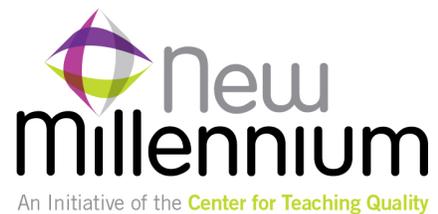

Many Ways Up, No Reason to Move Out

**By the Teachers of the
Bay Area New Millennium Initiative**



TeacherSolutions: Many Ways Up, No Reason to Move Out

By the Teachers of the Bay Area New Millennium Initiative

Prologue: Motivation to Teach

We are teachers, diverse in experience but united in our goal to make a difference for children. We teach in a variety of schools throughout the Bay Area in California, including an elementary charter school in East Palo Alto, a middle school in Alum Rock, and an inner-city Oakland high school. We entered the profession through myriad routes, from Teach for America to the Oakland Teaching Fellows Program to the Stanford Teacher Education Program. Several of us brought experience from other fields, such as pharmaceutical development, public safety, documentary filmmaking, and international human rights, which enriched our knowledge and skills as educators. Although our pathways are diverse, we share common principles that motivate us as teachers. (See Appendix A for our bios.)

Change is needed—and we want to be a part of it.

We are not satisfied by the status quo. We realize that the majority of today's schools—including some of our own—are not meeting children's diverse needs. That is why we are actively involved in pursuing change—the type of change that will benefit the students who need it most. “I entered the teaching profession,” says our Hayward colleague Andrew, “because I was—and still am—disturbed about educational disparities in the United States, specifically the achievement gap of Latino and African American students compared to white and Asian students.” For Andrew, teaching was a political act. “I wanted to become an agent of social change by being a quality science teacher in an urban area.”

The slow pace of change is a source of frustration for us; therefore, we do not simply sit on the sidelines waiting for others to bring about change. Instead, we have joined a cadre of our peers from across the United States to build a movement for reform through the Center for Teaching Quality's New Millennium Initiative.

Our colleague Lilla from Everest (a Summit public charter school) shares her intolerance for inertia in education as she discusses her decision to enter the profession:

It would be nice to say that I became an English teacher because I'm so passionate about literature that I wanted to inspire the next great American novelist. I do love literature and want my students to love it too, but the truth is I am too impatient to wait for good public policy to save the world. I became a teacher because I want to see change enacted every day in my students' revolutionary ideas. I hope they walk away from my classroom as confident, thoughtful communicators. I love watching my students' hard work turn into opportunity.

We view public schooling in America as a vital civil right. The greatest hope for children of poverty is an excellent education.

Our students come from all walks of life, yet many of them face everyday struggles for survival. Ensuring that each child—regardless of their zip code—receives a rich, comprehensive curriculum in an interactive learning community drives us continually to enhance our effectiveness as educators. “I always wanted to develop awesome relationships with young people, to have the opportunity to provide them with the supports they need as they move throughout school,” reflects Jessica from Fremont. “I became a teacher to make an impact on the lives of children, and to be part of something meaningful,” notes our colleague Marijke who participated in the Oakland Teaching Fellows Program. “I chose to forge my teaching career in Oakland because education is a human right, and I am committed to joining with underserved communities to ensure that we have publicly funded schools that are accountable to the populations they serve.”

Sherene, who entered the profession through Teach for America (TFA), feels similarly about working with children from low-income communities. She observed firsthand the cycle of poverty in her career before teaching:

I used to work in legal services where countless people would call in time and time again with the same legal problems of poverty: an eviction one month, a bankruptcy three months later, another landlord-tenant problem nine months down the road. Same client and same issue: not enough money. I applied to Teach for America, hoping to provide an avenue out of the constant state of crisis that poverty is, even if I only reached a student or two, I love the kids and disparage the inequities, so I decided to stick with teaching.

Our inspiration as teachers comes from our own experiences as students.

Many students in today's schools feel disconnected from the learning process. Our Hayward colleague Marisa shares her perspective as a disengaged youth in public school:

I was deeply curious about the world, but I did not see how my class work had much to do with my life. In college, I tutored many first generation and low-income college students, who, like me, had arrived at college without much experience using school to explore their own questions or develop their own academic voices.

Marisa found her voice as a teacher and now is an outstanding one looking for new ways to improve education. She, along with the rest of our team, insists on making the teaching profession more results-oriented. However, as teachers, we want to ensure our students have the opportunity to discover learning through authentic means, not just through standardized accountability measures.

We want to inspire them to have a love for acquiring new knowledge like our colleague Taica in San Francisco experienced:

My high school math teacher inspired me to enter the teaching profession. Ms. Nakayama had an irrefutable passion for math and structured a classroom where learning was revered. I want to instill the same love of learning in my students, while deconstructing math in a manner that allows students to access their strengths.

While the road to reform may be difficult, we stand resolute that change is needed. Improving teaching quality by better preparing, developing, and supporting teachers will increase the educational outcomes for students.

The Challenge

Every student deserves a high-performing teacher in *every* classroom, *every* day. But in districts like ours—particularly in school communities where poverty is common—students may not have a high-performing teacher in *any* class.

Indeed, the view from the classroom door is bleak. If a teacher is lucky enough to make it through her first five years, only two out of five teachers who began with her will still be there. The other classrooms will be filled by a revolving door of teachers—first-year teachers, under-qualified teachers, and “temporary solutions”—creating classes of chronically underserved students who move through schools without ever achieving commensurate levels of educational outcomes as their peers who live across the freeway.

