Message from the Dean

Dear Graduate Student,

In recent years, those who are responsible for policy and programs in graduate education have been increasingly concerned about graduate students as teachers. While conducting a successful original research project is central to obtaining a doctoral degree, achieving excellence as a teacher is not required. Working as teaching assistants, moreover, may contribute to graduate students’ support, yet not prepare them for the careers as college and university professors that many of them will take up.

The Graduate Quarterly often features new or exceptional academic programs for graduate students, and student profiles highlight the research of individuals. In this issue, however, we focus on teaching and on graduate students who have achieved excellence in teaching.

Our feature for the issue describes a National Science Foundation-supported program that sends doctoral students in math and science into the math and science classrooms of local public middle and high schools. Doctoral students, who receive fellowships for their work, are matched with UCLA graduate students in the School of Education and Information Science who are taking up full-time teaching duties for the first time. The doctoral students become highly qualified guest lecturers and assistant teachers, providing support to the new teachers and inspiration and role models for youngsters. Most important, perhaps, doctoral students help to develop curricula and practice cutting-edge techniques of inquiry-based learning, a combined experience that will serve them—and all the students they teach—for years to come.

At UCLA, the Office of Instructional Services has been involved for several years in contributing to the teaching skills of graduate students. With OIS support, most departments have programs to train and advise teaching assistants. Since 1975, five teaching assistants have been honored each year as distinguished teachers. You’ll meet this year’s honorees in this issue and learn how they approach their classroom responsibilities.

While professors teach undergraduates primarily through classroom experiences, their education role with graduate students is more subtle. Mentoring, a combination of counseling and socializing new scholars into a discipline, is crucial to a positive outcome. In this issue, we talk to a senior UCLA mentor, meet two of his advisees, and offer some suggestions for graduate students who are looking for a mentor of their own.

As always, I hope you will find ideas in this issue that inspire new efforts on your part, along with a greater appreciation of the exciting adventure of graduate education. Please let us know if we can help you make the most of it.

Claudia Mitchell-Kernan
Vice Chancellor Graduate Studies
Dean, Graduate Division
SEBASTIEN BREAU,
one of UCLA’s best TAs

FEATURES
4 GK-12: School Teachers + Graduate Students = Kids Interested in Math & Science
12 UCLA’s Best TAs
18 How to Find a Mentor

PROFILES
20 Roberto Oregel
Theater, Film and Television
22 Mirasol Riojas
Theater, Film and Television

NEWS
24 Graduate Student Accomplishments

ON THE COVER: Roberto Oregel, a Theater, Film and Television student, in the outdoor garden of his downtown apartment building. The skull paintings in the background are by neighbor and Latino performance artist/painter Gronk.
School Teachers + Graduate Students = Kids Interested in Math & Science

A

s a postdoctoral fellow in ecology at UCLA, Smadar Gilboa was studying ants: How do they invest in offspring and do they treat all offspring equally? What is the relationship between the landscaping outside the building and ants coming inside? Then, her research interests took a sharp turn.

FROM LEFT TO RIGHT: Graduate student Ben Wang, left, and Jenny Ta of the M.Ed. program, looking at insects on the tree in the overgrown Fremont High School garden. Ben is giving Jenny a preview of the ecology curriculum he and graduate student Kelly Thomas developed for Jenny’s ninth-grade science students.
“My kids started to go to public school,” Dr. Gilboa says, and she was confronted with direct evidence of “how hard it is for teachers” to introduce youngsters to basic science. She began to put some lessons together for her children’s classes and eventually found her way to UCLA’s program for Graduate Teaching Fellows in K–12 Education (GK–12), where she is now program manager.

Through the GK–12 program, the National Science Foundation is trying to achieve, on a large and structured scale, what happened to Dr. Gilboa informally: Awaken interest at the university level in the science and math education of America’s children and get academics involved in making it better.

Toward that end, NSF provides a stipend of $30,000 per year for graduate students in science and mathematics, expecting in return that the GK–12 Fellows will spend a minimum of 15 hours working in K–12 classrooms and preparing lessons for their students. While the receiving schools and their students clearly benefit, NSF’s primary focus is on what happens to graduate students as a result.

When former NSF director Rita Coldwell established the program in 1999, her idea was that participating students would gain skills that would be useful in any future career: how to talk about science with people who aren’t at the same level and how to respond to different learning styles. NSF never intended for the GK–12 Fellows to become high school teachers, but rather to take what they learned back to the colleges and universities where many will work.

