DATA USE

DATA-DRIVEN DECISION MAKING TAKES A BIG-PICTURE VIEW OF THE NEEDS OF TEACHERS AND STUDENTS

By Victoria L. Bernhardt

In July 2006, eight members of the Marylin Avenue Elementary School leadership team from Livermore, California, arrived at the annual *Education for the Future* Summer Data Institute in Chico, California, eager to learn how to employ

data-driven decision making to change their school. Data-driven decision making is the process of using data to inform decisions to improve teaching and learning.

Schools typically engage in two kinds of data-driven decision making—at the school level and at the classroom level. The first leads to the second.

At the school level, staff members look at all the data to:

- ◆ Understand where the school is;
- ◆ Understand how they got to where they are;
- ◆ Know if the school is meeting its goals and achieving its vision;

- ◆ Understand the real reasons gaps and undesirable results exist;
- ◆ Evaluate what is working and what is not working;
- ◆ Predict and prevent failures; and
- ◆ Predict and ensure successes.

The Marylin team included six teachers, the district data analyst, and Principal Jeff Keller, who had just finished his first year as an administrator. The team was ready to get to work on the challenges they faced:

- ◆ Their school had not made Adequate Yearly Progress (AYP) since it was first required in 2002-03 (four years in a row).
- ◆ The English as a Second Language population was on the rise.
- ◆ The free/reduced lunch population was increasing.
- ◆ It was perceived that the school culture was not ready to change.
- ◆ The school lacked focus and instructional coherence.
- ◆ Staff members were not using data to improve.

After a week of intensive work, the team left with a plan for the data-driven activities to improve instruction and student learning. One year later, three members of the leadership team returned to

Chico to share their successes at the 2007 *Education for the Future* Summer Data Institute.

Just days before the team arrived in Chico, Marylin Avenue Elementary School received its spring 2007 student achievement results. Student achievement improved at every grade level, in every subject area but one at one grade level, and with all student groups. These increases came even as the Hispanic and free/reduced lunch populations increased. Here is what the school did to get results.

Marylin Avenue Demographics

In 2002-03, 49% of Marylin Avenue's students were of Hispanic descent. This percentage increased to 66% five years later as the percentage of Caucasian students decreased from 31% to 18%. At the same time, the percentage of students receiving free/reduced lunches increased from 45% to almost 76% of the population. By 2006-07, Marilyn Avenue School had a student enrollment of 507 in kindergarten through 5th grade, up from 465 in 2002-03. Of the 507 students enrolled, 335 (66%) spoke Spanish as their first language. Almost half of the parents had only a high school diploma or less. The teaching staff, mostly Caucasian females, had an average of 14.4 years of teaching experience (Marylin Avenue School, 2006). (See chart below.)

Marylin Avenue Elementary School Background

Student Enrollment	2002-03		2006-07	
Total	465		507	
Hispanic	229	49.2%	335	66.1%
Caucasian	145	31.2%	91	17.9%
Other	91	19.6%	81	16.0%
F/R Lunch Qualifiers	211	45.4%	385	75.8%
Mobility	30%		34%	

Marylin Avenue had not made AYP for the previous four years. The school received negative scores on the California Academic Performance Index (API)

for the previous three years, which meant that student achievement results were decreasing. In 2003-04, the school's API score decreased 17 points. Their target for 2006-07 was to increase 7 API points. Introduced in California in 1999, the API measures the academic performance and progress of individual schools and establishes growth targets for future academic improvement. The interim statewide API performance target for all schools is 800. A school's growth is measured by how well it is moving toward or past that goal.

The biggest challenge facing the leadership team was to get experienced teachers to realize that changes in the student population required changes in their teaching.

What Data-Driven Decision Making Looks Like: Marylin Avenue, July 2007

Fast-forward to the 2007 Summer Data Institute. Participants heard Marylin Avenue's success story: The school increased 54 API points, and student achievement increased in every grade level, every subject area, and with every student group. here is what the leadership team told the group assembled in Chico:

◆ **We looked at all the school's data.** Comprehensive demographic data told us that our current student population was changing while we stayed the same. This told us that we had to change our strategies and services to improve student achievement. Perceptions data allowed us to hear from students and parents about how better to meet their needs. Perceptions data from staff revealed what it would take to change teaching strategies and get all staff working on the same page. Student learning results, disaggregated in all ways, told us where we did not have

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Page 2 of 5

instructional coherence and which students we were not reaching. We realized we had very little school processes data that measured our instructional strategies and programs. Looking at all the data gave us a reality check about where our school was, not just where we thought we were.