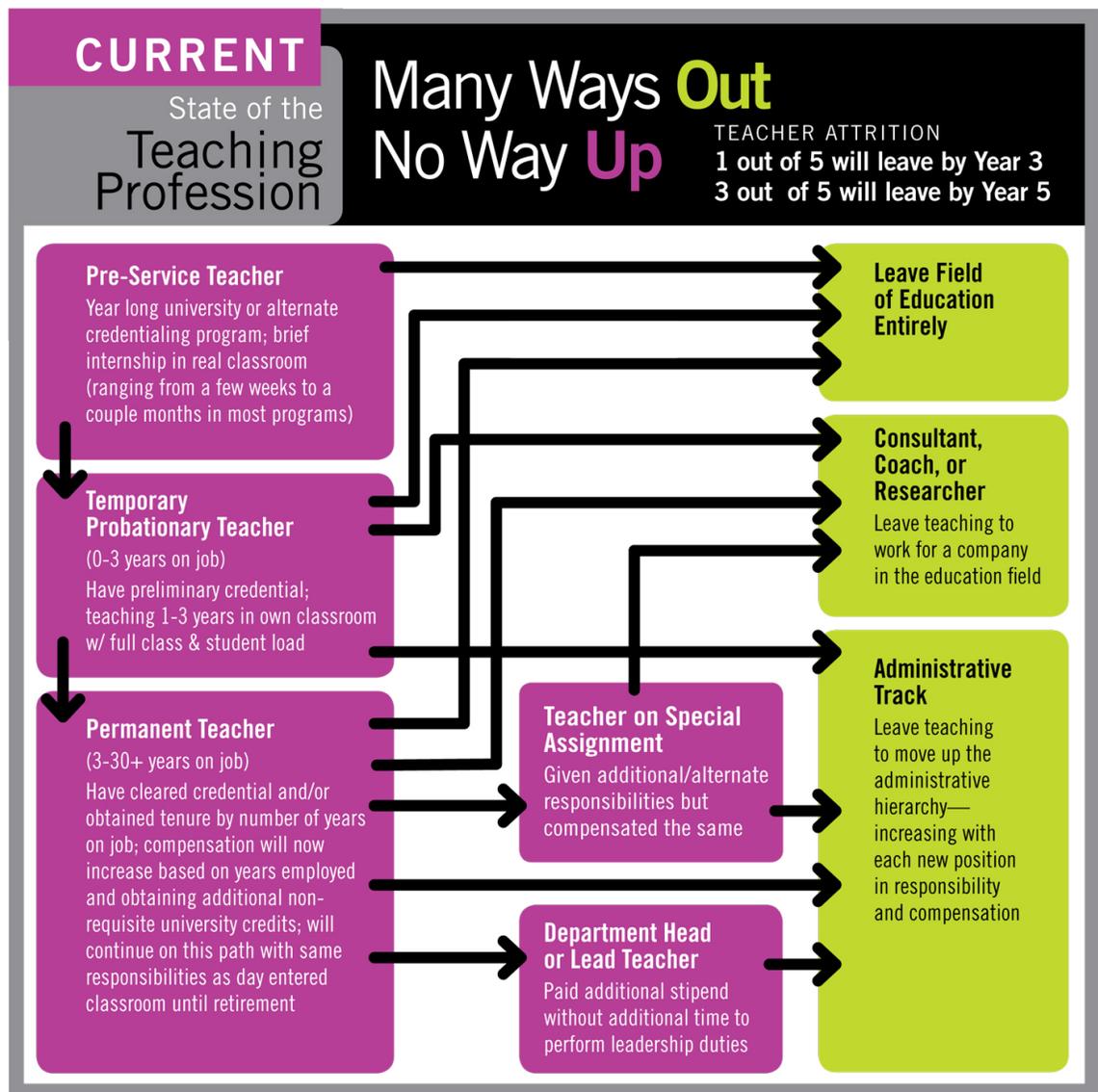
The current policy realities in Bay Area schools incentivize experienced teachers to move on to more highly paid positions in affluent districts and do little to support the young teachers who inevitably take their place. This is not just an “urban” problem—recruiting, hiring, and retraining replacement teachers costs the nation \$7.34 billion annually¹—but the price is disproportionately paid by schools with high-poverty, high-minority, and/or low-performing student populations.

Consequently, nowhere is a solution to this problem more urgent than in schools like the ones where we teach. New teachers in these schools are not only underprepared for all of the traditional teaching tasks, lesson planning, classroom management, instruction, intervention—but they are also woefully unprepared for a host of nonacademic needs associated with children who live in poverty. Unfortunately, the system for professional development does little to continue the learning for these teachers once they enter the profession either. Effective teachers with the knowledge and expertise to assist their young colleagues have few structures in place to help them lead and offer support.

No first-year medical resident is given a scalpel, an operating room, and multiple surgeries to perform on her first day. No law intern argues a case by himself at his first court appearance. No rookie is the starting pitcher on the first day of his team’s season. Yet we continue to throw our beginning teachers into challenging environments without a support system in place to coach them in their learning and development. And unfortunately, in the end, the kids are the ones who suffer the most as a result.

Current Realities

Unfortunately, all too often many children, especially those in high-needs schools, do not experience the opportunities for educational excellence that we envision. Economically disadvantaged students and those of color—the kids who are most at risk for low achievement—are more likely, for example, to be taught by less-experienced, less well-prepared, and overall less-effective teachers.² In addition, these students often face a narrowed curriculum with rigid remedial courses to assist them in test preparation. Their teachers frequently work in environments with sparse resources, weak professional development programs, and inconsistent leadership. As a result, they may feel overwhelmed by a multitude of challenges, including those described below.



- **A reliance on standardized testing as the measure of effective instruction:** Unlike the lean standards of other nations, teachers are expected to teach a laundry list of fact-based standards. This overemphasis on facts takes attention away from pushing students to solve authentic, real-life problems and think critically. Instead, it directs learning to the narrow band of knowledge and skills that can be easily assessed by paper-and-pencil tests. “I don’t know anyone who enters the teaching profession hoping to increase their school’s API (academic performance index, which is based primarily on student test scores),” reflects Dave from Oakland. “They want to teach because they have an interest in students’ learning, which goes way beyond standardized tests.” Most new teachers end up in schools with low APIs, which hinders their creativity and focuses their attention on test preparation because they feel as if that is their only option. Testing companies keep a tight lid on the underpinnings of these assessments and create them without the input of classroom educators, which further results in teachers feeling a lack of respect for such products as objective and valid measures. Alberta, Canada, presents an interesting alternative with the role both teachers and their students play in the development of the Provincial Achievement Tests and Diploma Examinations.³ Educators there feel more ownership for the assessments because they are teacher-developed and require students to use more than rote memory to recall facts.
- **Lack of time for collaboration:** Current school schedules prevent innovative use of time during the school day, leaving teachers with limited availability for collaboration, planning, reflection, and leadership. Our colleague Andrew, from Hayward, now serves as a team leader, but worries about the sacrifices he must make. “I am the eleventh grade lead teacher at my new school this year, and I don’t have any additional preparation time for this role. Although I am excited about the challenge of supporting other teachers, I am concerned that I will have to compromise some time that I would dedicate to my students.” Teachers should not have to choose between helping their students and working with teams of their colleagues to improve instruction. Creatively structuring the school schedule can allow for teacher leaders to serve their school communities in productive ways. In order to make this time truly productive, however, teachers must be trusted as professionals to structure their day in ways that best meet students’ needs rather than following tightly controlled meeting schedules and protocols from administrators, which ultimately become another drain on their resiliency.
- **Dwindling budget dollars:** “California schools are struggling so mightily with their budgets that paying teachers to work without children in the room is becoming more and more difficult,” reflects our colleague Dave from Oakland. Additionally, the dollars that used to be available to support teachers’ professional development plans have long been directed to other budget line items, especially for spending millions to purchase the newest textbooks, which textbook companies have promised will raise student test scores. We remain hopeful that—despite the budget challenges—decision makers will find ways to reprioritize the money available and create conditions that allow teachers to provide the best possible learning opportunities for all students. Marisa from Hayward shares this idea: “Teachers could lead professional development, decreasing the need for external consultants. If professional development was relevant and differentiated for teachers based on their experience and

subject, perhaps evidence of it would actually be reflected in student outcomes, and the district would not feel the need to purchase new curriculum every few years in search of the perfect textbook.”

- **Ineffective school leadership:** In many high-needs schools, the teachers are not the only ones unprepared. Many administrators begin their careers as teachers, but leave the classroom well before they really learn how to teach. In fact, principals may be assigned to schools that do not reflect their own classroom experience (e.g., a former elementary teacher being hired at a high school as an administrator, or a suburban teacher thrust into an AP role in a high-poverty setting). Further, novice administrators may be placed in high-needs schools without support from their more experienced peers. “The attitude of many teachers is just to go on about their business and fill in where the administration lacks capacity,” our colleague Marisa shared. “Although this allows teachers to give extra help to some of their students, the lack of unity and support from the administration makes it impossible to utilize the real potential at a school site.” The lack of good leadership skills often leads to piecemeal, “silver bullet” reform initiatives that inexperienced school leaders believe will “fix” complex educational systems. This top-down view of reform hinders teachers from working collaboratively to make informed decisions with their administrators about what will work best in their specific context. In the end, the major disconnect between teachers and their administrative leaders results in a lack of shared language and vision and lower student achievement.

