



Center for the Mathematics  
Education of Latinos/as

# CEMELA News

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The University of Arizona · University of California, Santa Cruz · University of Illinois at Chicago · The University of New Mexico

Spring 2008

Edited by: Cynthia O. Anhalt

## News from the Sites

### The University of Arizona

By Phillip Kisunzu

The year is 2020... many children impacted through this year's UA CEMELA community outreach and research activities will be in their twenties - for the first time, they will find that their culture is fast becoming the predominant culture. This reality begs the question, "What impact will CEMELA's mission for the mathematics education of Latinos/as have made to prepare the next generation for its new majority status?" The UA community outreach and research activities described below seek to address this question.

#### Math For Parents Workshops

As of the spring semester of 2008, UA CEMELA's Math For Parents workshops, led by José María Menéndez Gómez, Phillip Kisunzu, Jesús Acosta-Iriqui, and Marta Civil, occurred at a middle school serving grades 6-8 and an elementary/middle school serving grades Pre K-8. The workshops at both schools met seven times per semester and shared the same goals. The learning modules were designed to parallel the mathematics topics the children were actually learning in their classrooms. In addition to the workshops, we did classroom observations and debriefings with the parents.

#### After School Math Club (ASMC)

Maura Varley, Rodrigo Gutiérrez, Tal Sutton, and Erin Turner led the ASMC expansion to a middle school in the Tucson Unified School District. During the fall of 2007, the



15 -18 students in this math club participated in challenging mathematical tasks in cryptography. In the spring of 2008, the students designed and carried out a Social Justice Education Project relevant to the welfare of their school and the community in which they live. This ASMC met

weekly for 1½ hours throughout the school year. Maura continues the ASMC for girls at the elementary school where she has worked for three years. This club is the site for her dissertation research.

#### Student Learning and Understanding Study (SLUS)

This year, SLUS is researching students' performances on NAEP-type mathematics tasks (in number theory and algebra) as assessed in light of their language proficiency. One question that drives this research is, "Are students more likely to perform a mathematical task correctly if they are given an (accommodation) opportunity to ask questions about the meaning of the words describing the task?" This study is in its pilot stage with 15 students from grades 3 and 6, who are known to have been English Language Learners at some time during their schooling experience. Heather Cavell, Kathleen Ross, Phillip Kisunzu and Suzanne Weinberg are involved in this study.

#### Teacher Study Group (TSG)

This year, José María Menéndez Gómez, Laura Kondek McClellan, Leslie Kahn, and Jackie Wortman worked with six teachers in the TSG. These teachers teach in grades 3-5, and some of them had taken part in the TSG last year. Throughout the 2007-2008 year, there was an

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## New from the Sites continued

### The University of Arizona continued

emphasis on the intersection of mathematics and language in the classroom. Mathematics topics included number sense, whole number operations, and an exploration of fractions.

#### *CEMELA Mathematics Classroom Observation Protocol (CMCOP)*

The UA CEMELA group is currently pilot-testing a revised classroom observation protocol in selected grade 3-8 classrooms in the Tucson Unified and Sunnyside Unified School Districts. The revised protocol adds a language component to the Classroom Observation Protocol originally developed at the University of Wisconsin. Gabriela Dumitrascu,



Jesús Acosta-Iriqui, and Ginny Horak are leading this CMCOP project; Kathleen Ross is doing preliminary analysis of the data collected this school year. Potential cross-site collaborative research in this area with other CEMELA sites will be explored during the upcoming CEMELA School.

### University of California, Santa Cruz

By Craig Schneider

#### *UCSC Teacher Education and Professional Development*

Last fall the UCSC professional development team worked with ten teachers for an all day exploration of videos of their classrooms. Pairs of teachers discussed effective strategies for teaching ELLs and an article on academic language. Another professional development day is planned for spring.

#### *UCSC Research Studies*

The Teaching and Teacher Education research group is exploring how eight pre-service teachers discussed the role of language in mathematics teaching and learning, especially related to ELLs, on a high-stakes teaching assessment (PACT). In the second project, Angela Thompson and Kip Téllez (Using Video Technology to Provide a Professional Development Forum for Reflection on the use of *Academic Language* for Mathematics in Elementary School Teachers) utilize classroom video analyses as a tool for helping in-service teachers enhance their mathematics instruction to ELLs with respect to academic language.

