



CSUS MATH PROJECT NEWS

JANUARY, 2000

"Mathematics is not a careful march down a well-cleared highway, but a journey into a strange wilderness."
--W. S. Anglin

UPCOMING CSUSMP SATURDAY MEETINGS—FEB. 5 & APRIL 1

Mark your calendars if you haven't already done so. All are welcome—bring your friend, your colleague, your spouse, your dog...O.K. maybe not your dog. On Saturday, Feb. 5 we will open the morning with some donuts and bagels, and some problem solving to get ourselves energized and thinking. For the second part of the morning, we have prepared some HAVE→WANT's that you have never seen before, for each grade level group. HAVE→WANT's are a method we developed during the 1999 Summer Institute in order to make sense of the mathematics behind the standards. We identify the mathematical ideas our students understand (that's the HAVE), and the mathematical idea we want them to acquire (that's the WANT). Then we look for the logical mathematical steps the students must take which lead them from the HAVE to the WANT. In this way, we are able to identify connections which lead to better understanding. Recognizing the HAVE's and WANT's and the mathematical hurdles between them, helps us determine the best question to ask in order to get the students over the next hurdle. Previous experience with HAVE→WANT's is not necessary, so whether you're a returning CSUSMP Summer Institute participant, an NCMP fellow, or someone who would like to find out about CSUSMP, please join us on Saturday, Feb. 5 from 9:00-12:00 with lunch following the meeting at CSUS Eureka 112. [Just to entice you about the last Saturday meeting this school year at CSUS, you did notice the date didn't you—April 1! Problem solving will be appropriate. Enough said.]

NEXT PEER COACHING CADRE MEETING—FEB. 22

- Would you like to have an extra pair of eyes and ears in your classroom?
- Are you unsure how to start a peer coaching relationship with someone at your school?
- Are you unsure with whom you can develop a peer coaching relationship?
- Would you like to hone your own observational skills?
- Would you like to heighten your own reflection about your teaching?
- Would you like to feel the support of CSUSMP while eating some really good snacks?!

If you answered yes to any of the questions above, then attending the next meeting of the Peer Coaching Cadre would be valuable to you. At each meeting, we have time for individuals to discuss their thoughts about their latest coaching experiences and time to address logistical difficulties encountered while trying to start or to sustain coaching. We view a video of a math classroom watching for specific instances of positive effects on student learning. Our focus is on detecting what caused those positive effects and on providing specific supportive feedback on what we observed.

At the latest PCC meeting in January those who attended were able to discuss scheduling one (or two) of the CSUSMP staff to visit their classrooms. If you would be interested in having one of us come observe or guest-teach, please come to the next meeting or contact Debbie Stetson at 278-5951 or through

sdavis@csus.edu. Of the staff, Debbie has the most time available (generally on Mondays and Wednesdays), but Scott Farrand, Rick West and Elaine Kasimatis are also available for visits.

The next meeting is on Feb. 22, from 4:30-6:00 in Sequoia 456 at CSUS. If you have not been to a PCC meeting, please contact us for a parking pass.

UPCOMING EVENTS

- Saturday, Jan. 29, NCMP Meeting 8:30-12:00 at UC Davis
- Saturday, Feb. 5, CSUSMP Meeting 9-12 at CSUS, Eur-112
- Tuesday, Feb. 22, PCC Meeting 4:30-6:00 at CSUS, Mnd-4008
- Saturday, March 18, NCMP Meeting 8:30-12:00 at UC Davis
- Saturday, April 1, CSUSMP Meeting 9-12 at CSUS
- Tuesday, April 4, PCC Meeting 4:30-6:00 at CSUS
- Saturday, April 8, NCMP Meeting 8:30-12:00 at UC Davis
- Saturday, April 8, SAME's Spring Mini-Conference held at CSUS—"Developing Strategies to Address Standards Instruction" Keynote Speaker John Van De Walle
- Tuesday, May 16, PCC Meeting 4:30-6:00 at CSUS

SUMMER INSTITUTES HAVE BEEN CALENDARED

Applications for this summer's institutes will be coming out in the next mailing. We are planning two three-week invitational institutes concurrently, one for elementary and one for secondary. Those two institutes will be held from June 26-July 14, with a pre-institute Saturday meeting on May 6. In addition, this summer we plan to hold a one-week Open Elementary Institute from July 17 – July 21.

DR. LIPING MA AUTHOR AND SPEAKER

By Debbie Stetson

As you may recall from a green flyer you received last month, Dr. Liping Ma, author of the book, Knowing and Teaching Elementary Mathematics, will have spoken on January 27 at an event cosponsored by the Sacramento County Office of Education, the Sacramento Area Math Educators, and CSUSMP. Dr. Ma will be speaking about the results of her study of Chinese and American teachers' understandings of the mathematics that they teach. It has been said of Dr. Ma's book that people with the most opposing views of mathematics education, both traditionalists and reformists, value what she has to say. I find Dr. Ma's book intriguing for two reasons: 1) she has been a teacher since she was a teenager, and 2) because she writes from the perspective of a teacher trying to understand good teaching. The types of questions she asks the teachers in order to determine what level of understanding each possesses about the mathematics they teach inspire me to examine

my own teaching. She didn't give them an end of course exam for the 3rd grade; she didn't give them a standardized test. She posed a question about a specific idea taught and asked what they would do as teachers. For example, she gave the following scenario to each teacher in the study:

"Some sixth-grade teachers noticed that several of their students were making the same mistake in multiplying large numbers. In trying to calculate

$$\begin{array}{r} 123 \\ \times 645 \\ \hline \end{array}$$

the students seemed to be forgetting to "move the numbers" (i.e., the partial products) over on each line. They were doing this:

$$\begin{array}{r} 123 \\ \times 645 \\ 615 \\ 492 \\ \underline{738} \\ 1845 \end{array}$$

instead of this:

$$\begin{array}{r} 123 \\ \times 645 \\ 615 \\ 492 \\ \underline{738} \\ 79335 \end{array}$$

While these teachers agreed that this was a problem, they did not agree on what to do about it. What would you do if you were teaching sixth grade and you noticed that several of your students were doing this?"

The variety of responses and Dr. Ma's analysis of them shed light on the level of mathematical understanding of the teachers themselves. Dr. Ma's point is this level of understanding plays a part in each teacher's suggested method of correcting the error. I don't find the comparison between Chinese and American teacher strategies insulting, rather I find it reveals ways we can improve math instruction. Secondary teachers might also find value in this book in the chapters about division of fractions and the relationship between area and perimeter.

By the time you receive this she will have given her talk. I hope that I will have seen some of you there.

MAILING LIST REQUESTS

Would you like to be on our mailing list? If you would like this newsletter mailed to your home, contact us at (916) 278-5951.

If you would like an electronic version only and no hard copy, please let us know that also.

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