Profile of District A

CONTEXT

District A consists of six schools (five elementary and one middle school) and serves approximately 2400 students in what was a small, traditionally middle class, suburban community on the Bay Area Peninsula. The majority of the student population is Caucasian (about 69%) and the remainder mostly Asian (14%) and Hispanic (10%). As a result of soaring housing prices and the scarcity of rental units, the economic spectrum in District A is also fairly narrow – students tend to come from upper income families, with many parents employed in the high tech industry.

Until quite recently, District A had benefited from a highly stable community with respect to both its teacher corps and student population. However, the district currently finds itself in the midst of a retirement wave as many veteran teachers who have served the district for decades approach the end of their careers. Finding qualified replacements poses a serious challenges for district administrators – keeping new teachers has proven even more difficult. The recent hires in District A tend to be young people, and new to the profession. Their initial enthusiasm for teaching wanes as they discover the disparity between their modest salary and the cost of living in the local area. Most last only three to five years before moving on.

The "**.**com culture" that surrounds the district also contributes to greater sense of transience among students. Parents that work for these firms change positions with great frequency and their children move with them. One elementary school in District A, located near a high tech business park, has reported annual student turnover rates of nearly 40% in recent years – a phenomenon the principal directly attributes to the employment patterns of the businesses in the surrounding area.

Still, District A is a place that exudes long-term success, satisfaction, and stability. This is a district that has reported respectable student achievement scores for decades. And aside from some minor adjustments in demographics, the community served by this district has seen little radical change in recent years, save the ever-escalating costs of housing. Students who attend schools in District A want for very little. They come from established households and generally succeed academically. Parents volunteer regularly in the schools and demonstrate overall support for teachers; most prefer education that adheres to fairly traditional curriculum and practice.

LEADERSHIP

At the helm of District A is a Superintendent/Assistant Superintendent team. Both report working closely with the six schools on a regular basis – the school principals provide a second tier of district leadership. The Superintendent takes the lead in areas that involve the community and the school board. Matters of curriculum and instruction generally fall to the Assistant Superintendent, who has been in this position only a few months. While she recognizes the value of staff development in mathematics, she views literacy as a higher priority at present.

The district has no designated discipline-based instructional leadership and therefore, no "math leaders" per se – at least not officially. Informally, a handful of teachers with a particular interest in or talent for mathematics have served as math leaders within their schools – a resource for teachers to turn to if they have questions or concerns relating to math instruction. During the last math adoption, which took place in 1995, the district put together a "Math Committee" (a group of teachers, administrators, and community members) that helped steer the adoption process. One of the responsibilities of the Math Committee was to put together a set of math standards for District A. The 1990 NCTM Standards and the California Mathematics Framework in place at that time provided the foundation for creating this document. When, only a few years later, the state of California published its Mathematics Standards, the Math Committee reconvened in order to revise District A's math standards accordingly.

VISION

Teachers and administrators in District A do not speak in terms of a common explicit educational philosophy or vision. They believe the district has attracted a group of high quality educators who are afforded the freedom to design instruction that best meets the needs of their students. They talk about wanting students to be engaged and actively involved in the learning process. For the most part, all express considerable satisfaction with the teaching and learning in the district as it stands. Teachers are content and families are happy. The district's primary interests lie in staying the course of success and high achievement, as opposed to engaging in reform or improvement. The old adage holds: "if it's not broke, don't fix it."

The district brochure includes a vision statement as well as a mission statement, both of which are written in quite general terms. Both make reference to nurturing the individual student, maintaining high academic standards, and offering a depth and breath of learning experiences that support the success of all students. The brochure also indicates the ways that the district is trying to remain in the educational forefront. For example, class size reduction has been fully implemented at the primary level so that all classes in grades K-3 have no more than 20 students. All classrooms K-8 also have access to the Internet and the World Wide Web, thanks in large part to strong partnerships with local businesses. In short, District A considers itself among the best and intends to do what is necessary to remain in that position, without altering too greatly the traditions that have served it so long and so well.

PROFESSIONAL DEVELOPMENT

Seemingly because of the widespread satisfaction in District A, district administrators and school principals do not see an overwhelming need for staff development. All schools have funds that support individual teachers attending a variety of conferences and workshops throughout the year. The expectation is that teachers who attend these events will bring a distilled version of the experience back to their colleagues in the school and district. As one principal explained, "If there's something a teacher wants to go to, they know that the money is there." However, the district does not have a history of providing district-wide professional development opportunities

for teachers, aside from a handful of district meetings that occur each year. Currently, District A also has no funding to support such district-wide professional development offerings.

In terms of professional development related specifically to mathematics, the elementary teachers in District A received considerable training four to five years ago in connection with their then-newly-adopted math program, *Mathland*®. The publishing company provided multiple sessions for teachers, as did a master teacher in the district, who had piloted a pre-release version of the text. According to school principals, teachers found this initial training very helpful – especially for designing more student-centered math activities and learning to use manipulatives in their classrooms. The master teacher has since left the district and there has been little follow-up in recent years.

At the middle school level, the Math Department attends the annual meeting of the California Mathematics Council each winter. The department also meets twice a month to discuss issues related to math instruction. Mostly recently, the discussion has centered on how best to respond to the state standards. The middle school math teachers also meet with each of the elementary staffs once a year to talk about curriculum and supporting students in the transition from 5th to 6th grade. Aside from these meetings, however, professional development in District A, particularly in math, is based almost solely on teacher interest and individual motivation.