Their experience makes them better teachers. As part of the GK–12 program, Fellows are introduced to various pedagogical theories, and they have ample opportunities to design and implement lesson plans. In particular, they become familiar with inquiry-based learning, in which students come up with the questions, design procedures to answer the questions, and analyze the data that results. As Fred Freking, co-principal investigator of the program at UCLA, puts it, “students learn science the way scientists do—they’re not just memorizing a bunch of facts out of a book.” This inquiry-based teaching style would be welcome at university campuses, too, Professor Arlene Russell, the UCLA PI, notes.

This initial program activity, however, is like a metaphorical stone tossed in the pond of American education. Working with graduate students who have advanced knowledge of science and mathematics is expected to have a lasting and positive impact on the public school teachers who are their partners. That benefits not only the students in their current classes but all the students the teachers meet as their careers go forward, students who are often economically disadvantaged and struggling with English as a second language.

Another ripple is created by the direct interaction of these youngsters with the GK–12 Fellows. Sonia Ortega, program director of...
education and human resources in NSF’s Division of Graduate Education, says the GK–12 program dispels the notion that “all scientists look like Einstein—old white men with frizzy hair.” By seeing that scientists can be young, female, and underrepresented minorities like themselves, today’s urban youngsters may see that “I can be a scientist, too,” Dr. Ortega says. “It becomes kind of a cool thing to do.”

And another ripple may be the change produced in the academic culture when Fellows inevitably become professors at colleges and universities. As they take up faculty positions, Professor Russell says, GK–12 Fellows will be better informed about public education and more sensitive to the role their institutions might play in educational reform.

In the long run, Dr. Ortega says, NSF hopes that “participating universities will create long-lasting partnerships with local schools” and “recognize the value of this experience for graduate education.” Some universities now require students to be teaching assistants for one year in order to obtain a PhD. What if doctoral aspirants were required to teach in high school for a year, she asks? “That would be a really big change.”

There’s one final ripple that could have an impact on that funding: Alumni of the GK–12 program may find themselves in a position to “go and explain to Congress why science is important,” Dr. Ortega says. “We don’t have enough scientists who know how to communicate the excitement and importance of science to people outside the science community.”

In the Classroom

Among the 150 or so GK–12 projects that the National Science Foundation has funded around the country, the one at UCLA may be unique in the way it selects teachers to partner with its Fellows. Instead of going to schools or school districts, the principal investigators at UCLA went across campus to the university’s Graduate School of Education and Information Sciences. As a result, graduate students are playing both roles: the experts in science and mathematics as well as the K–12 teachers who receive curriculum assistance.

The hypothesis, according to co-PI Arlene Russell, is: “If you help teachers learn how to do inquiry-based instruction labs in their first year, they’re more likely to continue throughout their career.” Less than three years into the program, that hypothesis is still being tested.

However, the early evidence is encouraging. Informal surveys of teachers the year after their GK–12 participation indicates that many continue to use the inquiry-based lessons developed as part of the program, and the general response to GK–12 is positive, sometimes with a small reservation. “Unless you’re a teacher,” Jenny Ta says, “it’s really hard to understand to understand how people learn. I still use the lessons but with modifications.”

There are some negatives. First-year teachers are often struggling to meet all the challenges that the classroom presents, and “the number one thing isn’t always curriculum,” as teacher Cheryl Bayley puts it. In 2003–2004, she was partnered with a Fellow who was a former teacher. “We were pretty lucky to have him because he had a lot of experience in the classroom,” she says. While all Fellows must have been teaching assistants, relatively few have worked in public school settings with adolescent learners.

Frederick Freking, the co-PI for the project, acknowledges that it “has been a challenge to work with first-year teachers because they’re still learning how to teach while they’re working with Fellows.” But Professor Russell points out that “all programs are experiencing this same problems.” Classroom management issues, inadequate resources in urban schools, and the need to meet a growing array of standards “are not unique to first-year teachers,” she adds.

Hanna Kang, who was partnered with a GK–12 Fellow in both her first and second years, has an informed point of view. She appreciated the contributions of her first-year partner—“my students thought it was the coolest thing that they had a real chemist in class.” In this second year, however, she says, “I know my curriculum from last year, I know what I want to teach, and I have a better feel for what works with these students.” Her first-year partner “might have gotten more out of it if she had arrived in my second year,” Hanna says.

While GK–12 Fellows must apply for a place in the program, “we wanted every science teacher to have access to Fellows,” Professor Freking says, “and so far we’ve been able to do it.” Teachers may choose not to participate, but otherwise, their inclusion is automatic. Few have refused.

As Cheryl says, “any help is really good.”

