

**Ancillary Unit Annual Report
San Joaquin Valley Mathematics Project
July 1, 2012– June 30, 2013**

Purpose of Ancillary Unit

Since its inception in 1989, the San Joaquin Valley Mathematics Project (SJVMP) has provided a stimulating and supportive professional home for K-12 mathematics teachers residing in the Central Valley of California. Throughout the year, the SJVMP offers a wide variety of high quality professional development and leadership opportunities designed to increase teachers' knowledge of mathematics and their effectiveness in teaching the subject. SJVMP is also an important partner in a number of grants promoting mathematics teacher recruitment, retention, and professional development. SJVMP also collaborates with the campus's MSTI grant.

Administrative Housing of Ancillary Unit

California State University, Fresno is the fiscal agent for the SJVMP. The Project's Co-Principal Investigators (Co-PIs) are members of the Fresno State faculty. Dr. Carol Fry Bohlin is a professor in the Kremen School of Education and Human Development, and Drs. Rajee Amarasinghe and Agnes Tuska are professors in the Dept. of Mathematics. The current Director of the SJVMP is Mike Chamberlain.

Major Accomplishments for 2012-2013

The SJVMP serves Region 7, which includes Fresno, Kings, Madera, Mariposa, Merced, and Tulare Counties. Since July 1, 2012, the SJVMP has sponsored a two-week Summer Leadership Development Institute focused on the Common Core State Standards for Mathematics (CCSS-M) and the Standards for Mathematical Practice (SMP). These events have included work with the following:

2012 Summer Leadership Institute (SLI)

Eighteen participants attended our SLI in July 2012. These participants were teachers sponsored by their school district. Additionally, six teacher-leaders participated in planning and presenting at the institute. Participants were immersed in 75 hours of K-12 mathematics content from the Common Core State Standards-Mathematics (CCSS-M) and the Standards for Mathematical Practice (SMP).

Content items included: Sorting functions represented graphically, verbally, and symbolically, looking at the grades 3-5 fraction progression, examining the progression document on ratios and proportions at the middle school level with an emphasis on proportional triangles, transformational geometry and the role it will play in the way that congruence and similarity are proved, functions in grade 8-12 and how they will be used in mathematical modeling situations, and a variety of other mathematical modeling opportunities such as the bouncing ball lab.

Non-content based items included: examining what it means to make a viable argument, team strategies for collaborative student work, talking about what it means to be a teacher-leader and

how to look for leadership opportunities within your site or district, literacy standards, Smarter Balanced Assessment Consortium writing standards, a reading of *Deliberate Discussions*, viewing the classic “12 Angry Men” and discussing how it relates to Math Practice #3, a close look at #1 and #6 of the 8 standards for mathematical practice, the TIMMS report and the usefulness of lesson study, and Carol Dweck’s Mindsets.

The 2-week institute concluded with participants choosing two of the mathematical practices on which to focus in their classroom to begin or further their work of developing mathematically proficient students as described in the SMP.

SLI Follow-up Days Held on Saturdays During AY2013

During the **first** follow-up day to the 2012 SLI, participants observed videos provided by each participant, with them teaching a lesson with their class. A discussion on how instructions were given and displayed through each lesson followed each video review. The participants also reviewed how to use study team strategies. There was a whole class session on reviewing students’ work and surveys. The participants also learned how to apply the Standards for Mathematical Practice in their daily lessons. The most useful part of the day for the participants was hearing what is working and the challenges that these participants face in their classrooms and how to overcome them.

The **second** follow-up was in conjunction with our Technology Day. GeoGebra Sessions included an introduction to GeoGebra and then open lab time during which teachers could work on their own projects or follow along with demonstrations.

The **third** follow-up day started with the participants examining student work on the MARS tasks that they gave their students in class. Participants discussed grading the tasks on a rubric and the implications for instructional shifts. Next, they examined the grades 6-8 expressions and equations progression document. In this discussion, they talked about pedagogy and took a look at student evidence through the videos that the participants took of their classroom working on the MARS tasks. Time was spent on discussing teaching conceptually versus procedurally.

Our **fourth** and final follow up day was also in conjunction with our Technology Day and included the following topics: *Google Apps for Education, 1:1 Laptop Immersion, Screen casting in the Elementary Classroom, Common Core Tech Integration, Free Online Math Tools, High Tech Tools & Literacy, Sassy Spreadsheets, Changing Pedagogy with Technology, Google Maps in Social Sciences, Gaming the Writing Assignment, iMovie 101, Project Based Learning & Google Apps, Free Microsoft Tools for the Classroom, Google Forms: May the Forms be With You, Google Drive in the Primary Classroom, and many more.*

2013 Winter Leadership Retreat (WLR)

Approximately 50 teachers, teacher leaders, coaches, administrators, County Office personnel, and professors attended the 2013 WLR. Friday started with "Professional Development and the Common Core State Standards." The participant outcomes consisted of: Develop an understanding of the recently revised Standards for Professional Development, their core elements, and how they differ from previous standards; Acquire strategies for implementing the Standards for Professional Development that would be used in a leadership capacity; Acquire

recommendations for introducing the standards to policy and decision makers to incorporate the new standards into existing policies about professional development; and last, but not least Experience the Common Core State Standards and the Standards for Mathematical Practice. Friday evening consisted of a panel of local experts in professional development in the San Joaquin Valley continuing the professional development discussion and a Q & A session. Our Saturday presenter was Heather Dallas, who spoke on "Common Core in Action." Her goals for this session included several model lessons, which aimed to teach key Common Core standards, practice and content. The content standards in focus for the day included ones for which the mathematical content or mathematical emphasis is new for a number of the participants. Through the model lessons, participants looked at what each practice standard does and does not mean and what classrooms that employ those practices look like. Scott Farrand began the Saturday evening session by challenging participants with initially an elementary level task that he continually tweaked to become a more and more difficult task. The participants experienced an engaging mathematical problem solving exercise that was accessible K-12 that highlighted some of the new standards as well as one or more of the Standards for Mathematical Practice. The weekend ended with the session, "Meeting the Challenge as Leaders: From Talk to Action."