CURRICULUM

The most recent math adoption in District A took place in 1995. By a vote of 4 to 1, the School Board approved *Mathland*® by Creative Publications for grades K-6. Adoption of the new textbook represented a significant change for the district both in terms of curriculum and pedagogy. The decision also took place in the midst of California's "Math Wars." Not surprisingly, a vocal group of parents and teachers opposed making too radical a departure from the traditional program. Administrators, reflecting on the process, described it as "rancorous" and "contentious."

Implementation of the new textbook quieted concerns as teachers clearly attempted to combine the best of old and new when putting together their individual mathematics programs. According to school principals, everyone tried *Mathland*®, but few teachers implemented it wholesale. Some never tried more than one or two units and all continued to supplement from their favorite "tried and true" resources and activities. Still, *Mathland*® served as the district-endorsed curriculum and continues to do so. Most recently, largely in response to the California State Math Standards, the district has supported teachers in piloting materials from the state's list of supplemental math materials. A book called *Math Steps* has been particularly popular – reportedly because it fills some of the gaps that teachers find in *Mathland*®.

Because there is only one middle school in District A, the School Board generally gives the Math Department the autonomy to select its own materials. For 6th grade math, teachers use *Mathland*® as the main text and supplement as needed, much as teachers do in grades K-5. Although the middle school is moving towards making Pre-Algebra the standard 7th grade placement and Algebra I the standard 8th grade placement, multiple tracks operate at each grade

level and there are no plans to discontinue math tracking. In terms of materials, the upper-grade teachers currently use the McDougall-Littell *Algebra I: An Integrated Approach* as their text because it aligns well with the local high school program.

ASSESSMENT

On the one hand, District A is a place that does not overly concern itself with assessment and testing. There is a longstanding trend of high student achievement with respect to grades and standardized test scores. For example, a pamphlet in the district office boasts 1996-97 California Achievement Test scores that are two to four grade levels above average in every subject area across grades 3-8. On the other hand, the combination of increasingly rigorous state standards and new standardized tests (with scores published in the newspaper) places the district in a more vulnerable position vis-à-vis the affluent community it serves.

When it comes to district-wide testing, District A takes its lead from the state. The SAT 9, a norm-referenced multiple-choice test, serves as the only assessment given to students in all six schools. The results of this test are used primarily to inform teachers and principals about how their students are performing in comparison to others in the district and state. In mathematics, schools sometimes use the results to identify an area of the curriculum that needs particular attention, for example problem solving or number sense.

Aside from the Golden State Examination in Algebra (given to all middle school students enrolled in Algebra), individual schools do not make use of common assessments in District A. Instead, individual teachers devise their own assessments and these take a variety of forms including in-class observations and portfolios, as well as more traditional tests and written assignments. The idea of putting into place some sort of performance-based assessment that might complement the SAT 9 has not surfaced at the school or district level.

INSTRUCTION

Our research team observed four classrooms in District A: two elementary and two middle schools. Of the four teachers, two were veterans with more than 20 years experience and two were in their first five years of teaching. Overall, we would characterize all four of the lessons as solid traditional teaching, with the teacher at the front of the room "instructing" students who worked willingly, if not eagerly, at their seats throughout the lesson.

At the elementary level, we observed a primary class working with money and practicing different ways to "make" a particular sum using different combinations of quarters, dimes, nickels, and pennies. Students' hands shot up enthusiastically in hopes that the teacher would call on them to share an idea or strategy. In the intermediate classroom, students learned about factor trees and took careful notes in their math journals that included definitions which the teacher wrote on the board for them to copy. These students also let out cries of "oh, oh, oh" and waved their hands to let the teacher know that they had an answer. An 8^{th} grade class prepared for an upcoming test by doing review problems and a 7^{th} grade class reviewed strategies for solving inequalities that involved absolute value, going over many of the prior night's homework

problems in the process. The middle school students all sat quietly in rows and responded with interest to their teachers queries, albeit with less zeal than their elementary counterparts.

Most of the lessons were characterized by highly traditional, didactic teaching. The primary lesson on money was the only one that broke this pattern. Here, students worked collaboratively in pairs and with manipulatives. However, even under these circumstances, the lesson remained very teacher-centered.

Transitions from one activity to the next flowed smoothly in all four classrooms. We observed no discipline problems – students and teachers treated each other with respect and courtesy. They followed directions and completed tasks with little assistance.

COMMENTARY

An air of accomplishment and complacency pervades District A. While Administrators stated that their teachers do not have any real needs in terms of professional development related to teaching mathematics, only moments later, we observed two different teachers in two different schools struggle with student questions that probed beyond the text and the teachers' minimal math backgrounds. We observed classrooms full of bright, enthusiastic, curious children who want to go just as far as their teachers could take them. We met caring and committed educators with a demonstrated affinity for children and their profession. And yet, we can not help but conclude that District A is missing an opportunity.

We sense that parent and community expectations may limit what district leaders feel they can attempt with respect to change or reform in District A. Both the Superintendent and Assistant Superintendent gave us the impression that they know that there is room for improvement in the district. However, a combination of limited funds, and parent and community comfort with the current status, has led the district administration to be satisfied with maintaining the current course – that is, maintaining good tests scores while not slipping back to a math curriculum that emphasizes just basic skills and standard algorithms.