



## Community Engagement: School and Family Partnerships to Support Mutual Learning

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Community engagement can, and should be, a dynamic, reciprocal relationship between families and schools. So, what might community engagement in schools look like when we place parent voices at the forefront? Can mathematics be a context for this type of community engagement? In this article, we share our journey for a family-school partnership that began with parents' vision for how to meet educational goals for their students.

### Beginning our Journey

This journey began when a teacher contacted the UCLA Parent Project at the request of her parent community. In the first meeting, twenty-five parents shared how they volunteered at the school, took English as a Second Language classes, and attended all parent workshops offered. They envisioned more – as their children's first and most important teacher, they also serve as a strong resource for their children academically. They voiced that deepening their own and their children's understanding of mathematics was their first priority: "Teach these classes in our language, so we can better understand. This is not another way for us to learn English. We want to do mathematics in our language. Math is too important, I don't want to miss anything. When we learn, it helps our children learn too." The parents had already begun to research grants to fund their vision.

In collaboration, parents along with Moffett teachers, an administrator, and UCLA co-developed the goals, agendas, and structure of our work together. We set out to engage parents in mathematics through problem solving and conceptual understanding, drawing upon research and classroom practice informed by Cognitively Guided Instruction (Carpenter, et al., 2015). Goals included:

- Share our family's experiences with mathematics and learn from others' experiences
- Engage in a community of practice where we work on mathematics tasks together, share problem solving strategies, and consider how to support our children's mathematical development in both school mathematics and at home
- Promote a love of mathematics

# *Community Engagement: School and Family Partnerships to Support Mutual Learning*

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Moffett Elementary School is a neighborhood school. Parents believed the best time to hold the workshops would be immediately following the start of the school day since many families walked with their children to school. Parents worked with school administration to invite more community members to participate. They made personal phone calls and hung large posters at the school entrance to advertise the sessions. Everyone was welcome, whether they could come to all of the sessions or only one.

## Community Engagement Through Mathematics

We scheduled two ten-week series: the first to start at the beginning of the academic year and the second to commence after the Winter Break. Each session was two hours in length. We designed these sessions for active engagement: parents participated as learners and reflected on how their experiences (both as a learner in their own schooling experience and as a learner in these sessions) impact their views as a parent of their own children learning mathematics.

Mathematics we explored in the twenty workshops included:

| Series #1                                      | Series #2                                |
|--|--|
| Addition and Subtraction Concepts              | Fair Share & Fractions                   |
| Choral Counting and Counting Collections       | Geometry Concepts                        |
| Grouping Problems: Multiplication and Division | Algebraic Reasoning in Elementary School |

As a community of learners, mathematical dialogue was imperative for multiple reasons. We grow as mathematicians as we engage with others, and we grow as people who can support others through sharing our own and hearing about others' practices.

Parents spoke on expert panels to share their home and cultural practices around how they engage in mathematics as a family and requested teachers to visit the workshops to share and answer questions about classroom practices and goals around mathematics. Parents often tried ideas from the workshops at home with their children, such as posing mathematical tasks, noticing how their children solved those tasks, and asking questions to encourage their child(ren) to explain their mathematical thinking. They would readily share their ideas, noticing, and wonderings with the group at the next session. These conversations greatly shaped subsequent workshops as we learned more about our parents and their children.

Workshop attendance averaged 25-30 parents every week, with over fifty parents attending workshops that first year. Many parents did not miss one workshop.

## What We Learned

Parent involvement in schools can sometimes be limited to parents volunteering to help the school with tasks such as opening car doors during student drop-off, copying homework packets, and chaperoning field trips. At Moffett Elementary School, this involvement model shifted towards more authentic parent

# *Community Engagement: School and Family Partnerships to Support Mutual Learning*

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engagement as educators listened intently to what parents were interested in and took collective action to co-plan workshops around parent interests.

UCLA started as an external partner. Respecting and starting with their voices and goals, it was important for us to develop relationships with parents and educators. We custom-designed these workshops based on community interest, and continually engaged in ongoing debrief and reflection to make adjustments as we also learned from our participants.

Parents often shared how they felt during and after the sessions, in both formal and informal conversations. Some of these reflections are shared below:

## **Family Conversations**

A highlight for many parents was the stronger connection they felt with their children. Parents believed participating in these workshops impacted their relationship with family: both with their elementary children and older children. Families engaged in mathematical conversations at home as children grew interested in what their parents were learning. Parents and children could each share their problem-solving strategies. Parents' and children's confidence grew. A parent shared, "Show me what you learned mommy. Let's do math together."

Many parents noted that before the workshops, children would say, "You can't help me with my math work. That's not how my teacher did it." These conversations started to change throughout the year, as parents, children, and teachers encouraged and prompted for more than one way to solve mathematics problems. More mathematical conversations were taking place, in homes and at school.

## **Impact on Mathematics Identity**

Some parents felt successful with mathematics before, and now feel even more confident while others changed their perceptions of themselves as mathematicians and a source of knowledge and support for their children. Through reflection and interviews, we learned a lot about individual's dispositions. A parent of a second grader revealed that there were many times she struggled and felt like giving up. Yet, her tablemates would not allow themselves to move on unless the entire group understood. She revealed, "We are becoming a team with other moms. I was embarrassed because I did not have a higher education. I would see other moms participating a lot. There was a time I said I was going to leave. Why am I sitting here? But it was worth being here." One of her peers added, "I saw her being focused and persevering. She can do it, but hasn't realized that. If we don't have opportunity to learn, we all have our limits. Sometimes there are things that stop us, but when we persevere, then there is a change."

