Abstract
This brief is based on a case study of the San Francisco Teacher Residency, one of seven cases examined by the Learning Policy Institute (LPI) as part of its study Preparing Teachers for Deeper Learning. The study sought to explore how leading programs are creating ways to prepare future teachers for deeper learning and equity and to understand the policies needed to transform teacher education systemwide. LPI research teams collected data in 2015–16 during site visits through interviews, observations, reviews of program documents, and a survey of teacher candidates in each program.

All briefs related to this research and program case studies can be found at https://learningpolicyinstitute.org/product/preparing-teachers-deeper-learning.

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Preparing Teachers for Deeper Learning at San Francisco Teacher Residency
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On a sunny March day at June Jordan School for Equity in San Francisco, Jody DeAraujo—a teacher resident in the San Francisco Teacher Residency—teaches a lesson about the effects of pH on an ecosystem to a diverse group of 9th- and 10th-graders, half of whom are identified for special education services, in a block period field biology class.

Jody’s lesson centers on teaching the concept of pH through a real-world example of how CO₂ combines with H₂O in the ocean to make the water more acidic. Class begins with a whole-class warm-up activity, as Jody reviews a range of tolerance graph from the previous lesson. Next, the students work in pairs to answer a set of questions on ocean acidification to understand how and why pH in the ocean is changing. Jody intentionally pairs up the students and provides them with two images: a time series graph of CO₂ levels in the North Pacific and the ocean pH between 1958 and 2012 and a picture depicting how atmospheric carbon dioxide and water create carbonic acid.

The student pairs spend the next 15 minutes deciphering the images in front of them and answering a set of questions about ocean acidification. Jody and her cooperating teacher, Lenore Kenny, circulate around the classroom, supporting the pairs and redirecting a couple of distracted students.

Jody then leads the class through a series of short activities designed to deepen students’ understanding of ocean acidification and provide different entry points for students still struggling with the concept. First, Jody screens a 5-minute video on ocean acidification and then questions the class to assess students’ understanding. Next, students work in pairs to read and annotate two short texts, one on ocean acidification and another on coral reefs, and answer response questions. Lastly, Jody leads the class through a no-stakes check-in assessment in preparation for an upcoming quiz on the topic.
Because Jody and her cooperating teacher (CT) are operating on a co-teaching model, the last 30 minutes of the class are led by the CT, who works with the students on their Ecosystem Data Collection project. This 2-week project, in which students build and observe an ecosystem and develop and test hypotheses, was designed by Jody and her CT working together.

Each group of students has a container—their ecosystem, which they have designed themselves—inhabited by two fish. Today, the CT asks students to observe the fish and use clues to determine why they are or are not still alive. The project is intended to provide opportunities for students to learn academic content—the factors that influence an ecosystem—while building their scientific analysis and writing skills in collaboration with their partners. “I want you to write detailed observations,” the CT says as the class transitions to the project. “At this point, there are detailed changes happening.”

When the students come back together after 15 minutes of observing and writing, the CT asks them to read their observations out loud, “so everyone can hear.” As each student shares, the CT responds with probing questions, modeling the quality of observations she’s looking for. “I want to give people a sense of how thorough I want you to be,” she tells the class. After a back-and-forth with several students, she gives them some hints linking their observations about their ecosystems to the discussion about CO₂ from the first part of class. “When Ms. DeAraujo was teaching, you learned we’re polluting the air with a lot of CO₂. Maybe some CO₂ is getting from the animal into the water.”

The CT then sends the students back to their ecosystems to do a more thorough analysis, reminding them to measure the plants and to look at the fish fins and gills.

Introduction

The San Francisco Teacher Residency (SFTR) is a teacher preparation program created through a partnership between the San Francisco Unified School District (SFUSD); the University of San Francisco (USF); the Stanford Teacher Education Program (STEP); and the United Educators of San Francisco (UESF), the union for SFUSD teachers and paraprofessionals. SFTR provides residents with an intensive, yearlong clinical experience that is combined with tightly aligned coursework and grounded in the context of SFUSD and the local community. Residents earn a stipend for living expenses, and SFTR’s higher education partners provide financial support to residents through reduced tuition, loan forgiveness, and fellowships. Graduates commit to teach for 3 years in high-need schools in SFUSD, with 2 years of mentoring and support from SFTR, and earn a California preliminary multiple-subject or single-subject credential as well as a master’s degree.