The Mathematical Discourse research group continued work on two papers. One paper, "Student reasoning about

graphs of motion: Interpretations of horizontal segments" (Zahner, Moschkovich, Ball) uses a sociocultural perspective on mathematical reasoning to describe how four pairs of eighth-grade bilingual students interpreted horizontal segments on a distance versus time graph about everyday motion. In related studies, Griselda Velázquez is beginning an analysis of one peer discussion, Spanish-only session. Additionally, the research team is analyzing classroom video data. Another paper, "The Organization of a Group Mathematics Discussion in a Middle School Classroom" (Zahner & Moschkovich) analyzes patterns of interaction among bilingual Latino middle school students while they engaged in mathematical discussions.

#### *New UCSC CEMELA Members*

Craig Schneider joined CEMELA as a Postdoctoral Fellow in the summer of 2007. Craig's dissertation centered on a teacher designed and implemented professional development program for middle school mathematics



teachers working with bilingual learners. Craig's research interests include students' mathematical thinking, teacher knowledge, beliefs, and practices and professional development. Eddie Mosqueda joined the UCSC faculty as an Assistant Professor in Fall 2007. His recent work reveals that Latino non-native English speakers with low levels of English proficiency perform at lower levels than their native-English speaking peers—and that English proficiency, tracking, and teacher educational background accounted for the difference.

### The University of New Mexico

By Barb Trujillo and Edgar Romero

This year, Fellows contributed selected readings to the CEMELA Seminar at UNM and presented their current research. This kept our group connected with our very diverse research projects. The seminar was enriched by three new voices. Guadalupe Lozano, post-doctoral Fellow in the Mathematics Department, is participating in CEMELA cross-site research with Jesús Acosta-Iriqui (UA) on transnational research in Agua Prieta, Sonora, Mexico. María Salett Biembengut, a Brazilian Mathematics Education professor, was an invited guest of CEMELA for the spring semester, sharing her work on mathematical modeling and its teaching implications.

**New from the Sites continued**

Xue Khan, of the Department of Teacher Education and associate CEMELA faculty, has shared her research on “Learning with Colleagues Through Public Lessons” from her native China.

UNM and UA Fellows co-authored and presented a paper on teacher learning for AMTE, entitled “*Teachers of Latino Students Reflect on the Implementation of a Mathematical Task.*” They will present again at PME this summer.

Mary Marshall, who recently defended her dissertation proposal, is working with Sandra Musanti and Sylvia Celedón-Pattichis in research on student and teacher learning; she has presented at PMENA, NABE, and AERA, and is working on manuscripts for publications. Mary and Sandra, deeply involved in the school research site, are working in classrooms and with a teacher study group.



Laura Burr and Berenice Castellón along with Rick Kitchen are conducting research on how Latino/a sixth graders make sense of fractions, decimals, and estimation in a reform mathematics classroom.

Listening to insights and literature reviews on student learning and teacher pedagogy has enlightened Barbara Trujillo’s research, a year-long pilot study of school principals’ conceptions of their leadership roles in the implementation of reform mathematics curricula in their schools.

**University of Illinois at Chicago**

**By Susan Kolian and Lena Licón Khisty**

As we look back over this past year, we can see that we were very busy not only with the typical things that university doctoral students, post docs, and faculty do, but also with those unique “doings” of CEMELA. This year can be characterized as “really coming together” – a quality that is less measurable, more elusive to direct observation, yet still a keen, deeply-felt, and highly important impression--and one that is at many levels and in many situations.

UIC CEMELA really “came together” in the quality of intellectual interactions we have; this was especially apparent in our weekly working team meetings. We always have had weekly meetings that we defined as time to solidify being a team engaged in “organic” research (a favorite term of our Project Coordinator, Susan, meaning starting from the ground up to promote a wide-spread sense of ownership). In our working team meetings, we have collectively puzzled over theoretical perspectives for how to explain a phe-

nomenon we have observed in the after school project we all participate in, we have similarly struggled over how best to analyze and code the data that we have, and we have similarly, again, brainstormed potential papers and presentations that we can create under multiple authorship.