MATHCOUNTS and MSTI

The SJVMP supported the February 2013 MATHCOUNTS competition held at Fresno State, distributing trophies at the conclusion and taking/distributing photos for documentation/celebration of the young mathematicians' achievements (as well as their coaches'). The SJVMP is also a partner with the Mathematics and Science Teacher Initiative (**MSTI**) in providing teachers with workshops to prepare teachers to pass **CSET: Mathematics** Subtests I and II, as well as a mathematics methods course to help teachers earn a Single Subject credential in Foundational-Level Mathematics. This program meets the CSMP goal of helping teachers to become "highly qualified."

TEACHING GEOMETRY WITH COMMON CORE MATHEMATICAL PRACTICES

The Department of Mathematics at California State University, Fresno, in collaboration with the SJVMP, MSTI, and the Science and Mathematics Education Center (SMEC), offered a unique opportunity for middle and high school teachers to learn how to integrate the Standards for Mathematical Practice and the Mathematical Content through embedded lessons with actual students. Middle and high school geometry teachers participated in an intensive one-week learning experience.

Sources of Funding

- Funds Including Income from Service and Product Sales/Other Revenues and Expenditures

Base state (\$24,021) and federal funds (NCLB 9: \$46,392) received from UCOP serve to support the infrastructure of the SJVMP. Additional income generated from school districts to support SJVMP activities is deposited into the SJVMP Program Income account at the CSUF Foundation to further support Project activities and infrastructure. All monies are expended on Project-related activities and staff compensation/salaries.

Space and Equipment Utilization

The SJVMP Director, Mike Chamberlain and his administrative assistants, May Lee and Alyssia Aguilar share an office in Room 242 of the Kremen Education building. All are supported by the Department of Curriculum and Instruction (e.g., telephone, photocopies, mailbox, office space, and technology support). CSUF facilities such as the University Business Center, classrooms in the Kremen Education Building, and classrooms in Science II and Peter's Business Building are regularly used for SJVMP-sponsored professional development activities.

Goals and Activities for 2013-2014

The goals for the SJVMP remain constant:

1. To increase the mathematical competence and confidence of teachers so that they in turn can help all types of students to develop a deep, meaningful understanding of mathematics concepts and proficiency in mathematics skills.
2. To increase K-12 teachers' awareness of current mathematics issues in California with a specific focus on the CCSS-M and the SMP
3. To develop teacher leadership in mathematics.

We strive to meet these goals by providing quality professional development opportunities in mathematics education that deepen and enhance knowledge and understanding of mathematics content and pedagogy; enrich knowledge of the latest developments in mathematics curriculum, instruction, and assessment; enhance instructional effectiveness; help empower teachers to become leaders in mathematics education at school sites and beyond; increase and enhance knowledge of how to effectively infuse technology into the mathematics curriculum; and provide opportunities for networking with other mathematics educators from throughout the Central Valley.

Event Descriptions:

For a complete table of events including projected dates and numbers for July 1, 2012 – June 30, 2013, see Appendix B.

The 25th Annual SJVMP **Summer Leadership Development Institute** is in the beginning planning stages for July 9-19, 2013. The 2013 institute will focus on the Standards for Mathematical Practice; help teachers become familiar with the K-12 CaCCSS-M; and include work on some large tasks at participants' grade levels. The institute will consist of 2 weeks of intensive activities supporting mathematics content, pedagogy and leadership in mathematics for teachers of grades K-12 with a focus on grades 6-12.

Four **follow-up days** and several **classroom visits** will be provide to the alumni from the 2013 SLI. The primary focus of these events will be the implementation of the SMP in the classroom.

The 13th **Annual Tier II Winter Leadership Retreat** will take place in January 2014. The focus will continue to be on the CCSS-M and the SMP. This will continue to be a joint event with the Cal Poly/CSU Bakersfield Mathematics Project.

Appendices

- A. The unit's financial statement prepared by the California State University, Fresno Foundation.
- B. A matrix of SJVMP events for 2012-2013.

CMP Scope of Work Matrix for 2012-2013 — San Joaquin Valley Mathematics Project

<u>Event Name</u>	<u>Dates</u>	<u>CSUF Participants</u>	<u>Non- Students</u>	<u>Total</u>
SJVMP Summer Leadership Institute 2012	July 9-20, 2012	1	17	18
Summer Leadership Institute Follow Up Fall 2012	September 15, 2012	1	16	17
Technology Day Fall 2012	October 20, 2012	18	19	37
Winter Leadership Retreat 2013	January 25-27, 2013	1	51	52
Summer Leadership Institute Follow Up Fall 2013	March 16, 2013	0	11	11
Technology Day Spring 2013	April 20, 2013	1	9	10