

Home Visit Training Part of STEM Teacher Prep for Success

National Science Foundation Funds \$1.9 million for Unique Partnership



Mother, student and teacher,
Sacramento, CA.

SACRAMENTO – “Your country needs you,” said President Barack Obama in his 2010 State of the Union Address, which lifted up the demand for teachers with STEM credentials, proficient to teach Science, Technology, Engineering or Math. Numerous programs and incentives have been launched since then, aimed at reversing the declining number of teachers qualified to teach STEM subjects. But raising the STEM capacity of the US population requires more than simply increasing the number of teachers who can solve differential equations.

Education policy makers, responsible for billions of dollars in funding, are asking how may this cadre of new teachers be better prepared than their predecessors? What new strategies will lift American math and science test scores on par with leading nations? How will new teachers be equipped to lead a culture change around these “nerdy” topics? And, how will new teachers be ready to reach out to a public school population that is now over 50% students of color, with a majority of students from low-income families, who have been vastly underrepresented in the STEM fields? The answer lies in connecting with families of students, in the comfort of their own home.

Family Engagement Key to Growing STEM



Asst Professor Dale Allender,
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If STEM teachers want to be effective, they have to engage not only their students, but also their families, say professors at Sacramento State’s College of Education, citing research that shows investment in family engagement pays dividends in improved student achievement. In their curriculum planning to credential STEM teachers, the faculty tapped a nationally recognized best practice in family engagement, Parent Teacher Home Visits.

“We are extremely fortunate to have access to the highly acclaimed Parent Teacher Home Visits, an innovative effort to connect teachers and families that has become a national model, and which last year, received two national awards¹. In collaboration with our main partner, the urban Sacramento City Unified School District, PTHV will offer cultural competency and home visit training to our scholars, and the district has committed to offering this same training to their teachers,” said Dr. Deidre Sessoms, Director of Faculty Research Development and Professor in the College of Education at Sacramento State. “We believe that this partnership will significantly contribute to the Scholar’s future success in high needs schools. We have found that while some students

“We are extremely fortunate to have access to the highly acclaimed Parent Teacher Home Visits, an innovative effort to connect



Sacramento State University STEM teacher credential candidates roleplay outreach to students’ family members in home visit training.

bring heightened maturity and a wealth of experience to the teaching field, others are at first taken aback by the challenges inherent in high needs schools. PTHV can assist in the transition.”



Parent Teacher Home Visit, Anaheim, CA.

Founded by parents with the support of community organizers and teachers in a low-income neighborhood of south Sacramento, Parent Teacher Home Visits is a nonprofit that trains teachers to establish meaningful relationships with their students’ families, starting with a voluntary home visit. Evaluations show multi-directional impacts, such as higher test scores, improved school climate, increased family participation at school, and increased skills, empathy and job satisfaction for educators. The model has been successfully adopted across the US, and has been lifted up by the Harvard Graduate School of Education and the US Department of Education as a “high-impact” strategy that enriches educators and families as well as the children they team up to support.

Parent Teacher Home Visits was invited to join this unique STEM teacher preparation partnership between Sacramento State’s College of Education, the area’s three largest high-needs school districts – Sacramento City Unified, San Juan and Elk Grove – and Next Ed, the Sacramento Metro Chamber’s workforce development affiliate. This year, the partnership successfully approached the National Science Foundation for a five-year, \$1.9 million grant dedicated to helping middle and high school teachers become leaders in STEM subjects.

“This project is an investment by the federal government in the economic future of our students, our region and our country,” says Congresswoman Doris Matsui.

The primary benefit of relational home visits, according to evaluationsⁱⁱ, is student progress, with the following outcomes improving the bottom line of student developmental and academic growth:

- Increased attendance
- Deeper connection with adults at school and home
- Improved behavior, including significant reduction in suspensions and expulsions
- Higher academic performance, including test scores



Lysette Lemay of PTHV leads home visit training with Sacramento State STEM teacher credential candidates.

Home Visits, Cultural Capacity Building and Growing STEM



Parent-Teacher Home Visit, Denver, CO.

A significant reason that Parent Teacher Home Visits are so effective at bringing teachers and families together is the model's directive to question and let go of any previously-held assumptions. Educators say that any unconscious bias or stereotypes they may have had about the family is replaced naturally by first-hand knowledge learned from 1-1 interactions. Similarly, parents or guardians who have negative attitudes about school, possibly from their own experience, are often impressed by teachers who care enough to sit down for a chat.

