accountability from the Annenberg Institute for School Reform contains tools for organizing accountability events, using surveys to gather data, and analyzing test data. www.annenberginstitute.org/accountability/toolbox

The North Central Regional Educational Laboratory's online Toolbelt is full of information gathering tools (checklists, surveys, software) for collecting data about classrooms, schools, districts and community needs. www.ncrel.org/toolbelt

Data Analysis for Comprehensive Schoolwide Improvement, a book by Victoria Bernhardt, offers practical tools for collection and analysis of multiple forms of data, managing data and communicating results. Although the book is intended for educators, the explanations are also useful for parents and community members. Published by Eye on Education, Larchmont, NY. 914-833-0551

Parents' Use of Data

The Education Trust's *Community Data Guide* The report is available online (as

a downloadable PDF file) or in print. 202-293-1217; www.edtrust.org/main/reports.asp

Of interest on GreatSchools.net is "Is My Child on Track?," a short article with tips for parents for monitoring their students' progress in elementary and middle/high school. www.greatschools.net/cgi-bin/showarticle/AZ4/improve

Benchmarking

Dispelling the Myth: High Poverty Schools Exceeding Expectations from the Education Trust compiles six common characteristics of top-performing high-poverty schools, with a directory of the 366 schools. The report is available online (as a downloadable PDF file) or in print. 202-293-1217; www.edtrust.org/main/reports.asp

Promising Practices, a report from Just for the Kids, explores five improvement strategies common to high-performing schools in high-poverty areas in Texas. (The report is available under "best practices" on the group's Web site.) 800.762.4645; www.just4kids.org

The Education Finance Statistics Center's Web site features a search tool that allows users to compare the finances of one school district with that of districts sharing similar characteristics. <http://nces.ed.gov/edfin>

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Driving Decisions with Data

In today's climate of accountability and assessment for public schools, "data" is the watchword. But when data shine a light on low performance in schools, people tend to only wring their hands. Many times they are unaccustomed and sometimes afraid to mine data for information about underlying causes of achievement problems.

People often underestimate the value of data. Data can give an accurate picture of the past and a clear indication of the present, based on reality not perception. Data help school communities develop a map for the future: what students need in order to master grade-level knowledge and skills and what teachers need to help them succeed.

Used effectively, data can *diagnose* what teachers are teaching and what students are learning and *prescribe* how teaching and other factors that influence learning need to be improved.

In a recent analogy, Clif St. Germain and Michael Guillot of the Center for Academic Excellence, note that doctors don't use one treatment for all patients. They see patients individually, evaluate temperature, blood pressure and lab work, and then establish a personalized course of treatment. So too, educators, the public and policymakers must resist the temptation to use one treatment based on a classroom, district or national "temperature." They must collect multiple forms of data, analyze the information and then adjust teaching and policies to meet specific needs of students, teachers and schools.

Let us know how your district uses data as a springboard for corrective action. We'd like to print your stories, especially the ones where parents and PPS chapters are the catalysts for change.

Letter from the Executive Director

This issue of Parent Press is the fifth in a series focused on key issues in education reform. Topics have included school governance, accountability and standards, teacher quality, and school leadership. The response to the series has been incredibly favorable, resulting in new and strategic actions by a number of PPS chapters. We are especially encouraged by the numerous requests by superintendents, principals, and allied organizations for bulk orders of individual editions. These are indications that PPS is on-target regarding issues that matter to student success and that we are meeting a need for content-rich and user-friendly materials for parents and professionals, alike.

Among the issues covered to date, the subject of data may feel the most daunting and foreign to parents. In these pages we have attempted to paint a clear picture of *which data* are important to school improvement efforts and precisely *why*. But more importantly, we consider *how the demand and use of data by parents* can be helpful as a lever for change.

The most compelling reason to get to know your school district's data is this: Data, presented properly, are indisputable. How (and how quickly) the *district* collects and publishes data can tell you where its priorities are for improving teaching and learning. How *individual schools* collect and use data can tell you how serious and knowledgeable they are about improving student success. *What the actual data reveal* points you to corrective (or celebratory) action.

Think of data in these terms: When you take your child's temperature, would you put the thermometer back in its case without reading it first? Similarly, unpacking data tells a story that moves a group of stakeholders beyond opinions, perceptions, procrastinations. Data are always useful, but even more so when accompanied by a commitment to addressing the issues they uncover. PPS chapters can be instrumental both in asking for the data and in being at the table to support solutions.