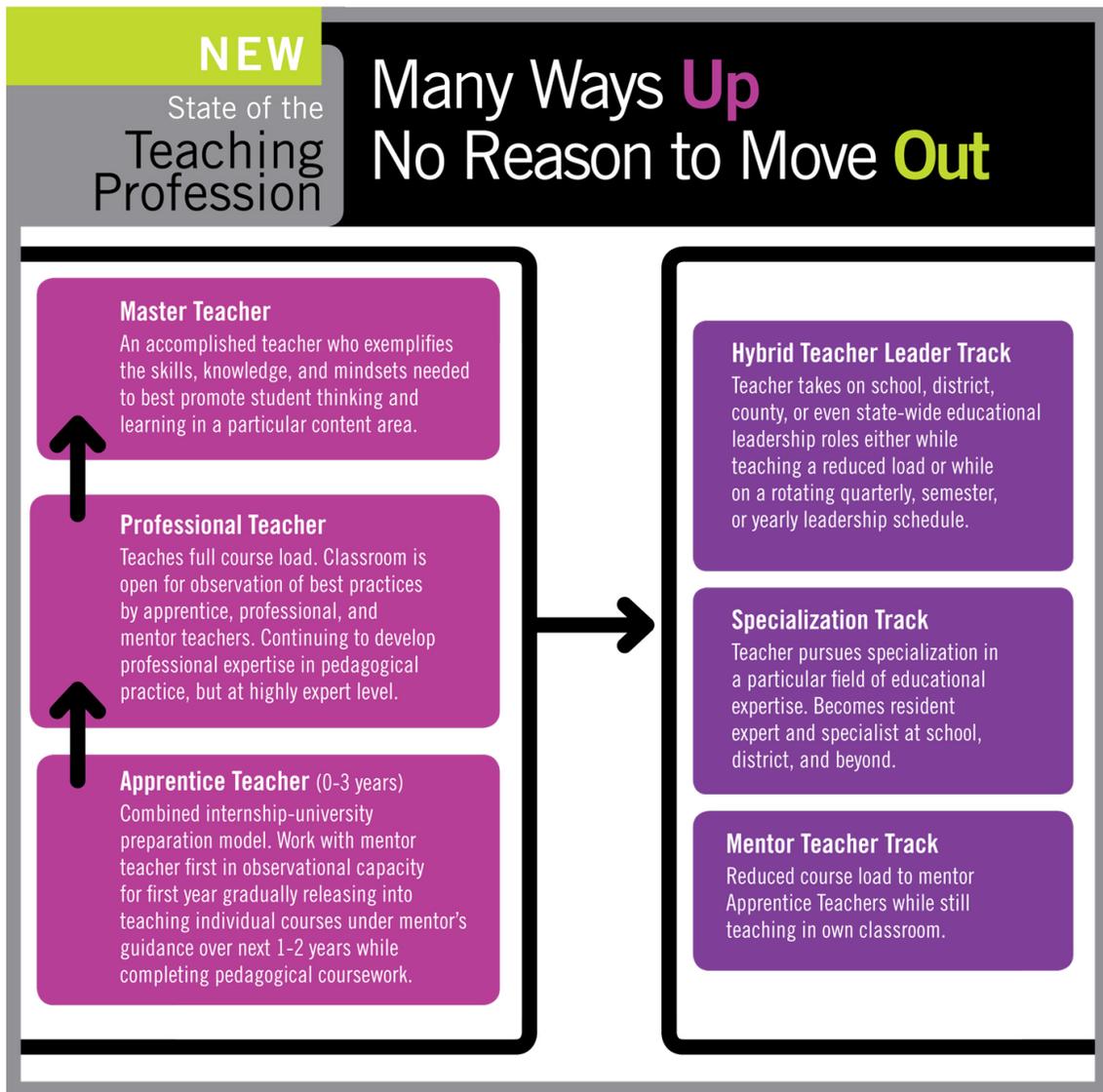
Vision for Change



While we recognize the tremendous challenges that our colleagues face each day, we still stand resolute that positive change is possible. Our proposal for reform is based upon the premise that improving teaching quality by better preparing, developing, and supporting teachers will increase the educational outcomes for students.

Teaching effectiveness has long been found to be the single most important in-school factor influencing student success. With the myriad challenges found in today’s schools, we believe investing in the preparation, development, and support of high-quality teachers will make the most difference for our nation’s children. Consider these statistics: the U.S. Department of Education estimates that 2.2 million new teachers will be needed before 2015.⁴ While teacher recruitment and retention go hand-in-hand, researchers agree it is more important to address retention because teachers are leaving faster than they can be replaced.⁵ John Merrow, an education correspondent at PBS, phrases the problem well: “The pool [of effective, available teachers] keeps losing water because no one is paying attention to the leak. ... We’re misdiagnosing the problem as recruitment when it’s really retention. ... We train teachers poorly and then treat them badly—and so they leave in droves.”⁶

Below, we outline three key strategies for plugging the “leak” with supports for highly effective teachers through a new multi-tiered system of career development, which includes **Apprentice**, **Professional**, and **Master Teachers**, with leadership tracks for **Mentors**, **Specialization**, and **Hybrid Teacher Leader** roles. We begin with teacher preparation.



STRATEGY 1: Preparing New Teachers for Today and Tomorrow

If high-needs schools are at particular risk of losing the very teachers who could help students learn, is it even possible for them to increase the numbers of effective teachers on their staffs? The answer could be as simple as the fact that the knowledge and skills for effective teaching look different in different kinds of schools. Preparing teachers *specifically* with the knowledge and skills they need to be effective in high-needs schools can make a difference.

It may be that the characteristics of pre-service teachers' learning experiences or the development of teaching dispositions during those experiences are more important to later retention and effectiveness than the particular pathways they access to reach the classroom. One likely characteristic of better training practices, along any pathway into the profession, is a longer in school clinical or "student teaching" experience.⁷ The skills needed to teach cannot be acquired in a few weeks, and teachers need ongoing mentor support to develop their expertise.

In addition to longer, more relevant clinical experiences, other “best practice” characteristics of high-quality preparation programs include cohort collaboration (where student teachers are placed and work with several of their pre-service peers in the same school) and on-site mentoring.⁸ This can have a significant impact on new teacher productivity and their overall effectiveness during their early years. The prevalent “sink or swim” style of induction is working for no one, including students. The bottom line appears to be that the specific preparation pathway matters much less to effective teaching than the content of the preparation itself.

There is a popular view that teachers are “born and not made,” but most teachers feel that the bulk of effective teaching work is, in fact, not a mystery. Teaching involves a vast set of skills that are acquired over a period of time and become systems of learning. Most preparation programs misidentify the skills necessary for effective teaching and/or misidentify successful ways to teach these skills. Anna, our colleague from Alum Rock and a TFA alum, explains, “Observing a master teacher making teaching decisions and then attempting the new strategy oneself, with guidance, gives the observing teacher confidence. It becomes much more likely that the observing teacher will actually use the strategies in the future.”