In the lesson described above, SFTR resident Jody had the opportunity to practice pedagogical and curriculum-building skills, such as using guided inquiry, checking for understanding and making adaptations, providing multiple ways to access the course content, and differentiating instruction. These and other practices with which SFTR equips its graduates are aligned with deeper learning (see “What Is Deeper Learning?”). SFTR can prepare graduates to teach for deeper learning in large part because the
program’s own vision of “transformative teaching” is itself well aligned with deeper learning. In this vision, which guides SFTR’s content, pedagogy, and assessment, teachers lead for equity and social justice, place students at the center of learning, communicate effectively in support of adult and student learning, and creatively manage the complexity of working in San Francisco Public Schools.

What Is Deeper Learning?

Deeper learning is both a new and an old idea, rooted in the findings of research on learning over the past century yet also aligned with the needs of 21st-century students. Deeper learning experiences allow students to apply challenging academic content to real-world problems and contexts that engage them in communication, collaboration, and critical thinking. Such experiences equip students with the skills to find, analyze, and apply knowledge in new contexts and situations, preparing them for college, work, civic participation in a democratic society, and lifelong learning in a fast-changing and information-rich world. We identified five dimensions that define the practices and the vision that enable deeper learning for both students and prospective teachers:

- Learning that is developmentally grounded and personalized
- Learning that is contextualized
- Learning that is applied and transferred
- Learning that occurs in productive communities of practice
- Learning that is equitable and oriented to social justice

Principals in SFUSD are eager to hire SFTR graduates. One San Francisco principal told us, “All of the [SFTR] residents we’ve trained, if we had an opening, we ... hired them. That’s not always true of other student teachers we’ve had.” He explained that SFTR “does a good job of recruiting strong folks. They do a great job with preparation, and they do a lot to support them.” An assistant superintendent in SFUSD echoed these points, saying, “At SFTR, you get an incredible on-ramp and touch point. I would want that for everyone entering the system.” These views are widely shared: 100% of SFUSD principals surveyed by the National Center for Teacher Residencies at the end of the 2014–15 school year agreed that SFTR graduates are more effective than other new teachers, including those who graduated from university-based programs and those prepared by other alternative route programs.1

Residents also think highly of SFTR, as 94% of those surveyed by LPI in 2016 agreed they were well or very well prepared for teaching. “This is a strenuous, self-reflective program that truly brings equity into the work of teaching,” one candidate noted, adding, “I wouldn’t have chosen any other program.” Candidates also responded positively when asked about aspects of teaching that address deeper learning, with over 90% of respondents reporting they felt well or very well prepared to engage in practices such as using instructional strategies that promote active student learning, setting norms for building a productive classroom community, and engaging students in cooperative group work as well as independent learning.
Not only are residents well prepared for teaching and sought after by principals, but they also stay in SFUSD. The program has done an excellent job of attracting and retaining a diverse cadre of new educators committed to teaching in the district. Of the 135 aspiring teachers SFTR prepared between 2010 and 2015, 97% were still teaching 5 years later, with 87% teaching in SFUSD, where they stayed at more than twice the rate of other newly hired teachers. Nearly all of them were working in high-need schools or subjects, and 66% of residents were teachers of color, compared with 53% of SFUSD staff overall.

Key Program Elements Support Teacher Preparation for Deeper Learning

Residents’ preparation for teaching for deeper learning is enabled by key elements of SFTR’s program. The heart of SFTR’s model is a yearlong teaching residency, in which residents work alongside an expert cooperating teacher 5 days a week, for at least 25 hours per week, for the entire academic year. The residency experience provides rich and plentiful opportunities for residents to learn to teach for deeper learning and gets them ready to take over their own classrooms. As one resident said in the 2016 LPI survey, “The SFTR [program] combined with the full-time teaching it provides has been extremely helpful in preparing me to be a first-year teacher.” Another resident stated, simply, “All teaching programs should be based on a residency model.”

SFTR’s coursework fosters deeper learning for residents as they get to know their students, the community, and SFUSD. Through their courses, residents are provided with a solid foundation for building strong relationships with students, differentiating instruction to meet their diverse needs, and making learning relevant to their lives. The 12-month sequence of courses differs at STEP and USF, but all residents learn about and practice strategies associated with guided inquiry, interdisciplinary learning, and project-based learning. Candidates in both university programs take a foundational course on equity and a yearlong course sequence in curriculum and instruction, in which they receive content-specific pedagogical training. STEP and USF also each include a course on language and literacy early in the program, providing candidates with a strong basis for building their students’ literacy and academic language skills. Other courses include assignments and activities through which residents learn about their students’ cognitive, social-emotional, and linguistic development. With this knowledge, residents are better prepared to serve a diverse student population in ways that advance educational equity and social justice.