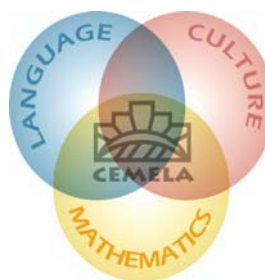
In essence, our meetings have become fertile ground for that thing that marks academe: intellectual strength, vitality, and curiosity. This became evident in our department’s first day-long mathematics and science education doctoral student colloquium, which was spear-headed by Eugenia Vomvoridi-Ivanovic. College of Education and mathematics faculty attended, and CEMELA Fellows gave almost half the presentations. Faculty were complimentary of the quality of doctoral student work, and in essence, CEMELA helped put mathematics education in the front row of faculty’s thinking and showed itself very well indeed!

**Los Rayos After School Project**

“Coming together” was a very tangible feeling in *Los Rayos*, our after school project. We completed three years of doing the after school and during this time, we have had nearly the same bilingual Latina/o students and parents each of these years. We have been pleased that the students and parents have stayed with us, which suggests we might have been doing something relevant. We got better at running a “like-school but not-like school” advanced mathematics learning environment and this year tried our hand at emphasizing proportional reasoning through project-based learning, a.k.a, the *recipes projects*. These projects involved everyone in *Los Rayos*: children, parents, Fellows, undergraduate facilitators, and faculty. We actually made food that we then ate in celebration of appropriately increasing, decreasing, or creating recipes. We ended our year by bringing students, parents, and siblings to UIC for bowling. Based on recorded discussions and interviews, it



seems that strong bonds have been formed among all parties. Finally, when the students came to UIC and looked in classrooms, they were sure the mathematical writing on the board was that of El Maga and that El Maga was somewhere nearby! What better evidence of the magic of learning.



## CLT West Collaboration

By Julia Aguirre and Erin Turner

In October 2007, CEMELA collaborated with three other Centers for Teaching and Learning (DiME, CISTL, and CLT-West) to host an NSF-funded national conference focused on the preparation of future leaders, especially at the doctoral level, who seek careers focusing on issues of diversity, equity and social justice in mathematics and science education. The conference, entitled "Equity in Mathematics and Science Education: Critical Issues in Leadership Development," was held in Portland, Oregon, and drew almost 100 faculty, graduate students, and other educational leaders from across the country. The conference had several aims, including a) to focus national attention on the need to prepare the next generation of STEM education leaders to pursue equity work nationally and around the world, b) to share ways of re-thinking doctoral education, and c) to stimulate a dialogue about the recruitment and support of diverse cadres of leaders in mathematics and science education. CEMELA members of the conference planning team included: Marta Civil, Judit Moschkovich, Julia Aguirre, Erin Turner, Sandra Musanti and Hector Morales. Additional Fellows and faculty attended the conference.

At the conference, participants engaged in a variety of session activities designed to showcase effective tools and strategies and provoke critical dialogue about promoting equity work and leadership in mathematics and science education. These sessions highlighted successful initiatives as well as challenges that are inherent in this work.

These successes and challenges were discussed in the context of conducting research (e.g., negotiating entry into various communities; developing shared understandings; reporting "discouraging" research results; and communicating researcher positionings), working within formal and informal educational settings (e.g., schools, museums, and community spaces) and navigating the graduate school experience (e.g., leadership experiences of scholars of color in academia; mentoring in the academy). In addition, specific tools and program models highlighted successful mentoring strategies, innovative approaches to research, and alternative career pathways for doctorates who pursue equity work in mathematics and science education.

In addition to stimulating panel presentations and animated discussion activities, the conference provided cross disciplinary networking opportunities to promote

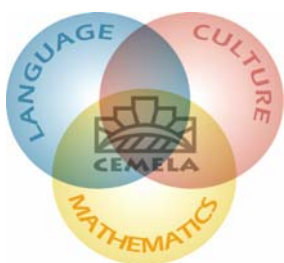
collaborative research and program development. Currently, members of the conference planning teams from CEMELA and DiME are authoring a manuscript that synthesizes what we have learned - both through the conference and through our broader work with our respective CLTs - about preparing new scholars to address issues of equity in their research and teaching. This manuscript will be submitted for publication to a leading journal in the field.