Let us know how your district uses data as a springboard for corrective action. We'd like to print your stories, especially the ones where parents and PPS chapters are the catalysts for change.

Kelly Butler
Executive Director
November 2001

Parents have a role in helping schools use data in systematic ways for the purpose of improving student and teacher performance. Indeed, PPS members in Jackson, MS, and Portland, OR, are participating on school improvement teams and district-level data teams to bring parent input into data-driven decision-making.

D **ata analysis in education**

In the past, most schools collected data on standardized tests, attendance and class assignments because the state department of education or the school district administration required it. But often this information was gathered without a close examination of what the data indicated about teaching and learning.

Most educators are not accustomed to looking at their own performance in relation to student performance because this hasn't been part of their training or experience. As a result, they are often wary of how data might be used to point out an individual teacher's or school's failures and justify punitive or remedial action.

Parents and administrators must assure teachers that their vision of data-driven decision-making is constructive. They should convey that their goal is to use data to guide personalized professional development, lesson planning and delivery, and resource allocation to produce the best possible conditions for teaching and learning.

As a physician's ultimate goal is to cure a patient, not just identify the illness, so a teacher must move beyond using data only to evaluate student performance. Data assist educators in refining and redesigning instruction. To do this well,

without fear of punitive action, teachers need ample opportunities to learn to "read" data. Districts and schools need to provide time and support for teachers to help them understand what their students need and apply it to their lesson planning.

D **ata-driven decision-making**

When teachers and administrators gather and use in-depth information about how students are doing, how teachers are teaching, and what results school programs are (or aren't) producing, they are engaging in data-driven decision-making.

In a framework developed by the National Study for School Evaluation, data-driven decision-making entails four kinds of activities:

1. **Mining data:** Collecting and managing relevant information on performance and school characteristics
2. **Analyzing data:** Evaluating the data to create knowledge through comparisons, relationships, patterns and trends
3. **Communicating data:** Making sense of the data for educators, parents, community members and policymakers
4. **Using data:** Maximizing the role of data in school improvement planning.

When schools or other groups make decisions based on data, they do so using information that has been gathered regularly in a systematic, thoughtful way to inform their plans for future actions or to modify current practices.

D **ata need not be intimidating**

Most parents think that working with data probably requires (continued on page 4)



Chastain Middle School's Accountability & Accreditation Task Force is comprised of 17 parents, 19 teachers, and 4 administrators. This parent-initiated task force meets twice a month to review and analyze a wide range of data to improve the nature and quality of teaching practice, student learning and parent involvement. Says one parent member, "We're about facts, not opinions; solutions, not excuses."

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Toolkit: Kinds of Data, Sources of Data

Kinds of Data

This is a general list of the categories and kinds of data available. It is not necessary to collect all of this at once in order to make data-driven decisions. When information like this is examined and compared, a comprehensive picture of a school's current situation begins to develop.

Achievement

- ★ Scores on the state standardized test (the test used to judge and compare performance in all schools in the state)
- ★ Scores on the commonly used district standardized test (if applicable)
- ★ Local and national scores on the National Assessment of Educational Progress (NAEP)
- ★ Grades and passing rates on exit exams
- ★ Classroom grades
- ★ Student work (in-class and homework assignments)
- ★ Achievement levels at feeder schools (how well students performed at schools they attend before and after their current school)

Knowledge and Characteristics of Teachers and Administrators

- ★ Subject-area or grade-level certifications of teachers
- ★ Out-of-field teaching assignments (teachers assigned to teach in areas where they aren't certified or don't have adequate training)
- ★ Professional development opportunities for teachers and principals
- ★ Opportunities for teachers to collaborate across grade levels and subject areas and between schools
- ★ Numbers of new teachers and numbers of teachers ready to retire
- ★ Retention rates (length of time teachers or administrators stay in a school or district)
- ★ Faculty demographics compared to student demographics

Instructional Resources and Supports

- ★ Homework: quantity and quality in key subject areas
- ★ Technology (access to computers, software, training for teachers, curriculum-related use for students)
- ★ Textbooks and lab equipment: availability and quality
- ★ Support services (comprehensive health, social services, youth development programs delivered at the school or through community partnerships)

School Demographics

- ★ Student population by race, gender and socioeconomic status
- ★ Attendance rates
- ★ Mobility rates of students (how often are students transferring in and out of school)
- ★ Dropout and graduation rates
- ★ Grade-level promotion and retention rates
- ★ Participation in special programs (ESL, special education, gifted) by key demographic groups

Student Behavior

- ★ Disciplinary profiles (referrals, detention, expulsion, retention and positive behaviors)

Facility

- ★ Building capacity/occupancy
- ★ Average class size
- ★ Class size in key courses
- ★ Class size for key groups (gifted, regular, special education classes)

Sources of Data

Getting data takes persistence and sometimes depends on the right person knowing whom to ask and asking the right questions. Be willing to ask others to help gather data.

