

Local teachers learn the art of communication

SM-FC District is one of two in nation to test

By Deirdre Newman
Staff Reporter

FOSTER CITY — On a recent weekday morning, a group of fifth-graders from Brewer Island Elementary School was deeply immersed in solving a geometry problem involving how many edges have to be cut in order to open a cube.

While the students enthusiastically explored the possibili-

ties using paper cubes and scissors, a group of 75 teachers and administrators from throughout the Bay Area hovered curiously, taking notes as the lesson progressed.

The class, taught by a Japanese teacher, was part of a demonstration of "lesson study" — a Japanese approach that emphasizes reflection and dialogue after the lesson to see where improvements can be made.

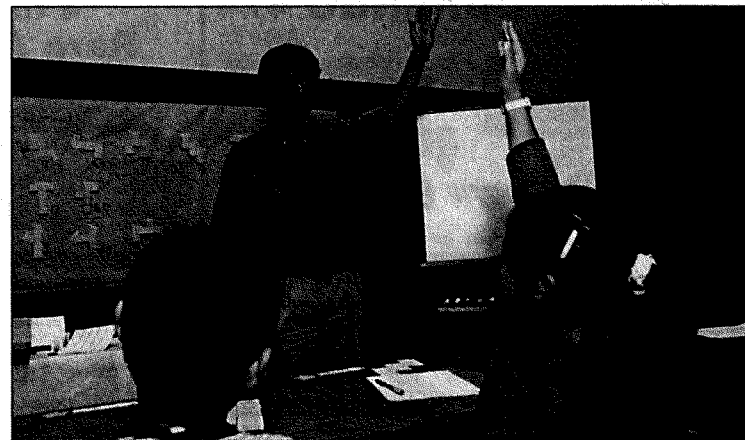
While some teachers in the San Mateo-Foster City School District experimented with lesson study last year, this was

their first chance to see it demonstrated by the experts. The district is only one of two in the country to pioneer the cutting-edge technique.

District officials say the approach is so beneficial because it encourages teachers to work together to enhance student learning and improvement.

"It's a model of professional development which incorporates some features that we already know to be effective, including structured ways for teachers to collaborate together with a focus on student

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SUSAN CALDWELL

Takahashi said the technique allows teachers to constantly evaluate students and help them improve.

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work and student progress," said Mary Pat O'Connell, coordinator of the Aragon-Borel Complex, a partnership of six schools that works to improve math and science education.

The two-week lesson study workshop, which culminated with the Aug. 10 public lesson, was a collaboration between the district, an educator from Mills College and the Noyce Foundation, which provided a portion of the funding.

The collaboration started when Catherine Lewis, a member of the education department at Mills College in Oakland, heard about an experiment with lesson study that the San Mateo-Foster City School District tried last year.

Lewis, who has been studying the Japanese approach for the past 10 years, met with district math coaches and invited the Japanese teachers to come for the summer workshop. American teachers can benefit

tremendously from lesson study because they tend to be more isolated from their peers than their Japanese counterparts, according to Lewis.

"There's a Japanese proverb that goes, 'if you gather together three people, you have a genius,'" Lewis said. "I think in the United States, you often have the culture of teachers alone in the individual classrooms whereas if you don't re-create everything from scratch, you're not doing anything original."

For the first week of the workshop, the participating teachers worked on math content and learned about the process of lesson study. During the following week, five of the Japanese and four of the American teachers got an opportunity to demonstrate their own lessons, followed by an hour or two of discussion.

Jeanie Dow, the teacher whose students participated in the public lesson, said the lesson study approach is a great way to gain insight from her peers. "It's always important because

you're off in your classroom by yourself and you don't have the opportunity to watch other people teach," Dow said. "It's really helpful to talk to someone when you get stuck on a lesson and see 'how can I make this work? How can I make this better?'"

The Japanese instructor who led the public lesson, Akihiko Takahashi, is currently working on a Ph.D. at the University of Illinois. He said he was surprised to see that lesson study was not very common in the United States.

"[In Japan], it's a very natural part of our professional development to talk about how the students did and how they can improve," Takahashi said. "You can see it all during the day."

After Takahashi finished his demonstration, a panel of Japanese and American teachers asked him to reflect on the flow, language and motivational techniques of the lesson.

It's this kind of in-depth discussion that's lacking in American classrooms, accord-

ing to O'Connell.

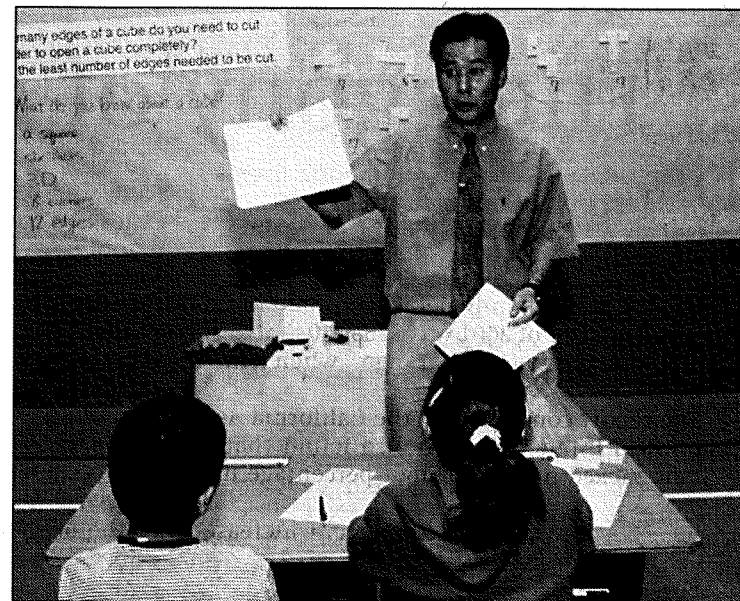
"What's missing is the depth of content discussion and how to make incremental bridges to make sure each student is following along," O'Connell said.

District officials also hope that implementing the lesson study approach, which tends to focus on solving one problem for an entire math period, will enhance students' mathematical thinking so they can be more competitive.

"Japanese teachers are very experienced and they have some particularly helpful insight into mathematics," O'Connell said. "Their students have been known to outperform American students, so it was exciting to get some insight about them."

Despite being watched under such close scrutiny, the students who participated in the public lesson said it was "exciting." Julia Rudakov gave high marks to Takahashi's style of teaching.

"He explained things and when you asked him a question, he wasn't clueless — he knew what to say," Rudakov said.



SUSAN CALDWELL

Akihiko Takahashi gives a demonstration lesson at Brewer Island.

District officials plan to expand the number of teachers using lesson study for the 2001-2 school year. And at one school — Highlands Elementary in San Mateo — almost all the teachers

will be using the lesson study approach.

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