## Learning in Out of School Time

By Aria Razfar

Since April 2007, CEMELA has been actively involved in a consortium with other NSF-funded CLTs to share, develop, and disseminate our collective understandings of learning in non-traditional settings. The "LOST" (Learning in Out of School Time) consortium, lead by Bronwyn Bevin of the Center for Informal Learning and Schools (CILS), first met at the Exploratorium in San Francisco where each center presented the scope of its work and discussed possible ways for collaboration. Given the focus on informal learning, the principal participants from CEMELA were members of the After-School research team from UIC and UA. As a result of this joint activity and follow up discussions, four common questions emerged: 1) *What counts as mathematics and science in informal settings?* 2) *What is the role of language, culture, identity, and ideology in learning mathematics and science?* 3) *What are the bridges and barriers in learning across multiple settings?* and 4) *How can we conceptualize these practices and activities as hybrid spaces?*

During the summer of 2007, videos from across the sites were collected to address the first question: *What counts as mathematics and science in informal settings?* At the Bay Area Institute in August 2007, participants facilitated video roundtables around this question where a diverse array of scholars, practitioners, and other science/math professionals discussed and debated the issue. The collaboration on these questions has continued and will be the subject of an edited volume. The editorial team meets regularly to discuss the contents and scope of the book and CEMELA faculty and Fellows have made significant contributions to this effort to create what will hopefully be considered seminal work on informal learning. The LOST consortium has had several noteworthy meetings since the summer: first, at the University of Pennsylvania Ethnography Forum (February 2008) to discuss the edited volume on informal learning; and second at AERA in New York where we participated in an interactive poster session featuring work from all the centers. CEMELA's contribution to the consortium has been essential to advancing sociocultural views of learning especially as they relate to Latinas/os, bilingualism, and issues of equity and access.



## "Alumni" Fellows

**Former Center Fellows give an update on their new endeavors.**

### Ksenija Simic

In 2007, I left CEMELA to take on a new role: that of a mother. This fall 2008, I will be starting a new position at Pacific Lutheran University in Tacoma. I will be working in the mathematics department, as a mathematics educator. All my formal training was in pure mathematics, but in CEMELA, I learned about mathematics education through auditing classes offered by CEMELA faculty and reading the literature, but mostly through interactions with other Fellows, faculty, and PIs, and especially through the work in the after-school Math Club. I feel this experience prepared me well for this new position. During my interviews, the search committees were always impressed with the work I had done while in CEMELA. I am grateful for all the opportunities I was given and all that I have learned.

I intend to remain in touch with my research team, and I hope we will continue our collaboration. I am especially grateful for the mentoring I received from CEMELA faculty and PIs and am certain that I will continue to ask for their help when faced with challenges in the new workplace.

### Javier Díez-Palomar

Last summer [2007] I went back to Barcelona and am currently a Postdoctoral Researcher at the University Autònoma of Barcelona after two years working in CEMELA. I learned a great deal while working with parents and the after-school Math Club. In Barcelona, immigration has become an important issue. Now the schools are getting more and more students from different countries, such as Morocco, Ecuador, Colombia, Peru, China, Pakistan, and Romania.

In February 2008, my project, "*Formació de professorat per a una educació matemàtica de familiars en contextos multiculturals* [Teacher training towards a mathematics education for parents in multicultural contexts]" was funded. This project seeks to improve the quality of mathematics teaching and learning provided in Catalan schools by working with families. The idea is grounded in the parents' research approaches utilized in CEMELA and other projects. Currently, I have a group of parents in an elementary school in a small town near Barcelona, with people from Romania, Morocco, Colombia and other countries. Another parent mathematics workshop started recently in a middle and high school, with another group of parents (mostly immigrants from East European countries and middle Asia).