- **We used the *Education for the Future Continuous Improvement Continuums.*** The *Continuous Improvement Continuums* are self-assessment tools that measure where the school is with respect to its *approach, implementation,* and *outcomes* for seven continuous improvement categories. The tools helped members of the staff communicate about specific aspects of improvement as we moved forward together. (The *Continuous Improvement Continuums* are available at http://eff.csuchico.edu/download_center/.)

- **We developed a vision.** All the data and the results of the self-assessments showed us that we needed a clear vision for the school—one that everyone could commit to, not just agree with, and one that we would monitor to make sure everyone was implementing. Having a vision that was shared by everyone made a huge difference.

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- **Staff participated in identifying contributing causes of our undesirable results.** Using the *Education for the Future* problem-solving cycle activity helped staff engage in deep discussions and honestly think about an issue

before we solved it. In the past, we would identify a gap and then solve it in the same half hour. The problem-solving cycle made us think through an issue and gather data to understand it in greater depth before solving it. Staff used this activity for evaluating programs, strategies, and processes (Bernhardt, 2003, 2004, 2005, 2006).

- **We engaged in schoolwide professional learning in assessment and instructional strategies.** We wanted teachers to work differently, so we had to support their continual learning of new assessment and instructional strategies.

- **We began using common assessments to clarify where students were at any time during the year.**

- **We established collaborative teams, and meeting times were enforced.** Teams used the time to discuss student assessment results and student work and how to change instructional strategies to get improved results. We kept these times sacred and modeled how to use the time and data effectively.

- **We created a school portfolio to house our data, vision, and plan.** The School Portfolio helps us assess where we are with respect to our vision and provides the focus and sense of urgency to improve.

Marylin Avenue, 2007-08

In 2007-08, Marylin Avenue staff members continued to implement the strategies they began using in 2006-07. In addition, staff mapped many school processes using flowcharting tools. Teachers and other staff members gathered data related to the processes to make sure they were teaching what they

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Page 3 of 5

intended to teach and that they were getting the results they wanted and expected for all students. All staff members understand what they are doing collectively to ensure that all students become proficient and what they need to do when students are not learning.

Marylin Avenue's 2007-08 accountability results were also impressive. The school is achieving instructional coherence and moving all students forward. The results again showed increases at every grade level, in every subject area, and with every student group. Marylin Avenue's API results for w007-08 are 742, a 37 point increase. The school's target was 7.

As the table below shows, Marylin Avenue has come a long way in improving student learning for all students.

Marylin Avenue Elementary School
API Growth and Targets Met
2002-03 to 2006-07

Year	Number Tested	Base	Target	Actual	Met Target
2002-03	276	681	6	1	No
2003-04	270	665	6	-17	No
2004-05	313	662	7	-5	No
2005-06	303	651	7	-7	No
2006-07	295	691	7	54	Yes
2007-08	286	742	7	37	Yes

Conditions for Success

In addition to the work detailed above, Marylin Avenue staff members say they continue to get student achievement increases because they:

- **Shifted their culture** through the use of data, committing to and implementing the vision, consistent leadership, and professional learning that helped them get results;

- **Adopted common formative assessments,** which helped every teacher know what students know and do not know, and therefore how to target ongoing instruction;
- **Examined student data** that allowed teachers to alter their instructional processes throughout the year to ensure that students continued to learn;
- **Collaborated** by grade level to review formative data, with a focus on teaching to the standards; and
- **Benefited from strong leadership** that never let go of the vision—modeling and supporting its implementation at every step along the way.

Moving Forward with Data

In spite of Marylin Avenue's challenging population changes, student achievement improved at every grade level, in every subject area, and with every student group two years in a row. With data and process tools, staff could see where the school stood. They used that information to get all staff on the same page to implement a vision and engage in powerful professional learning and collaboration strategies. Marylin Avenue staff will continue to use data to monitor and measure processes to ensure that all students are learning. The data framework that this school used for continuous improvement can be used by any school or learning organization. It is the use of all the data that makes the difference.

For schools to see student achievement increases in every subject, at every grade level, and with every student group, educators must look at big-picture data. They must understand what is being implemented to know what needs to change. It is not enough for educators to focus on just one thing they think can change; they must look at all the data. To move forward, review all the data, understand the data, and look for commonalities. Look for leverage points. Listen to students, staff, and parents.

Look beyond summative student achievement scores. With a big-picture view, schools have the ability to improve all of their processes—and students will be the ultimate beneficiaries.

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Page 5 of 5