This relatively fast and inexpensive way to build relationship and break down assumptions is significant when considering how to increase participation and proficiency in STEM. STEM-related fields are predominately populated by white males, and their leadership hasn't figured out how to attract and keep a diverse personnel base, despite the fact that job openings and salary levels are growing faster than other sectors.ⁱⁱⁱ Outreach to families of color and girls is key to growth.

At the same time, students of color are now the majority in US public schools, yet, like STEM employers, the majority of teachers and administrators are white and middle class, and do not live in the neighborhoods where they teach. Educators have little or no practical training in cultural competence and also may not understand historic reasons for mistrust and low parent involvement. As students of color attempt to close the "achievement gap" of lower reading and math scores, they face disproportionate remedial tracking, failures, suspensions, as well as disparities in infrastructure, teacher quality and per-student spending.^{iv} Students of color, especially girls, are less likely to have role models in STEM fields, or family and community connections to educational or career opportunities such as summer institutes, internships or job openings.

Parent Teacher Home Visits interrupt inequitable dynamics (whether historic, institutional and/or individual) as they build the capacity of teachers to partner effectively with the wide diversity of families in public schools. What does that mean for expanding STEM capacity? Here are some example outcomes reported from actual home visits with students from Kindergarten through High School:

- A teacher is surprised to see a computer in the public-housing apartment of an African-American family, and reflects on her unconscious assumption that the parents were not tech-savvy.
- A teacher draws upon knowledge of her students' homes and references them in math word problems, engaging both boys and girls with personal details from real life.
- A teacher learns of a Mexican-American girl's passion for video games and refers the family to a free summer camp that teaches programming and game theory.
- A teacher sees a Hmong-American grandfather's lush greenhouse at home in Minnesota and asks him to help in the classroom during a unit on climates. The grandfather then leads a successful effort to start a school garden, which is integrated into the science curriculum.
- Parents reconsider their refusal to allow their daughter, who has an A in AP Chemistry, to apply to college when a teacher and counselor walk them through the FAFSA financial aide process.

How Do Home Visits Work?

A Relational Model Based Upon Empowerment Principles

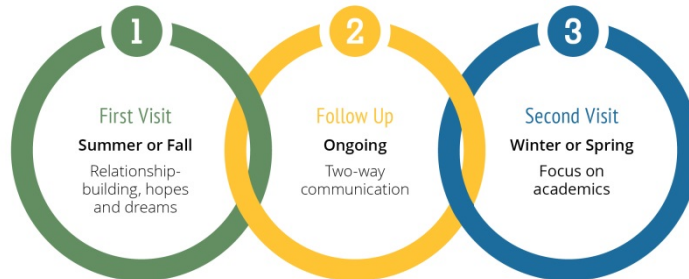
PTHV stresses five core “non-negotiable” practices that create trust, safety and growth for all involved:

- Visits are always voluntary for educators and families, and arranged in advance.
- Teachers are trained, and compensated for visits outside their school day.
- No targeting – visit all or a cross-section of students so there is no stigma.
- Focus of the first visit is relationship-building.
- Educators conduct visits in pairs, and after the visit, reflect with their partner.



OUR FIVE NON-NEGOTIABLE CORE PRACTICES

Teachers getting STEM credentials at Sacramento State are given a three-hour training in the PTHV model, which has three stages:



1st Home Visit (Summer or Fall): Educators focus on getting to know the student and the family. The educators and the family members share their experiences, their hopes and dreams for their child, and their expectations of each other. The conversation naturally leads to the educator and the family identifying how they will help the child with their goals.

Follow-up: Now that there is an ongoing relationship, family members and educators may share resources and continue their communication. Teachers may use what they learned from the family to improve the child’s experience in the classroom, and enjoy a stronger relationship with the child. Families may find new or additional ways to be involved with the school.

2nd Home Visit (Winter or Spring): Educators meet with the family again, with the focus on how to support their child academically. Sometimes schools offer Academic Parent Teacher Teams or other ways parents can get up to speed on grade-level standards and specific strategies to help their child learn.