CEMELA has made it possible to disseminate work on parents' involvement in mathematics education to other parts

in the world. The project that I am reporting is another effort to understand how parent involvement works, in the particular context of the Barcelona area and more importantly, to provide resources and opportunities to parents who may not have had these opportunities because of their social class, ethnicity or immigrant status.

### Matt Ondrus

I am finishing my first year as an assistant professor in the mathematics department at Weber State University in Ogden, Utah. Due in part to the predictable challenges of starting a new position, the last year has been quite busy. In addition to the expected teaching and research responsibilities, I am the chair of the department's Math Education Committee. This means that I have jumped directly into things like choosing curriculum, deciding on requirements for secondary teaching majors, and observing student teachers. I am quite thankful for my opportunities observing and meeting teachers in CEMELA.

Nearly a fourth of Ogden's residents are Latino or Hispanic (according to the last census). Although there is little large scale data available regarding the success of Latino students at Weber State, I have personally struggled with some of the same challenges that other teachers face. For example, several of my students have had difficulties with ideas that they already learned in other countries (e.g. Mexico, El Salvador). In some cases, I (we) realized that the difficulties were notational rather than conceptual, and sometimes the solution has not been so simple. Slowly, but surely, I am improving my ability to ask questions instead of making assumptions.

### Hector Morales, Jr.

I am currently a visiting assistant professor in the College of Liberal Arts and Sciences at DePaul University, Chicago, IL. I am teaching courses for the Quantitative Reasoning Program. The purpose of this program at DePaul University is to help students become confident and critical users of quantitative information of all kinds.

I also am part of a planning team to develop an innovative graduate program in middle school mathematics education that is aligned with the NCTM themes of equity, curriculum, teaching, learning, assessment, and technology and grounded in research on learning and cognition. This is a partnership that brings together faculty and administrators from both DePaul University and The Chicago Public Schools (CPS). The program will lead to a Master of Science in Middle School Mathematics Education and will allow participants to meet the requirements for an endorsement in middle school mathe-

## "Alumni" Fellows...continued

matics. Data from the CPS Department of Program Evaluation indicate that in 2006-07, fewer than 5.5% of elementary teachers in the district are endorsed in mathematics. These same teachers teach to a large number of Latino students. My role has been to challenge faculty to think about language and culture as we design courses and professional development experiences for teachers.

### Cynthia Anhalt

I am currently working in the Secondary Education Program in Mathematics at the University of Arizona, Department of Mathematics. I continue to draw from the CEMELA experiences and knowledge gained during my fellowship. The most critical work that I continue to draw from is related to issues of equity and language in teaching mathematics, especially with students of diverse cultural and language backgrounds. More specifically, I draw from experiences in doing research in a Lesson Study setting with middle school mathematics teachers in a high Latino-student population school. I continue to reflect on effective teaching practices in professional development for mathematics teachers.

I value the knowledge gained from the experience of writing and presenting at national conferences. I continued my collaborations beyond the fellowship years and am anticipating a few publications this year from our work in CEMELA. Our collaboration has continued as our research and thinking evolves with respect to critical issues of equity, mathematics, and Latino students. I hope to continue to utilize my knowledge gained from CEMELA in future research endeavors.

### Anthony Fernandes

I am currently a first year assistant professor in the Mathematics and Statistics Department at The University of North Carolina at Charlotte. As a new faculty member, I have had to set up a research agenda and it is here that my experiences in CEMELA have proven valuable. I am working on expanding a study, which started in CEMELA and examines equity issues in assessments. Further, I am still collaborating with CEMELA members on joint papers on the initial study.

Currently, North Carolina has the highest influx of Latinos, and the education of Latino/a students has taken a high priority among educators. However, a deficit view of Latino/a students seems widespread in my discussion with educators. I often try to counter these deficit views through my experiences on various CEMELA projects with students, teachers and parents.

On a more concrete note, I was asked to create projects for our Masters students so that they can learn about issues in diversity and equity in mathematics education. Again my readings from CEMELA schools, resources from the CEMELA website, and my numerous interactions with the diverse CEMELA faculty helped me compile a list of projects.