UCLA’s GK–12 Fellows work in three different concentrations: chemistry, biology, and mathematics. On the following pages, Fellows in each of those concentrations talk about their work and its impact—both on their own careers and on the students they meet.
Our Scientist is Here Today!

To many of the sixth- and seventh-grade students at John Muir Middle School, UCLA graduate student Michael Page is “our scientist.” When “our scientist is here today,” something that happens every Thursday, students have found that interesting things are often on the agenda.

Working with teachers and other GK–12 Fellows, Michael devises classroom experiments to help them learn science. In one class, he used a wave tank to show how hot and cold water generate ocean currents and storms. In another, students were given clay of different colors and directed to construct a cell. How to picture the cytoplasm was stumping them until one student compared it to the gel inside the bubbles of their running shoes.

Michael also answers students’ questions about science, even questions that are some distance from his own work in chemistry. But perhaps best of all, Michael embodies what it is to be a scientist. He “updates them about his research and whether or not I synthesized my molecule,” he says.

And before he went to last summer’s annual American Chemical Society conference in Washington, he took his poster into class. Students wanted to know about “these other people” whose names were on his work, and when he told them they were collaborators, the students wondered if asking him good questions would qualify as collaboration.

“When I was growing up,” Michael says, “we didn’t have cousins or uncles who were scientists.” He hopes that, by getting to know him, students may realize that science “is no longer just a school requirement, it’s a possible career path.”

Mui Sam, a former GK–12 Fellow, also sees the potential of the program to provide professional experiences for young students. In one class at Abraham Lincoln High School, she and her collaborating teacher assigned students to do independent research and make a visual presentation to their classmates. Students from low-income, underrepresented backgrounds may see a job or community college as their only options after high school, Dr. Sam says. Among other things, the GK–12 program tells them “you can go beyond college and do what you want to do,” she adds.

GK–12 brings students a lot of “a-HAH moments, lots of times when they say, ‘I get it.’”

Both Michael and Dr. Sam know that expanded opportunities in high school can have a big impact on future career directions. At his Catholic prep school in Columbus, Ohio, Michael had an opportunity to do summer research in chemistry, and Dr. Sam speaks highly of her chemistry and math teachers at Abraham Lincoln High School.

When Dr. Sam heard about the GK–12 Fellowship, she specified that she would like to return to Lincoln, grateful for the education she received there. She was shocked to find that classrooms outside the advanced placement environment where she thrived can present great challenges. Some of her students still didn’t know the difference between multiplication and addition. Still, she welcomed the “huge opportunity to go back.”

Michael also hopes that, in some way, his work at John Muir Middle School will make a return on the support he received as a struggling young student. When GK–12 invited him “to be a role model to students who come from a similar situation,” he says, “I had to jump at the opportunity.”

Michael Page is a graduate student in UCLA’s Hawthorne Group, named after Professor M. Frederick Hawthorne, which explores a wide range of applications for his work with boron clusters. Michael’s work involves using a boron “cage”—human bodies don’t recognize it as alien—to deliver blood-thinning medicines directly to internal sites.

Mui Sam, PhD, Chemistry, worked with Drs. Abu-Omar and Guillaume Chanfreau at UCLA, looking at the role of enzymes in PKU and RNA metabolism. She is now a postdoctoral fellow at Harvard University, continuing her study of proteins and enzymes.

A Garden Grows More Than Plants

During the Winter and Spring of 2005, the abandoned organic garden at Fremont High School took on a new life: as a field study site and classroom for ninth-grade science students. In a sequence of 15 class days, small teams of newly minted field ecologists conducted a biodiversity survey of the garden’s flora and fauna—what most people might call weeds and bugs. Some of the students collected spiders in vials and sent them along to the Los Angeles County Museum, which was doing a spider census. Stumbling upon evidence of owl visits, students dissected the pellets, and they also built a worm bin.

Teachers who may have started out with some apprehension about turning teenagers loose outdoors were “pleasantly surprised by how well the students handled it all,” says Kelly Thomas, one of the UCLA graduate students who helped to plan and implement the three-week curriculum. “Students were really engaged and doing what they were supposed to be doing.”

Her GK–12 partner, Ben Wang, points out that the curriculum also met all of the state’s ecology standards for this grade level through an inquiry-based activity, a learning tool in which students are guided to discover answers for themselves rather than hearing lectures and memorizing facts. “I feel strongly that students got a richer education
because of our efforts,” Ben says. GK–12 brings students a lot of “a-HAH moments, lots of times when they say, ‘I get it.’”

Two years of Ben’s graduate studies—and one for Kelly—were supported by the National Science Foundation’s GK–12 program. Although the ecology unit was the most ambitious of their projects—and well-suited to their background in ecology—both Kelly and Ben designed several other lessons during their tenure as GK–12 Fellows.