Residents are placed in deliberately chosen SFUSD schools called teaching academies. Modeled on professional development schools, teaching academies partner with SFTR to create environments in which residents receive high-quality training, school staff receive high-quality development, and schools benefit from the support of SFTR, Stanford, and USF. SFTR partners with schools that serve high-need student populations and that provide supportive, collaborative working environments with productive communities of teaching practice. Wherever possible, SFTR seeks to identify teaching academies that illuminate deeper learning practices. Increasingly, with more and more experienced SFTR graduates now serving in high-need schools across the district, SFTR and the clinical directors at STEP and USF are prioritizing teaching academy sites where such graduates are teaching. This allows the program to play a long-term role in
the professional learning of its graduates, to capitalize on a cadre of highly collaborative teachers who have been trained in deeper learning pedagogies, and to spread the program’s vision of “transformative teaching” across the district.

**Expert, well-supported cooperating teachers (CTs)** are also essential to the success of SFTR’s clinical residency model. SFTR selects for CTs who can model deeper learning pedagogies and who are willing to engage in ongoing learning themselves. SFTR’s director of clinical education visits each prospective CT’s classroom to have a conversation with the CT and to assess the culture of the classroom. SFTR values CTs who have built classroom communities on an ethic of caring and trusting relationships and who are willing to reflect on their own practice—all aspects of deeper learning. CTs are expected to meet with residents a minimum of 1 hour per week for a formal planning meeting, to observe the resident teaching regularly and provide feedback, and to complete three assessments of the resident’s progress, all in addition to daily informal communication. They also meet with the resident and a university supervisor together at least three times during the school year to evaluate progress and set learning goals. One graduate described the advantages of working with SFTR’s cooperating teachers for the full year of the residency:

> They’d been in the district for a long time, and they’ve worked with our population, and they knew exactly as new teachers where we’d end up and made sure that we had that whole experience. I think being with the CT before the students come is huge, [as is the CT] being there until the end [of the year] and ... every day.

SFTR makes significant investments in the support and professional learning of CTs, offering a $2,500 stipend and providing them deeper learning opportunities similar to those offered to residents. In addition, residents bring deeper learning pedagogies they have learned in their coursework into the classrooms of their CTs, providing two-way adult learning and enriching experiences for teachers and students.

**Intensive supervision provided by SFTR coaches** is an essential support for residents and CTs. Coaches, also known as supervisors, are former SFUSD teachers who visit residents at their sites, provide feedback, and meet with residents and CTs regularly. They also lead weekly, hour-long, small-group supervisory meetings for all their residents together and often end up providing support to the CTs themselves. Coaches are assigned to subject areas or grade levels based on their expertise, and they play a variety of mentoring roles: *instructive*, in which the mentor offers suggestions and solutions, such as pointing out ways to differentiate instruction; *collaborative*, in which the mentor and the resident co-construct materials and solutions, such as codeveloping a lesson or curriculum unit; and *facilitative*, in which the mentor acts as a facilitator of the resident’s thinking and problem-solving while the resident self-assesses and self-prescribes. An SFTR resident cited this support as an important feature of the program, stating on LPI’s 2016 survey, “Part of the reason I was attracted to this program was the opportunity that I would receive from my supervisor and teachers.” The resident added, “This program hands-down is much better than a regular teacher prep program because the supervisor provides feedback on lessons I give at my placement.”
Instructional rounds, which further contextualize residents' learning, are patterned on the well-established practice of medical rounds in teaching hospitals. SFTR has made these rounds a hallmark of its program, recognizing that the structure of the yearlong residency at a single site means that although residents come to know their teaching context extremely well, “they may have limited access to other teaching contexts across the district or even within their own schools.” Instructional rounds play a key part in contextualizing residents’ learning, providing residents with an opportunity to see beyond their own classrooms and schools. SFTR coaches typically organize and lead the instructional rounds, which take place during the spring semester, with their supervisory groups. Coaches carefully select host teachers and classrooms for pedagogical purposes, provide residents with a focus for guided observations, and then facilitate debriefing sessions afterward.

Program Features Align With Teacher Preparation for Deeper Learning

While SFTR’s program can be seen, as a whole, as supporting deeper learning, some particular aspects of the program can be singled out to demonstrate essential connections to the five dimensions of teacher preparation for deeper learning.