Finally, I feel the caring nature of the CEMELA members has helped me in making this transition from a graduate student to a faculty a smooth one. The official CEMELA project will end some day, but my friendships with its members will endure for a long time making my CEMELA experience truly worthwhile.

## Teacher Study Groups: A Cross-site Collaboration Research Project with UA and UNM

By Sandra Musanti and Leslie Kahn

UNM and UA participated in a collaborative research study to explore how elementary teachers of Latino/a students reflected on their adaptation and implementation of a mathematical task. Informed by the notion that teachers strengthen their mathematical knowledge and instructional practices through participating in learning communities, our teacher study groups (TSG) provided a forum in which reflection and analysis of student work occurred. The teachers of UNM's study group taught grades K-8, while the teachers participating in the UA study group taught grades 3-6. Multiple schools represented in this study served predominantly Latino students in low socioeconomic communities with a high percentage of English language learners (ELLs).

Centered on the teachers' implementation of a fourth grade geometry measurement problem (NAEP,1996), the TSG teachers explored the task as mathematical learners and discussed possible challenges it might present to their students regarding language, culture, and mathematical understanding. Next, teachers adapted that task and implemented it in their classrooms. Finally, teachers reflected on the task implementation, focusing on students' language and mathematical understandings.



Data included: (1) videotaped study group sessions; (2) videotapes of selected classrooms implementing the task (three sessions at each site); and (3) semi-structured interviews with the teachers whose task implementation was



videotaped (three interviews at each site). Designed to provide teachers with the opportunity to reflect back on different aspects of the task implementation during the interview, selected scenes from the videotaped classrooms were shared with each teacher as a means to prompt reflection. Data revealed that the teachers reflected on: (a) practices they considered effective to support their students to achieve mathematical understanding; and (b) factors the teachers considered that influenced their work in the classroom.

Teachers identified several practices that support their students' mathematical learning: the use of appropriate mathematical vocabulary and students' native language; creating learning environments that foster peer interaction; availability of varied materials and resources to solve problems; review of concepts, and validation of students' responses and strategies.

In addition, teachers considered that multiple factors impacted their teaching, including: the adopted reform curriculum; their knowledge of students' dispositions for learning; students' prior knowledge and mathematical understanding; their previous personal and professional experiences as learners and teachers of mathematics; their expectations for students' learning; and the TSG professional development experience.

## CEMELA School 2007

By Susan Kolian and Lena Licón Khisty

UIC hosted the second CEMELA School for all project Fellows and faculty. Sixty-three people attended the School including John "Spud" Bradley, CEMELA's Project Officer from NSF along with three of CEMELA's advisory board members (Beth Warren, TERC; Nora Ramírez, Arizona State University; and Carne Barnett-Clarke, WestEd). We also had guests: Martha Alexsaht-Snyder, University of Georgia; Fellows from other CTLs (DiME and CTLW); representatives from SRI International and from the Spencer Foundation; and the project's evaluators, Joan LaFrance and Allison Titcomb.

The theme of the six-day gathering was "Latinos/as, Language and Mathematics." The School was designed to have a coherent set of experiences for all participants to consider the question: *As researchers, teacher educators, and*

*implicit contributors to educational policy related to Latinos in mathematics, what should we know and be able to do regarding language and/in mathematics?*

The School was organized around two sets of modules

each reflecting a dimension of language that impacts Latinos/as in mathematics. The first dimension or set of modules considered concepts

and research concerning bilingualism and second language acquisition, and how these relate to mathematics learning. The second dimension considered concepts and research related to discourse processes or language as social practice in mathematics teaching and learning (for example, how classrooms with Latinos/as are organized to promote or inhibit Latinos/as' speaking mathematically). We also considered how the language of mathematics relates to Latinos/as' learning.

The school consisted of three main activities that were designed to interconnect, foster, and enhance new perspectives and understandings: 1) the two course modules described above; 2) the Data Inquiry Groups where small groups examined these issues in real contexts as represented through videos and transcripts; and 3) the Think-Talk-Act Groups that focused on implications of the previous two activities for research, policy, and teacher development.