Teaching theory is not always easily translated into teaching practice, and this gap can be wider depending on the school environment in which a teacher actually works. Different schools and districts require teachers to use different ideas and strategies. This is why teachers should not be prepared for just one type of school—and why universities, which are not beholden to any particular district, should have a strong role to play in the future of teacher education.

As a result of our deliberations, we propose a new model for teacher preparation that extends the learning period and capitalizes on the knowledge and skills of highly effective teacher leaders. Policymakers and higher education institutions should consider these innovative recommendations for teacher preparation reform.

Pathways for Preparation

A 2008 examination of evidence on teacher education found that teachers with more extensive clinical training (including a full-year internship) before they begin to teach produce higher student achievement gains. In a study of both traditional and alternative pathways into teaching, the researchers – using a large and sophisticated database – found that teacher education programs that produce higher student achievement gains (in their graduates’ first year of teaching) had the following characteristics: (1) extensive and well-supervised student teaching, with strong “congruence” between the training experience and the first-year teaching assignment; (2) engagement in the actual practices involved in teaching; (3) opportunities to study and assess local school curricula; and (4) a capstone experience in which action research projects or data-focused portfolios were used to make summative judgments about the quality of the teacher candidate.

* Boyd, D., Grossman, P., Lankford, H., Loeb, S., & Wyckoff, J. (2009). Teacher preparation and student achievement. *Educational Evaluation and Policy Analysis*, 31(4), 416–440. Retrieved from <http://www.teacherpolicyresearch.org/portals/1/pdfs/EEPATeacherPrepVA.pdf>

During a three-year program, the **Apprentice Teacher** and **Mentor Teacher** share classroom responsibilities. The **Mentor** is a **Master Teacher**, with expertise in curriculum, instruction, assessment and intervention, compensated at the highest levels in the district. The **Apprentice Teacher**, on the other hand, is a paid employee of the school at the lowest salary levels and with no job security. The relationship between **Mentor Teacher** and **Apprentice Teacher** is for coaching purposes only. Other **Mentor Teachers** observe the **Apprentice Teacher** for formal evaluations.

Year One

In year one of a robust teacher preparation model, the **Mentor Teacher** co-teaches with the **Apprentice Teacher** for a combined caseload of four classes (out of six total) during the school day. The **Mentor** primarily teaches all four classes, while the **Apprentice Teacher** observes, teaches small units, co-plans other lessons, helps with assessments, tutors individual students or small pull-out groups, plans and attends schoolwide parent/community activities and works in inquiry groups to collect data about the effectiveness of instructional strategies. The **Apprentice Teacher** is also taking a full load at the local university (e.g., courses in pedagogy, classroom management, assessment, history of education, and social foundations).

During one of their noninstructional periods, the **Mentor** and **Apprentice Teacher** collaborate on lesson planning, instruction, assessment and intervention. In the other prep period, they meet with other teachers with whom they share students and discuss student achievement and progress. They also collaborate with another team of teachers with whom they share subject matter and discuss instructional practices.

These teams of teachers help the **Apprentice** to collect and analyze video of his/her interactions with students. The faculty council, **Mentor Teacher**, observing **Mentor Teacher(s)**, and the school administrator meet together monthly to discuss the **Apprentice's** progress and if she or he will be retained from year one to the next.

Teacher Residencies

Urban Teacher Residency United (UTRU)—the nonprofit clearinghouse for teacher preparation reform—supports innovative models for extended pre-service and in-service learning, similar to what our Bay Area team proposes. UTRs, such as Boston's Teacher Residency (BTR) and Chicago's Academy for Urban School Leadership (AUSL), offer master's students a yearlong residency through district-based education programs that partner the graduate students with an experienced mentor. The UTR model is set up to gradually release classroom responsibilities to the residents through an apprenticeship year under the careful tutelage of their mentors. On-the-job experience is thereby paired with continued professional development and learning. Research conducted by UTRU revealed that 85 percent of all residency graduates remain teaching in their schools past three years—a huge reduction in teacher turnover.

Year Two

In the second year, the **Mentor** teaches two classes and the **Apprentice Teacher** teaches two classes. When the **Apprentice** teaches, the **Mentor Teacher** remains in the room and models lessons or provides feedback on instruction (if needed). In year two, the pair shares only one non-instructional period during which they collaborate on curriculum, instruction, assessment and intervention.

During their second release period, they each have meetings with different teams of teachers to talk about shared students and/or curriculum. The **Apprentice** continues to collect video footage of student interaction.

The **Apprentice Teacher** still has some classes at the local university and meets regularly for structured collaboration time with his/her cohort of new teachers who share successes and struggles with one another and with a professor who serves as an additional mentor. Just like in year one, the faculty council, **Mentor Teacher**, observing **Mentor Teacher(s)**, and the school administrator meet monthly to discuss the **Apprentice's** progress and if s/he will be retained from year two to the next.

Year Three

In the third year, the **Apprentice Teacher** is in charge of all four classes. His/her **Mentor** receives several release days from instruction to observe and debrief the **Apprentice**, as well as assist in videotaping. They work together to prepare the retention portfolio for the **Apprentice Teacher**, which is used by the faculty council, **Mentor Teacher**, observing **Mentor Teacher(s)**, and the school administrator to determine if the school will retain him/her as a **Professional Teacher**. The **Apprentice** is evaluated through a portfolio on his/her ability to build relationships with students, plan and sequence rigorous lessons, exhibit effective classroom management skills, and demonstrate impact on student learning.

STRATEGY 2: Enriching Professional Development

While 99 percent of teachers in the United States report having participated in some form of professional development,⁹ most of that training is brief, generic, fragmented, and of low quality. Several studies show that professional development can have a positive effect on student learning, but only if it has the following characteristics: is a longer-term and sustained effort, not a series of single day, one-shot workshops that are unrelated; focuses on subject-specific instruction and relevant strategies that work with the kinds of students the teachers are actually school improvement objectives and existing resources and curriculum materials;¹⁰ is based on interactive professional learning, wherein teachers “become actively engaged in meaningful discussion, planning, and practice” with their colleagues;¹¹ and connects to student data to plan, monitor progress, and evaluate the impact of teacher learning.¹²

Overall, high-quality professional development is embedded in and directly related to teachers' specific, daily work. Effective formats include lesson study (where teachers observe each others' lessons), mentoring and coaching, study groups, grade-level or subject teaming, informal school collaborations, school and classroom data analysis and action research.

Our colleague David from Fremont has observed firsthand how teachers learn best when they are trying to impress each other, based upon his own experience in being paired with excellent content-area peers.

He imagines:

I think it would help keep teachers sharp if every three to five years, they had an opportunity to co-teach with another same-subject teacher. Teachers stick around when they feel supported, and a good co-teaching pairing would definitely aid that. Students do well when the same teams of teachers teach the same subjects for more than one year at a time, and I think this avenue for co-teaching could be arranged in such a way to keep teams together.