Another mother reflected, "Through our participation, I realized other things. I did not know I was good at math. Our self-esteem went up. We trust ourselves more. We interact more with others and are less shy. We learn from our mistakes as we help each other. We learned from our mistakes and maybe our mistakes are not that big. We are becoming self-assured, and we are helping our children become confident and self-assured."

Another parent added, "I would come home after the class, and my husband would say you look happy, you must have gone to math class."

# *Community Engagement: School and Family Partnerships to Support Mutual Learning*

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## **Developing a Culture of Problem Solving (as a learner and as a parent supporting children)**

Participants realized and appreciated multiple ways of solving mathematics problems and applied reasoning skills to other life situations. Parent comments indicate that this learning has translated to understanding their children both as individual learners and as individuals with unique approaches to problem solving. For example:

“Before I used to try to show my child how to solve the problems, asking him why do you take so much time, just do it this way. Now I realize the kinds of strategies kids use and how solving problems in your own way, in a way that makes sense to you, can be very helpful”.

“The teacher (UCLA facilitator) told us to get in the shoes of the children, children the age of our children, to see how they would solve the math problem. For me that was one of the most important things that I learned. To put myself in the shoes of my child.”

These parent insights support the notion that we can nurture children’s mathematical development by starting with what they know, celebrating those partial understandings and building on what they can do. This creates spaces for learners to feel and be seen as competent as we broaden our notions of what counts as knowing and understanding (Franke, 2017). For many, this is very different from our own learning experiences.

Many adults may have been seated in rows in their K-16 mathematics classrooms, quietly replicating steps the teacher demonstrated to solve a problem, and turning in work to find out if it was right or wrong. This approach to learning creates dependent thinkers – students who, for a variety of reasons, wait for the next instructions on how to proceed. This has led many learners to believe they are not good at mathematics. This belief can occur very early. My own niece (from a different school), shared with me that her little sister, who had just completed first grade, didn’t like math anymore because she always had a lot of red marks on her math paper. These red marks did not honor what she could do nor help her to grow as a mathematical thinker.

Through our time together, Moffett parents gained a greater understanding of school mathematics while simultaneously growing as a supporter of children. For example, a parent of four children, commented during a workshop, “I was wondering why on my child’s homework last week, it asked her to break up 12 into a 10 and a 2 to solve multiplication problems involving 12. And when we solved the problems today, someone used that strategy. I see how thinking about 12 as a 10 and 2 made the problem easier for her to solve today. And, I know this is just one way to think about the problem.”

## **Academic Support & Leadership**

Academic support can be seen in at least two settings: at home and in classrooms. Parents felt better equipped and confident to support their children in mathematics. One parent shared that she realized that although the teacher in the classroom has many students, she, as the parent, is her daughter’s first teacher. The teacher is half of the equation and the parent is the other half. Together they can make a difference for her child.

## *Community Engagement: School and Family Partnerships to Support Mutual Learning*

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Another parent described her personal growth over the year, feeling that she enhanced her skill in helping her child. She realized there were many parents who could not attend the workshops. A group of parents partnered with teachers by volunteering in classrooms during mathematics instruction.

### **Advocates for Education**

Parents see themselves as leaders who can affect change. A parent states, “This year our school lost their parent coordinator. I know the importance of having guidance. How can there be a parent center without a guide? So I said I have to do something. I asked myself how can I help? Even if I wasn’t the leader. I could provide ideas to move us along. A committee was formed with five parent leaders. There had to be a speaker among us to move us along.” Parents have created their own distributed leadership model through voicing their ideas and taking action for implementing their vision. Administrators share, “Parents seeing their ideas heard was very empowering. The course was practical and hands on. They tried ideas at home and volunteered in the classrooms. They made it a point to tell me what they did. They saw themselves as really capable. They are taking on more and more things. They are seeing themselves as leaders. Parents are more understanding about the processes we are handling at school. They know the school routines, the materials, the school’s struggles. They help the children. They help the school. There are more parents participating. I think the manner of the class helped a lot. Parents are feeling more capable, more active, and speak up for what they want. Not afraid to give their opinion and are more insistent about their ideas being tried. Now we have a strong parent group and there is more voice in what they choose to do.”

## Possibilities and Opportunities Continue to Grow when Schools and Parents Engage in Collective Work

Parents are their children’s first and most important teacher. They are powerful allies in supporting children. Children benefit when schools and families engage in mutual learning. We can shift our focus from what schools can do for families to include explicit efforts for schools to also learn from families as we work together to support our young people. This approach positions community members as co-constructors, collaborators, and valuable team members. At Moffett, we see sustained engagement from all stakeholders – parents, educators, and students as we learn, take action, and grow together.

It takes a village to create a learning community. Parents’ unwavering goals and commitments to their children’s success started this effort. Did children grow as mathematicians? Yes. Did parents learn mathematics and deepen their understanding of the development of children’s mathematical thinking? Yes. But, this work encompasses so much more. Families and schools work together to create spaces of learning for children, parents, and educators. All are vital for continued growth. Our journey did not end after one year. It has since blossomed into a thriving five-year partnership where parents are facilitating math and science family nights that draw in over four hundred participants. They are leaders who positively impact their community.

We continue to learn and be inspired by their work.

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## About the Author

Dr. Carolee Koehn Hurtado is an Assistant Professor of Education at California State University, Channel Islands. Prior to this role, she was the Director of the UCLA Mathematics Project and the UCLA Parent Project, where she had the fortunate opportunity to bring teachers and families together to support children's mathematical thinking. This work has deepened her understanding of how mathematics can be a means for challenging inequities in schools.

## References

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