- ★ Always begin with your principal and school counselor for school-based data
- ★ School district central office, local newspaper
- ★ State departments of education (most should have a Web site)
- ★ State, district or individual school report cards (often published by state departments of education)
- ★ Interviews and/or focus groups with students, teachers, administrators or families to uncover information about perceptions and attitudes
- ★ Surveys that provide information on parent, teacher, and student satisfaction, school climate or students' health and social service needs
- ★ Observation of students and teachers and descriptive evaluations of what was observed
- ★ Site visits to schools to gather ideas about strategies that work

(When possible, request numerical data that are broken down by gender, race, participation in free- and reduced price lunch program, and individual schools and grade levels.)

Sources of Data on the Web

Data from the National Assessment of Educational Progress (NAEP) are available by subject-area, by grade level and in relation to student, teacher and community factors on the user-friendly National Center for Education Statistics (NCES) Web site. www.nces.ed.gov/nationsreportcard

A resource directory from the US Department of Education provides contact information and Web addresses for state departments of education. www.ed.gov/Programs/bastmp/SEA.htm

Greatschools.net is a nonprofit, online guide to K-12 schools that provides information on many public, private and charter schools in every state and contains a function to compare school data in a district, county or state. www.greatschools.net

Just for the Kids catalogues state-by-state information about testing, standards, student demographics and student-level data. (In-depth data is available for Texas and Tennessee and general information is available for other states.). 800.762.4645; www.just4kids.org

In Education Watch Online, The Education Trust compiles current national and state-by-state NAEP data and offers comparisons and information about high-performing areas for particular groups of students. www.edtrust.org (see "EdWatch Data")

Data-Driven Problem Solving

Steps in a framework for parent involvement in data-driven school improvement planning

Ask Clarifying Questions

Parents can ask:

- Which grade levels are affected?
- Which specific student groups are below grade level?
- What information is needed to answer these questions?

Who should be involved:

- The parent or school/parent data team, along with key administrators, if possible

EXAMPLE To clarify the reading problem, a data team might consider:

- What more do we need to know about the problem?
- What is the current process for collecting and analyzing data at our school?
- How is current information about performance and school characteristics reported?
- What are the roadblocks to data collection? How can these be addressed?

Analyze the Data in the Context of Teaching and Learning

Parents can ask:

- What comparisons can we make between the kinds of data?
- What relationships or patterns appear?
- Are there trends that show up across several years of data?

Who should be involved:

- Some members of the original team, along with people who have data analysis experience. (Look for people at a local university or business who are willing to help.)

EXAMPLE

- IF... Data indicate that lower performing classrooms have a higher number of uncertified teachers or teachers not certified in reading. THEN ASK... What are the district policies for hiring teachers? How are teachers assigned to classes? How are students assigned to classes? What professional development opportunities in reading/literacy are available for teachers and principals? How many educators participate?
- IF... Data indicate that classroom grades in reading are high, yet test scores show low achievement in reading. THEN ASK... Does curriculum align with high expectations for what students are to know and be able to do (academic standards)? Do tests being used to measure reading performance align with high expectations and a rigorous reading curriculum? Do students understand what they should know and be able to do?
- IF... Data indicate that reading scores of poor children are consistently lower than other students' scores. THEN ASK... What staff development opportunities are available for teachers to learn strategies that work with struggling readers? Are teachers' expectations lower for poor students? What is the school doing to build learning partnerships with poor families?

Share Findings with a Larger Audience

Parents can ask:

- What does the data analysis mean for changes in our school's program?