Taica in San Francisco takes this idea one step further in describing his ideal learning community:

What is missing is a systematic co-mentoring model [for teachers of all levels of experience] that includes reciprocal observations, debriefing sessions and ongoing professional development. At least once a month, I would like to have time carved out of my daily schedule to observe other math teachers and debrief the observation that same day. I would also like to be observed at least once a month and provide the observer with a specific aspect of teaching that I wanted to examine and improve. Learning how to observe other teachers and pick up on the nuances of good teaching takes practice and ongoing mentorship, which needs to be supported by the school culture in order for all teachers to benefit.

Taica understand the huge financial burden such a robust professional development model might cost; therefore, he proposes that other schools find funds to utilize technology to facilitate the observation process. "Luckily, our department has received a grant that will fund a video club project," he explains. By videotaping classroom lessons, his colleagues can then review and provide feedback during their common preparation periods, eliminating the need for substitutes to cover classes in real-time.

Professional Development in Cincinnati

Cincinnati Public Schools has a rich history of teacher support and development. Its Teacher Evaluation System provides a comprehensive system for mentoring new teachers and those veterans in need of improvement. Trained consulting teachers work collaboratively to bolster the targeted teachers' instructional knowledge and skills. Professional development is then tailored to meet the areas of deficiency, with the goal of improved performance and increased teacher professionalism. The underlying premise is that teachers can improve their practice and should be provided with opportunities to do so.

This type of teacher-to-teacher learning is critical in 21st-century schools where administrators face a multitude of daily challenges, impeding their ability to fully support all of the teachers in their buildings. Offering **Master Teachers** these opportunities to lead is the linchpin to school success. “Building in time for teachers to pursue their intellectual interests contributes to teachers continuing to be learners themselves,” our colleague Marijke notes.

Sherene adds:

Offering teachers options of how to improve their practice as well as suggestions and recommendations for actually *where, how, and why* to do it within the context of the school day would help to make teaching a true profession and enable teachers to take more ownership over their practice.

Collaboration is a key ingredient in professional development for teachers—or teacher candidates—at all levels. Researchers suggest that professional development built around collective participation is more responsive and sustained, more effective in changing teacher practice, and contributes to a shared professional culture.¹³ This is of special importance because teachers rate collegial atmosphere as an

important working condition in deciding whether to stay in a school.¹⁴ Common planning time, participation in regular collaboration with other teachers in their subject area, or involvement in regular collaboration with other teachers on issues of instruction reduced new teachers’ likelihood of leaving by 43 percent in one study, and is also shown to boost teacher effectiveness.¹⁵

Unlike the best practices described in this section’s introduction, most of the professional development opportunities we experience are “one-size-fits-all” workshops, which do not allow us to explore our own areas of interest or need. Instead, school or district administrators select the in-service training we must complete—even if we have already mastered the content. That is why we propose the following recommendations for **professional development** reform:

- In a highly effective professional development model, **Professional Teachers** actively develop their own professional educator plans, with assistance from a **Master Teacher** or administrator. The plans focus on one to three specific goals each year, which are aligned with school and district goals and tied into the success of their students (e.g., experimenting with collaborative grouping, integrating new technologies, teaching reading comprehension strategies more effectively). **Professional Teachers** then identify 5–10 action steps to make the goals a reality, including what the teacher will do and what supports are needed. Periodic check-ins are scheduled to assess progress.
- **Professional Teachers** collaborate with a team of their peers who have similar (or the same, depending on the level) students to share information, plan interdisciplinary curriculum, create interventions and examine data.



“Mathson Musts”

In Alum Rock, Anna serves as an instructional coach who works collaboratively with teachers. Listen as she describes her efforts to implement proven instructional practices called “Mathson Musts.”



Collaborative System of Support

Adriana, a science teacher in Oakland, works collaboratively with multiple colleagues in work teams at her school. Listen as she describes the impact of this collaborative system of support on all teachers involved.

- **Professional Teachers** also conduct their own inquiry projects to determine the effectiveness of various instructional strategies. They pose questions about what might be working, and where they may be not reaching students. They innovate and experiment with different strategies and collaborate with others at their school to figure out what works best. They share their successes and failures with colleagues at their school and beyond. They seek out ideas and resources from a variety of sources and work with colleagues to try them out — collaborating and learning together.
- By following **Specialization Tracks**—much like in the medical profession—some teachers select areas of expertise, such as teaching English language learners, meeting the needs of high-poverty urban or rural students, or focusing on students’ development of critical thinking and 21st century skills. Each **Specialization Track** carries a set of professional development requirements and choices, such as increasing pedagogical knowledge to target specific learning needs, honing the development of practice with such learners and helping others to learn to address these needs (once the specialty is completed).
- Teachers following **Specialization Tracks** are offered daily schedules, which support teaching half-day and leading professional development workshops for the remainder. In doing so, in-house talent is built and a real sense of ownership for the community is cultivated. No longer is it just “some new thing our principal wants us to try,” but a teacher-driven approach to school reform.
- In an ideal learning environment, *all* teachers spend time working independently as well as collectively to improve their instructional practice. Multiple preparation periods are available each week for teachers to collaborate with same-subject and/or grade-level colleagues on curriculum, assessment, and interventions. This time is balanced by additional protected periods for personal preparation.
- Stop labeling teachers simply as either “good” or “bad,” and instead focus professional development on how to improve instruction with the proper supports. The first step is to create a school culture where teaching is “de-privatized” and an observation is viewed not as a judgment, but rather as a mechanism for helping teachers to develop and grow professionally. Strategies to help build a successful observation model include talking about the fears and concerns of peer observation openly and candidly, identifying a critical mass of early adopters (i.e., teachers willing to pilot the idea to build a positive buzz), collaboratively creating and using a common observation tool and building in time to debrief after observations.

STRATEGY 3: Embracing Teacher Leadership

Presently, teachers have limited opportunities to lead. While traditional roles such as department, grade level and committee chairs exist in most schools, teachers are rarely given the chance to take on larger responsibilities in teaching and learning. “Right now many of the needs at a school site either go unaddressed or are based on a system of personal sacrifice by individual teachers,” our teammate Marisa says. “Teachers are often uncompensated or nominally compensated for doing work that is vital to a school. Even aside from considering the inherent unfairness of this model, it must be changed because it is completely unsustainable.”

When teachers do express interest in leadership, they are typically counseled out of the classroom into full-time school administration roles. **We stand firm in our belief that our best teachers should have incentives to remain in the classroom;** therefore, we propose that the state of California develops specific **Master Teacher** roles for the profession.

Our teammate Ben, from a charter school in East Palo Alto, would like the opportunity to spend time giving back to his profession. Through a **Hybrid Teacher Leader** position, he would teach load) and then advocate for education reform during the remainder of the day—providing a perspective all-too-often left out of policy conversations—as part of a **Specialization Track** in education policy. Ben would both teach students and serve as a district specialist who works with national think tanks (like CTQ) to identify important issues for discussion and engage in policy conversations, representing his district.

Ben embraces the idea posed in Teaching 2030, where a significant group of “teacherpreneurs” are identified and utilized so that they continue to teach students as part of their workday but also globally.

Teacher Leadership in Rochester

Rochester City School District has long recognized the importance of supporting teachers’ growth through myriad professional development and leadership opportunities as part of its Career in Teaching Program. Since 1987, this district and union-bargained initiative has provided progressive job responsibilities, such as serving as mentors and peer reviewers, through a four-tier system for intern, resident, professional and lead teachers. As a result, the district has experienced dramatically increased teacher retention rates and reports of job satisfaction.