At the high school level, teachers and counselors often do College and Career Readiness visits as the 2nd visit.

Quotes from teachers in the STEM credential program



Ashlee Teczon, STEM Single Credential Candidate, Fall 2016 program, future Biology teacher:

“When I first heard about this, I won't lie, I had a little bit of anxiety and I was like, ‘What? I might have to go visit somebody's house? Oh my gosh. A student's home? Okay. I can do it in the classroom but can I be in their home?’ It really made me nervous just to think about it.”

“I always like personal testimonies and I like research. (The training) showed the positive impacts home visits have on students. The whole point of me becoming a teacher is what kind of impacts I can make on my students. If this is an extension of building a relationship with my students, then I'm all for it.”



Gage Flowers, STEM Single Credential Candidate, Fall 2016 program, future Math teacher:

“As a math teacher I'm afraid it is especially hard to engage families. For a lot of parents, math is going to be their worst subject just like it is for a lot of students in high school right now. They think, ‘Oh, math teacher - I just don't even want to deal with this right now.’”

“After the training, I feel like home visits can be a great tool. I'm going to try to make some time next year, even if it's only one student. From there, I can build onto it. The first phone call home will be hard. I think once I do it, though, I'll get over it and I'll be like, ‘Oh, this is actually a good thing.’ Then I'll want to do it more.”



Vitaliy Pulber, STEM Single Credential Candidate, Fall 2016 program, future Chemistry and Biology teacher:

“I feel like I can totally see the effectiveness of this. I really liked hearing from the first-year teacher that used home visits. He said ‘I don't have any more bullets in my chamber. I want to try this because I don't know what else to do.’ And that worked for him. His testimony stands out to me because it's more relevant than a lot of theoretical things thrown at us in this program. That was a huge thing for me, as far as, ‘Will you use it?’ Most definitely.”

“I thought the training was great. I just really think it's awesome how it's always on a positive note, and positivity always brings hope. We're asking them about their hope and dreams, overall, for their child, right? It takes that triangle to teach a child. But, if the parent is missing, then it's just a line. I'm a math pro, right? For a stable structure, it's about triangles.”



Anonymous, Spring 2016 program, White male math major, future math teacher:

“The Parent Teacher Home Visits workshop was one of the professional development activities I found most helpful. The moderator and the teacher who lead this activity sincerely believe in the importance and in the effectiveness of this project. They effectively communicated to us that the school sites implementing the home visits have decreased suspension and expulsion rates, increased student attendance, increased student test scores and decreased vandalism. I valued a great deal getting informed about this project, and I was inspired and enjoyed very much the moderators sharing their personal experiences. It seems like innovative and creative approaches such as this project may help to engage the community. I was very happy to see their results. Also, the accomplishments of the Parent/Teacher Home Visits Project demonstrated how important community engagement is for the students to building trust and respect, and to develop cultural sensitivity and validation.”

Anonymous, Spring 2016 program, Latino male math major, future math teacher:

“The Parent Teacher Home Visits was my favorite professional development opportunity. I learned so much about how to build a strong relationship with my students and their families. The information and experiences from the presenters were very informative and helpful to me. I really learned a lot of new methods to build relationships with my students and their families. This will help me in the long run as an educator and I want to thank you for providing the opportunity to be a part of this.”

Anonymous, Spring 2016 program, Asian female biology major, future biology/chemistry/math teacher:

“It was very informative and a useful approach to reach out to parents and students in ensuring academic success for each student. I learned that parents played important roles but at times teachers do not know how to go about reaching out to them in a personable and relatable way. Through home visits, teachers are able to gain the support and teamwork from the parents of their students.”

ⁱ The two awards given to PTHV: Innovative Family Engagement Strategy for Systematic Education Reform, by the National School Family and Community Engagement Working Group, and the Bright Idea Award by the Ash Center for Democratic Governance and Innovation at the John F. Kennedy School of Government, Harvard University.

ⁱⁱ For results of independent evaluations, case studies and testimonies, see www.pthvp.org/what-we-do/results/

ⁱⁱⁱ “STEM Workforce No More Diverse Than 14 Years Ago,” US News and World Report, 2015

^{iv} For sources, and more discussion of home visits and socioeconomic equity, see [Equity Strategy Issue Paper](#) in the Toolbox at pthvp.org.