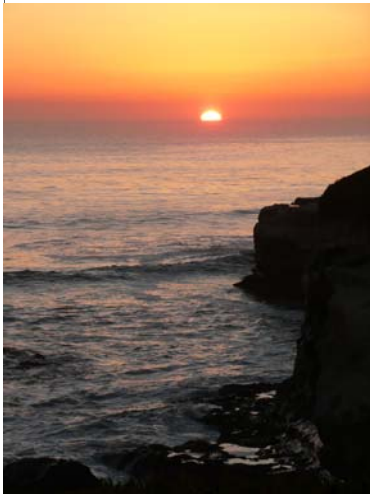
We also invited five teachers from UIC-CEMELA's partner school, Whittier Elementary, to co-conduct the Data Inquiry activity with Fellows in examining issues of language in mathematics. Whittier teachers have a long history of using inquiry, or action research, to better understand teacher-identified issues in the classroom, and during previous work with UIC, have developed a rigorous protocol that they use for their own inquiry activities.

The participation of teachers as "leaders" in research working groups was intended 1) to redefine teachers as having expertise; and 2) to give CEMELA Fellows experience working with teachers through action research. When asked what was gained from this activity, one fellow stated that, *"It was nice to have a teacher play the role of the research expert and present a different way of analyzing data. In our group, everyone commented that after doing this they realized how much they tend to jump to conclusions when analyzing data and how this method [using the protocol] prevents one from doing this."*

Overall, written evaluations of CEMELA School 2007 noted that it challenged conventional ways of learning and knowing, provided insights on the issues of language and mathematics, and brought participants together in new and productive ways.



## Research Symposium 2008



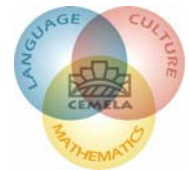
CEMELA at UCSC hosted the Research Symposium on January 18-20, 2008. The symposium brought together more than 60 participants to discuss center research projects and efforts to connect CEMELA initiatives to the work of other scholars in mathematics education.

Plenary guest speaker David Pimm (University of Alberta, Canada) gave a talk titled "Whom Have I the Pleasure of Addressing? Addressivity, the Spoken and the Written in the Mathematics Classroom." Guillermo Solano-Flores (University of Colorado at Boulder) also delivered a plenary talk entitled, "The Forms and Functions of Language: Implications for the Assessment of Mathematics Achievement in Linguistically Diverse Populations."

The CEMELA symposia are especially important as a venue for Fellows to present and receive feedback on their research. After morning presentations of four research papers, CEMELA Advisory Board members Kris Gutiérrez (UCLA) and Carne Barnett-Clarke (WestEd in Oakland), and the two invited speakers, David Pimm and Guillermo Solano-Flores, served as discussants giving feedback on the papers in small groups. The Fellows who presented their work were Heather Cavell (UA), Jesús Acosta-Iriqui (UA), and Mary Marshall (UNM). In addition to sharing their research work, this forum provided an opportunity for Fellows to participate in discussions on critical issues relevant to their work.



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### Upcoming Events

#### *CEMELA School 2008*

The University of Arizona will host the third CEMELA School June 22-27, 2008. See <http://math.arizona.edu/~cemela/>, Events, CEMELA Schools.

#### *UA: Mathematics and Language Summer Institute*

June 9-13, 2008. Twenty-five K-8 teachers from two Tucson public school districts with large Latino populations will participate. The goal is for teachers to deepen their mathematical understanding in proportional reasoning, reflect on their practice by analyzing students' work, and enhance their understanding of the challenges experienced by the ELLs while learning mathematics.

#### *UIC: Institute for the Improvement of Mathematics Teaching and Learning with Latinos/as*

June 16-19, 2008. The goal of the institute is to help 20 K-8 teachers rethink instruction and enhance mathematics lessons by integrating bilingual learning, writing, and content.

#### *UNM: Integrating Cognitively Guided Instruction with Bilingual Learners*

A series of summer professional development seminars will take place to prepare four NM teachers to share their expertise and successes with bilingual learners of mathematics. The teachers will prepare presentations for La Co-secha Conference to be held in Santa Fe, NM in November.

CEMELA Publications and Presentations can be found at  
<http://math.arizona.edu/~cemela/> → Research → Publications or Presentations