Teachers as Policy Advisors

Listen as Ben, an elementary teacher in East Palo Alto, describes his ideal hybrid teacher leadership role.

A robust career continuum would provide teachers with a means of achieving their career goals. If a teacher felt fulfilled and satisfied with his/her work, teacher retention would increase. Whether teachers take on **Hybrid Teacher Leader** roles that keep them in the classroom part-time or move into leadership positions at schools where they become teacherpreneurs, these **Master Teachers** would be compensated at least at the same level as principals or coaches—or even more. Our colleague Ben explained, “If we’re going to flatten out some of the hierarchy in today’s schools, we must allow some teachers to be paid more. This compensation could come as increased leverage in decision making and/or a pay scale that is commensurate with administrators.”

Teacherpreneurs in 2030

In *Teaching 2030*,* Barnett Berry and his 12 teacher colleagues share the following vision for teacherpreneurs in the future:

Most [teacher leaders] now serve in hybrid positions as teacherpreneurs, teaching students part of the day or week, and also have dedicated time to lead as student support specialists, teacher educators, community organizers, and virtual mentors in teacher networks. Some spend part of their nonteaching time working closely with university- and think tank-based researchers on studies of teaching and learning – or conducting policy analyses that are grounded in their everyday pedagogical experiences.... These specially trained teacherpreneurs are groomed for a long career in teaching. As the leaders of their profession, they are expected to support and develop a wide array of classroom practitioners, many of whom may transition to other careers during their working life. Master teachers also work closely with content experts, online mentors, and teaching assistants who – with the right supervision – contribute significantly to a teaching and learning enterprise that extends beyond the conventional school day.

*Berry, B. et al. (2011). *Teaching 2030: What we must do for our students and our public schools – now and in the future*. New York, NY: Teachers College Press

Providing a career continuum for teacher leadership will offer teachers a way to stay active in the profession and provide more longevity to their careers. It would also make the work more creative, challenging and fun. “Accumulating expertise of our most effective teachers would be a continual source of growth for the members of a school’s staff,” Anthony from Oakland explains. “As of now many of our best teachers leave as soon as they arrive at the first plateau of growth, and they do not return.”

To support **teacher leadership** reform, we offer these recommendations:

- Myriad teacher leadership roles are made available to teachers in part-time and full-time capacities. In addition to **Mentor Teachers**, professional development leaders, and policy analysts (as described in previous sections), teachers might serve in the following teacher leadership positions:
 - School-university liaisons with one foot in the K–12 classroom and the other in the university to conduct educational research in conjunction with faculty members and/or help develop and lead the **Apprenticeship** model for teacher preparation;
 - Community partners with strong communications skills to coordinate and implement school’s outreach with parents, volunteers, local businesses and support organizations;
 - School leaders with some administrative responsibilities (e.g., grant writing, department or grade level leadership, intervention coordination) for a limited period of time;
 - District representatives with other schools within the system, state, or nation to implement larger-scale reform plans;
 - Directors of teacher inquiry with skills in data collection and analysis to help assist colleagues in action research and reviewing student assessment information;
 - Organizers and moderators of online learning for teachers and students to improve teaching and learning through the use of technology in virtual communities; and
 - Student event directors with budgeting and coordination skills for a variety of student activities (including athletics).
- Benchmarks, including reflection on classroom practice and effectiveness, will be developed in order to determine if **Master Teachers** qualify for these special teacher leadership roles.
- Teachers rotate in and out of leadership positions after several years to ensure that their skills remain fresh and their colleagues have opportunities to lead as well.
- Flex days and/or additional compensation is provided to teachers for their leadership.
- Teachers and administrators work together to ensure that **Hybrid Teacher Leader** roles are reasonable in scope and responsibility and do not lead to burnout or limited effectiveness for teachers in either role.

Future of Teaching and Learning

Our vision for change in teacher preparation, professional development and teacher leadership is necessary because the schools of tomorrow require a different type of teacher. We can no longer be bogged down by 20th-century concepts of what it means to educate and be educated. Indeed, teaching and learning will be much different from what we see in most classrooms today. In the schools of tomorrow, we imagine a *transformed learning ecology*—similar to the description offered by CTQ’s Barnett Berry and 12 of our teaching colleagues from the Teacher Leaders Network in their book, *Teaching 2030*—where students use cutting-edge tools to access, analyze and synthesize information. We imagine every student using touch-screen devices for computing and connecting as a routine part of their classroom experience. When we want our students to read material, we can call it up on the screen, and the kids can read it themselves or listen to the text being read aloud in their earbuds. If a child doesn't understand a word, they can highlight it and the screen will pop up a definition or a short encyclopedia article. We also imagine flexible groups with a greater degree of interconnectivity between lessons and student choice in their academic schedules. Students could spend up to a month per year working on a project in their own communities through partnerships with governments, businesses and nonprofits. These organizations would also help co-teach leadership, technical, and critical thinking skills in and out of the classroom. These concepts are already emerging in some isolated school systems across the country, but we don't want our students on the wrong side of the digital divide.

Teaching and learning in the future means transcending the four walls of brick-and-mortar buildings so that students can interact with their peers and experts from around the globe to solve original problems. We know this type of schooling is possible because it's already happening in places like [High Tech High](#) in San Diego. In the schools of tomorrow, students must be able to network, brand, invent, design, and envision—developing higher-order thinking skills as they explore technological advances, and preparing to make the difference in future competitiveness in the workplace. Our *Teaching 2030* colleagues haven't lost themselves in cyberspace, however. They emphasize the continued importance of face-to-face interactions, especially for our most challenged students. We agree that virtual learning is not a replacement for



School-Community Connections

Our colleague Marijke, a Spanish dual-immersion teacher from community-based Melrose Leadership Academy in Oakland, envisions a revised schedule in the future, which would allow her to work with students beyond traditional school hours. Listen as she depicts her vision of schools as hubs of activity within a community, which represents a radical transformation of our current perception of teaching and learning – and more aptly, of the *when* and *where* teaching and learning takes place.

the vital human connections found in strong school communities. Children will still need face-to-face relationships with consistent, trustworthy adults who have the professional skills to support students' academic and socio-emotional learning.

We also envision new forms of assessment that go beyond the capabilities of our current paper-and-pencil tests. Despite what critics of public education may believe, we do not run away from accountability. We embrace it. The future of assessment will include tracking student progress through robust software programs. Parents will receive electronic summaries of their child's work at the end of each school day, with links that show examples of each type of activity they completed. These daily reports will also allow teachers to customize homework so that students continue to work on knowledge and skills from their individualized lessons for the day with support from parents and other adults in after-school programs.

Instead of attempting to measure student learning annually (and crudely) with bubble tests in a few subjects, teachers will create performance assessment benchmarks that are interdisciplinary. The standards and rubrics could be common across schools and districts, but the materials used would be tailored to the interests and needs of students in different communities. Students' ability to communicate what they know will become a primary assessment standard. Gone will be the tests of memorized knowledge, since "facts" are easily accessible with the touch of a screen. Instead, children will have to demonstrate how they can look critically at information, analyzing it for bias and perspective and evaluating its validity and usefulness. Through digital portfolios and public exhibitions, students will have to show, write, and explain how their own ideas are influenced by what they learn and how their thinking contributes to the learning of others. Teachers of the future—just like the educators of today in Oakland's science and history Project-Based Learning Collaborative and at the [Bay Area's Envision Schools](#)—will work together on common assessments, review student work together and reflect on their own instructional strategies. In doing so, teachers will ensure they are evaluated with the same standards as their peers and knowledge will be shared among colleagues.