Who should be involved:

- The data team with support from others. Ask communications professionals (public relations firms, business advertising departments) to help make the message clear and compelling

EXAMPLE To build broad understanding for the problem, teams should report findings in an easy-to-understand format and create opportunities for educators, parents and community members to explore the problem and improvement strategies together. These opportunities might include:

- Meetings between members of the data team and the principal (if the principal hasn't yet been involved)
- Conversations with the superintendent and school board members
- A school report card focused on literacy achievement and instruction at the school
- A parent or community forum focused on high expectations for literacy skills and a demonstration of where students are in relation to these expectations
- Meetings with small groups of parents
- Discussions with local media and business organizations
- Meetings with teacher and principal unions/organizations

Plan Immediate and Long Term Action

Parents can ask:

- What specific strategies are likely to assist our school to improve performance?

Who should be involved:

- A school-based management team or another group that includes significant involvement by faculty and administrators at the school

EXAMPLE

- Immediate action steps to improve reading performance may include:
 - One-on-one assistance for students who need the most help developing reading skills
 - Recruiting and training for volunteer tutors
 - Specific ways parents can support reading improvement plans
 - Regular plans for communicating strategies and progress on improvement
- Long term strategies may include:
 - Professional development for teachers in effective reading instruction
 - New tools and resources for teachers and students (e.g., computer software that supports literacy development)
 - Funding for more age appropriate library books
 - Intensive recruiting of trained reading teachers
 - Regular assessments to monitor implementation and improvements

Thanks to the parents of Chastain Middle School Task Force for developing this much-needed framework for tackling the issue of data. And thanks to Patte Barth of The Education Trust and Don Saltrick and Jeff Schillier of Instructional and Accountability Systems for their thoughts, as well.



State the Problem

Parents can ask:

- What is our school's biggest student achievement problem?
- How do we know?
- Is it a new or long-standing problem?
- Have there been efforts to address the problem?

Who should be involved:

- A school improvement data team or other school/parent task force, a PPS chapter, a PTA or other parent group

EXAMPLE Students in our school are not able to read at their grade level. We know this because many parents report that they aren't seeing their children make significant progress in reading and reading scores are unacceptable.

Gather Data

Parents can ask:

- What evidence exists that will assist us in determining the extent of the problem?
- What do we know about the causes of the problem?

Who should be involved:

- A small group of parents, school faculty/staff, community members and people with access to (or the credibility to obtain) district and/or state data

EXAMPLE To develop a picture of the extent and causes, a data team would consider the following kinds of current data:

- The quality of reading assignments (what students are reading, how they are being asked to interpret what they read)
- Reading homework patterns (how much time students spend reading every night, how challenging this reading is)
- State and local academic standards for reading (what reading knowledge and skills students are expected to demonstrate at each grade level)
- Reading instruction/curriculum (how reading is being taught, how well what is taught matches what is expected of students)
- Reading tests (how well what is tested matches what is expected of students)
- Professional development (support for teachers in reading instruction)
- Teacher credentials (which teachers are certified/trained in reading instruction)
- Reading test scores (disaggregated by grade level, socioeconomic level and race)

Look to Role Models and Best Practices

Parents can ask:

- What is working at other schools and why?

Who should be involved:

- Members of the data team, teachers and, if possible, an administrator

EXAMPLE Members of the data team should investigate schools with similar characteristics whose students excel in reading. Team members visit schools and/or interview parents and teachers to learn about strategies the school uses, why the strategies work and how the strategies might be adapted in another school.

Assure Sustainable Implementation of the Strategies

Parents can ask:

- What must we do to assure that our immediate and long-term actions will be appropriately and effectively implemented?
- How can parents and community members assist in these improvement efforts?

Who should be involved:

- Site-based decision making team, parents and entire faculty, community

EXAMPLE To help assure the improvement strategies are sustained over time, educators and parents may need to:

- Review the school or district policies and personnel decisions to consider changes or modifications
- Build broad support for needed changes among parents, educators and community leaders
- Convene discussions and forums to set community budget priorities that focus on reading improvement
- Encourage faculty and administrators to support reforms
- Form partnerships with local public libraries and bookstores
- Host school and community book drives

Develop an Evaluation Plan and Monitor

Parents can ask:

- How will we know if we are making progress?
- What indicators will parents, teachers, students and the principal look for (during the school year) to determine if the new strategies are being implemented and student achievement is improving?

Who should be involved:

- Parents, teachers, students, the principal and members of the original data team or a school improvement team

EXAMPLE Indicators for successful reading instruction may include:

- More rigorous classwork and homework (higher level books, assignments requiring students to interpret what they read)
- Richer reading materials in classrooms
- Higher reading test scores
- More teachers certified in reading or actively seeking reading certification
- Clear indications that professional development strategies are being used in the classroom