The Practicum Course gives residents the opportunity to experience learning that is contextualized and grounded in social justice. Taught by SFTR staff, SFUSD leaders, and university faculty, the Practicum is the only course that STEP and USF candidates take together. The course is important to the cohort model of SFTR, which also allows residents to form strong and sustaining relationships with their peers that create a community of learning, as one graduate shared in response to a 2015 survey, stating, “SFTR provided me an opportunity to complete my credentialing program with like-minded peers that were able to engage in critical conversation around social justice and promoting our students’ needs.”

The Practicum also embeds residents’ teacher preparation in meaningful contexts and applications, including the specific school district context of SFUSD. Through the Practicum, residents come to understand that learning is connected to students’ experiences and the environments in which development occurs. The course also emphasizes that learning is enabled by ongoing communication and connection with parents, caregivers, communities, and the world beyond school. Grounded in an explicit social justice lens, the Practicum builds residents’ awareness of race, class, and other characteristics that shape students’ opportunities and experiences. The course further prepares residents for SFUSD classrooms by exploring topics such as restorative justice, trauma-informed classrooms, family engagement, the use of current events as teachable moments, the role of “play” in k–12 and teacher learning, and culturally relevant classroom management.

Faculty modeling gives SFTR candidates experience with learning that is applied, authentic, and collaborative. SFTR instructors, and most of the USF and STEP professors who teach SFTR courses, were classroom teachers themselves and are thus well equipped to model good pedagogy. Faculty name the strategies they use, explain why they are powerful, and suggest how they could be used in k–12 classrooms. This explicit transparency in teaching provides rich opportunities for candidates to unpack
why and how they might be able to transfer their learning to their k–12 classrooms. SFTR faculty and CTs also explicitly model classroom structures in which student learning is facilitated through collaboration and group work centered on authentic and complex tasks, while showing residents what it means to work with other educators in creating deeper learning opportunities for students. The collaborative relationships between faculty supervisors, CTs, and residents demonstrate how joint productive activity facilitates learning, as residents apply what they are learning to the new and complex problems of the classroom and receive support that is personalized and tailored to their evolving skills.

Learning that is equitable and social justice oriented is a deeper learning dimension that is embodied in SFTR’s commitment to achieving social justice through transformative teaching, providing deeper learning to all students. The program’s commitment to preparing teachers for the students of SFUSD—and to doing so in ways that close achievement gaps and advance a social justice agenda—is taken very seriously by SFTR staff and their university, district, and union partners. The program’s Executive Director expressed SFTR’s overarching social justice mission:

As important as anything we do is to prepare people to be successful in culturally diverse communities and in schools that are serving historically marginalized students and high-needs populations; if we’re not doing that, then we shouldn’t exist, in my opinion. Or at least if we’re not making significant progress in that direction and remain committed to that front-and-center through all of the work that we’re doing, then we don’t have any business preparing teachers to teach in San Francisco.

This mission is key to recruiting aspiring teachers who want to follow a social justice path into education and who will continue to teach in SFUSD, and residents see it as such, as one program graduate articulated:

The aspect that most interested me about SFTR was the focus on developing teachers to work in public schools mostly serving students from historically underserved communities. I was very intentional about working with a specific student population, and I felt that SFTR would provide me with adequate training that highlighted a culturally responsive pedagogy and a set of values that resonated with my experience and background.

SFTR’s social justice mission also drives program structure. The program’s explicit focus on achieving social justice through transformative teaching carries with it a broad conception of education, one that extends beyond the classroom and into the community and k–12 students’ lives. In the clinical placements as well as in coursework, SFTR provides residents with opportunities to develop their teaching toolbox so that all their students can acquire the academic content, skills, and mindsets they need to succeed in the 21st century. Through these efforts, SFTR works to disrupt patterns of inequity in our society and close achievement gaps within SFUSD.
Conclusion

As a joint effort between two educator preparation programs, the school district, and the local teachers union, SFTR is built on a collaborative model that is enacted in the relationships the program has with its teaching academies and in the mutually beneficial interactions between residents, cooperating teachers, coaches, school administrators, and higher education faculty. SFTR is driven by a programmatic vision of “transformative teaching,” and the structure of the program centers on the yearlong residency and integrated coursework through which residents experience and practice deeper learning pedagogies. Coursework emphasizes getting to know residents' students, the community, and SFUSD, while faculty and cooperating teachers model student-centered teaching and provide opportunities for residents to reflect on their practice through an equity and social justice lens. Year after year, SFTR graduates well-prepared residents who go on to work in high-need schools and subjects in SFUSD and who stay at much higher rates than other novice teachers in the district. Together, these program features demonstrate SFTR’s commitment to preparing teachers who are ready to provide deeper learning experiences for their students.

Endnotes