Testing Gone Awry

Veteran history teacher Dave uses two real-world comparisons to explain why testing reform is needed.

Teaching Effectiveness

In order to meet the needs of 21st-century schools and schooling, we must transform the way we define teaching effectiveness. We believe effectiveness must move beyond mere outcomes on standardized assessments. While student test performance is important, it is simply not the most significant factor in measuring teaching effectiveness. Teachers of tomorrow must be able to **plan** lessons well by designing curriculum that builds on students' skills, connects to the real world, utilizes cutting-edge technology to enhance learning and encourages students to become autonomous learners. They must be able to **instruct** their students with strong content knowledge and an understanding of how to set clear goals for learning. Teachers must **create** diverse, culturally relevant units that allow students to show their understanding through the use of a variety of formative and summative assessments to evaluate progress. They must also be able to **engage** their students by building strong relationships with the children and their families,

Evaluating Teaching Effectiveness

Indeed, much policy reform is needed to carefully design new systems for evaluation that assess teacher effectiveness, as our sister network—Accomplished California Teachers (ACT)—laid out in their 2010 report, *A Quality Teacher in Every Classroom: Creating a Teacher Evaluation System that Works for California*. Our colleagues in Los Angeles faced tremendous pressure and public ridicule when the *Los Angeles Times* released their own rankings of teaching effectiveness, based on test scores they received from the district and analyzed independently to determine “value added.” We agree that test data has a place in teacher evaluation; however, they should not be the *sole* measure of our effectiveness.

managing their classroom so that learning is the primary focus, and developing culturally relevant supports that encourage students to “flourish” as learners who feel invested in their own education. They must understand how to **collaborate** with parents, colleagues and administrators to build a strong school culture where all members feel supported and how to connect with local business and civic leaders to enhance students’ development of critical skills through school-community partnerships. In addition, they must know how to **reflect** on their own learning and their students’ learning to identify areas in need of development and seek opportunities to improve through collaboration in professional learning communities.



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Conclusion

Too often, education debates fall into the false dichotomy of pro-student/anti-teacher. We believe that it is possible to create a new model for teaching and learning (as described here) that keeps student needs at the forefront and also ensures a strong support system for teachers. Some critics may view our vision for reform as self-serving. We remind skeptics, however, of our original supposition: *Improving teaching quality by better preparing, developing, and supporting teachers will increase the educational outcomes for students.*

With this framework in mind, we believe teaching can become the results-oriented profession students deserve and the public wants. Teachers need to be more accountable, yet the solutions posed by most reformers (and those portrayed in the media) ignore the realities of the schools in which we teach and the conditions necessary to teach effectively. Taken together, our recommendations will create a robust career continuum to support teachers, ranging from their first days in the classrooms to the conclusion of a fruitful and effective career. Educators will progress from **Apprentice Teachers** who study and learn under the close guidance of **Mentor Teachers** to become **Professional Teachers**. With further development and demonstration of effective teaching, **Professional Teachers** can be recognized as **Master Teachers** who may choose myriad career paths through service as **Mentor Teachers**, **Specialization Teachers** or **Hybrid Teacher Leaders**. In doing so, effectiveness will no longer be marked simply by a set number of years in the field. Instead, a clearly delineated career continuum will be linked to objective teaching standards and benchmarks, not the traditional and outmoded “steps and columns” system that still dominates American public education today. Teachers will have many avenues to move up (without having to move out of the classroom into administration) and fewer reasons to leave the profession.

Given our vision for change and the future of teaching and learning, we urge policymakers to consider the recommendations outlined in our discussions of teacher preparation, professional development, and teacher leadership and to engage educators in ongoing discussions of education reform. We recommend to our colleagues—teachers and administrators alike—to study the research and policy carefully to become more informed communicators and advocates for transforming the teaching profession into one that our students deserve. We also encourage parents and community members to join in these important conversations to ensure that the vision they have for their children and their learning is not ignored.



By preparing new teachers, enriching professional development and embracing teacher leadership, policy makers and the public can give us the tools to be successful. Andrew says it well:

Creating opportunities for teachers to lead—without leaving the classroom—would make it more likely that teachers would continue to improve their teaching effectiveness since there would be specific indicators or benchmarks about ‘advancing’ in the profession and incentives to do so. As teachers progress in effectiveness (measured with a range of meaningful tools and metrics) and contribute to the greater profession through mentoring, policy making, writing, facilitating professional development, etc., the impact of their professional growth would be deeper and broader, ultimately improving student learning.

Appendix A—The Bay Area New Millennium Team

Anthony Cody

After 18 years as a science teacher in inner-city Oakland, California, Anthony Cody now works with a team of experienced science coaches who support the many novice teachers in his school district. He is a National Board Certified Teacher and an active member of the Teacher Leaders Network (TLN). Anthony, along with several of his TLN colleagues, helped found the Accomplished California Teachers organization. He writes regularly at his blog *Living in Dialogue*, hosted by *Teacher Magazine*, and also on his website (www.teacherslead.com). Anthony serves as a veteran teacher leader for the Bay Area New Millennium team.

Marijke Conklin

Marijke Conklin is a first grade dual immersion teacher at Melrose Leadership Academy in Oakland, California. She entered the teaching profession in 2005 as part of the first cohort of Oakland Teaching Fellows. Prior to becoming a teacher, she worked for two and a half years with the international nonprofit Human Rights Watch. She is most proud of her commitment to serve all learners, collaborate with parents and community organizations and garner access to educational resources.

Ben Crosby

Ben Crosby is a fourth grade teacher at Aspire's East Palo Alto Charter School (EPACS) in East Palo Alto, California. Ben began his teaching career by leading an award-winning literacy intervention program at EPACS while still an undergraduate at Stanford University. Upon graduating, he spent a year riding his bicycle with friends up the length of South America. Ben returned to EPACS in 2008 and stepped straight into the classroom through an alternative-credentialing program. He is currently in his fourth year of teaching and serves as lead teacher for fourth and fifth grades. Ben is interested in social media and is a featured contributor on the website www.betterlesson.org.

David Heinke

David Heinke is a math teacher at Fremont High School, a public school in Sunnyvale, California. He began substitute teaching while working on his master's in English Literature at San Francisco State University. His experiences with subbing at East Palo Alto High School, a Stanford-run charter school, led him to enter Stanford's teacher education program as a math candidate. Counting his student teaching year, David began his fourth year at Fremont High School in 2010–11, with a fresh responsibility: serving as cooperating teacher and content lead for geometry, a new position that will tie curriculum and literacy issues to larger schoolwide curricular goals.

Taica Hsu

Taica Hsu, a four-year veteran, is a math teacher at Mission High School in San Francisco, California. He received his mathematics credential and master's in teaching from Stanford University, in addition to a Spanish credential and bachelor's in Spanish and education from Dartmouth College. Taica is passionate about integrating social justice issues into his mathematics curriculum and empowers students to learn math through these less traditional contexts. He is also very dedicated to the principles of complex instruction and will lead his department next year in a video club pursuing a specific observational protocol to share and discuss practice—made possible through funding from a PacTin grant with UC Davis.

Adriana Jaureguy

Adriana Jaureguy is an Atlas team leader, TeamScience mentor and curriculum developer, and biology teacher at Skyline High School, an urban school in Oakland, California. She began her career at Skyline teaching biology and physiology to grades 9–12 and sponsoring an all-girls science and technology after-school program. Adriana went on to mentor intern teachers and start the AP Biology program at the school during her second year of teaching. She now serves as a team lead for Atlas,—an intervention program,—in which she manages an interdisciplinary team as well as the biology teachers within the science department.

Sherene Judeh

Sherene Judeh is a ninth and tenth grade humanities teacher and grade level leader at Lighthouse Community Charter High School in Oakland, California. She is certified in English and social studies, and holds a K–8 multiple subject license. She entered the teaching profession through Teach for America and completed a one-year credentialing program through Alliant International University. She is currently pursuing an M.Ed. and administrative credential through the Reach Institute. In her five years of teaching, she has served in multiple roles, including facilitating the English language learners program, chairing the Algebra readiness committee and working with novice teachers as a mentor. She is a member of the National Education Association, California Association of Teachers of English and the San Francisco Teachers for Social Justice network.

Anna L. Martin

Anna L. Martin is the resource teacher at Lee Mathson Middle School, a public school in an urban, high-needs district in San Jose, California. She began her career through Teach for America as a core teacher for seventh and eighth grades at Lee Mathson. Upon completing her two-year placement, she continued to work at the school as a mentor and teacher leader. She is now entering her seventh year in the profession. In her current role, she is responsible for coaching teachers, making student placement and master scheduling decisions, mentoring students and providing professional development for all staff. In the summer of 2010, she participated in a Fulbright teaching program in Morocco, developing relevant curriculum using cooperative group work theory. Anna began her work toward completing National Board Certification during the 2010–11 school year.

Lilla Toal Mandsager

Lilla Toal Mandsager is an English teacher at Everest Public High School, a charter school in Redwood City, California. She completed a yearlong master's and credentialing program at Stanford University to prepare to become a teacher. A member of the Bay Area Writing Project, Lilla has also helped to build her charter school network by leading professional development, participating in shared decision making and designing school structures in order to prepare diverse students for college. She gives back to her university by serving as a cooperating teacher in the Stanford Teacher Education Program.

David (Dave) Orphal

Dave Orphal is completing his fourth year as a Skyline Titan in Oakland, California. After receiving his bachelor's and teaching credential at Humboldt State University, David began a 10-year career at Zoe Barnum High School in Eureka, California. In 1997, he won a Fulbright Teacher Scholarship to travel to Japan for three weeks, talking with teachers about the future of education. He has also lectured at Humboldt State University in the education department. In addition to his teaching duties, Dave serves as a veteran teacher leader for the Bay Area New Millennium team and works with the California Teachers Association's Institute for Teaching.

Marisa Traylor

Marisa Traylor, a graduate of UC Berkeley's Multicultural Urban Secondary Education program and a fifth-year veteran, serves as an English teacher for the Community Multimedia Academy (CMMA) at Tennyson High School in Hayward, California. CMMA, a California Partnership Academy, works to ensure access to higher education for at-risk students. There, Marisa actively collaborates with her colleagues to prepare students for college and the workforce through internships and project-based learning. Her professional interests include adolescent literacy development, meaningful curriculum and assessment and bridging the gap between school and community.

Jessica Uy

Jessica Uy is a math teacher at Fremont High School in Sunnyvale, California. At the school, she has served as the math representative on the literacy team, facilitator of her professional learning community and leader of the algebra and geometry teams. Jessica earned her master's in education and teaching credential at Stanford University in 2007. In the fall of 2010, she was one of six teachers in the San Francisco Bay Area to be awarded a Math for America Master Teacher fellowship. Additionally, as a Knowles Science Teaching Foundation Fellow, she continues to share with her colleagues at Fremont the valuable insights she gained from the professional development opportunities offered to her by the fellowship.

Andrew Wild

Andrew Wild teaches chemistry and serves as the eleventh grade lead teacher at Impact Academy of Arts and Technology, an Envision School, in Hayward, California. Prior to this position, he taught conceptual physics and chemistry for three years at San Lorenzo High School in San Lorenzo, California. During this time, he also acted as a ninth grade house leader, mentored a new teacher and advised the Black Student Union. He earned his master's degree in teaching from Stanford University in 2007 and is a Knowles Science Teaching Foundation Fellow. In December 2008, he placed first in the Chemical Education Foundation's "You Be the Chemist" national lesson planning competition.

Works Cited

- 1 Alliance for Excellent Education. (2008). *What keeps good teachers in the classroom?* Washington, DC: Author.
- 2 Hanushek, E. A., Kain, J. F., & Rivkin, S.G. (2004, Winter). The revolving door. *Education Next*, 4(1), 77-82.
- 3 See <http://education.alberta.ca/admin/testing/achievement/involveteacher.aspx> for more information about teacher involvement in Alberta's assessment process.
- 4 Howard, T. C. (2003). Who receives the short end of the shortage? Implications of the U.S. teacher shortage on urban schools. *Journal of Curriculum and Supervision*, 18(2), 142-160.
- 5 Watlington, E. J., Shockley, R., Earley, D. L., Huie, K. K., Morris, J. D., & Lieberman, M. (2004). Variables associated with teacher retention: A multi-year study. *The Teacher Educator*, 40(1), 56-66.
- 6 Mellow, J. (1999). *Choosing excellence*. Lanham, MD: Scarecrow Press. <Note: APA doesn't really have a style for citing a particular chapter in an author's book, only if the book has been edited by someone else. If the information is available, you could cite the page number(s).>
- 7 Spooner, M., Flowers, C., Lambert, R., Algozzine, B. (2008). Is more really better? Examining perceived benefits of an extended student teaching experience. *The Clearing House*, 81(6), 263-269.
- 8 Branyon, J. (2008). Using mentoring and cohort collaboration: Enhancing teacher quality in pre-service teachers. *The Delta Kappa Gamma Bulletin*, 74(3), 35-38.
- 9 Hill, H. C. (2007). Learning in the teaching workforce. *The Future of Children*, 17(1), 111-127.
- 10 Hill, H. C. (2007). Learning in the teaching workforce. *The Future of Children*, 17(1), 111-127.
- 11 Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38(4), 915-945.
- 12 National Staff Development Council. (2001). *Standards for staff development*. Retrieved from <http://www.nsd.org/standards/index.cfm>.
- 13 Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38(4), 915-945.
- 14 Hirsch, E. (2005). *Listening to the experts: A report on the 2004 South Carolina teacher working conditions survey*. Chapel Hill, NC: Southeast Center for Teaching Quality.
- 15 Jackson, C. K. & Bruegmann, E. (2009). *Teaching students and teaching each other: The importance of peer learning for teachers*. NBER Working Paper 15202. Washington, DC: National Bureau of Economic Research; Smith, T. M., & Ingersoll, R. M. (2004). What are the effects of induction and mentoring on beginning teacher turnover? *American Education Research Journal*, 41(3), 681-714.