Kelly, for example, helped to develop a two-class experiment in which students learned how plants and animals—in this case, Elodea and snails—affect the carbon dioxide content of water. Students were encouraged to help design the experiment and develop their own conclusions about the findings.

Ben offered up another field study, based on this question: What locations in a school have the most germs? Armed with sterile swabs and agar plates, the students spread out around school, collecting samples. A second phase of the experiment tested antibacterial substances to see how well they worked on the bacteria colonies the students were growing.

Both Kelly and Ben are devoted teachers. Kelly was a TA every quarter for five years in a variety of introductory and advanced classes, and she knew from the first that “teaching was what I wanted to do,” preferably in a setting that focuses on undergraduate education. But, as she points out, “you don’t often get a chance to develop your own lessons as a teaching assistant,” an opportunity GK–12 provided.

Kelly Thomas is completing her dissertation about the effects of habitat fragmentation on small mammals in the mountains of the Mojave Desert. She climbed 2,000 feet or more each day, crossing from desert to forest, to gather data.

Ben Wang is examining the effects of hunting by humans in Central Africa on seed dispersal, drawing comparisons between sites where hunting is permitted and where it’s banned. He’s also using the techniques of molecular genetics to trace seeds back to their mother tree.

“the best thing we can do for the environment is to have a more educated population”

Ben’s broad experience is more directly related to the GK–12 project. After college, he became a science teacher at a private high school in Western Massachusetts. Moving to the West Coast to explore directions for graduate studies, he worked with inner-city high school students in San Rafael and later headed up the field studies program for the California Academy of Science in San Francisco. The last job meant “bringing inner-city high school students to parks around the city and teaching them how to collect ecological data.” The students also learned how to process their data, draw conclusions, and present their findings in a conference setting.

Through all that, Ben’s rationale was that “the best thing we can do for the environment is to have a more educated population,” he says. “I wasn’t expecting most of my students to become biologists, but I did expect that they would walk out of my classes having a respect for Nature.”

Chris Yakes in the classroom
Mathematicians who Teach Mathematics

When Stephanie Molnar Salomone was 22, she left a teaching credential program to pursue a master’s degree in mathematics because “I wasn’t able to do the discipline part of the job” during student teaching experiences. So there’s some irony in the fact that, eight years later, she found herself back in a public high school classroom teaching math “and thinking it was the best thing I had ever done.”

While she was pursuing her PhD in mathematics at UCLA, Professor Salomone worked as a GK–12 Fellow, spending time with students at the Orthopedic Hospital Medical Magnet High School in Los Angeles and developing curriculum for them. The way the school’s schedule was structured, “we had 35 to 40 students, 14 to 15 years old, doing math for two hours straight,” she says. “It meant we had to be very creative in the way we presented the material, which is the fun part of teaching.”

Among other strategies, teachers took their students to the gym where they acted out plotting graphs on an x and y axis made of rope. They also had students tear apart a triangle and lay the pieces on a line to show how the angles add up to 180 degrees. For young students, Professor Salomone says, “something they can actually see is sometimes better than a logical step-by-step proof.”

GK–12 Fellows also participated in the Math Content Programs for Teachers, a project directed by Dr. Shelley Kriegler under the Math Department umbrella. The Fellows attend ground-breaking professional development classes for K–12 teachers, acting as on-site math experts. Occasionally, they helped to “teach the teachers,” and they also developed lesson plans that teachers could take back to their classrooms.
They say their experience has made them better teachers. A GK–12 Fellow for three years, Flynn Heiss says his work “helps me to communicate mathematics to students” and furthers his long-term goal of being a university professor. Chris Yakes, on faculty at Rocky Mountain College in Billings, Montana, and headed to Cal State, Chico, next fall, says that while observing others, he “became more attentive to my own teaching” and works “to understand where students are coming from in terms of preparation and adjusting to that.”

Professor Yakes, who has found two jobs where he can combine mathematics and mathematics education, says “my favorite class” is teaching mathematics to elementary school teachers. They know how to do the basic math, he says, but he helps them to explore models of computation, properties of numbers, problem solving, and critical thinking: “What does it mean ‘to carry the one’? –we try to go deeply into why,” he says.

Dr. Salomone believes her GK–12 experience was an asset during her job hunt, which put her just where she wanted to be: at a small liberal arts college, the University of Portland. “There is a push in math now to hire mathematicians who are also interested in math education,” she says. “The fact that I have both strands helped me get interviews.”

Several employers “wanted to know what it was like teaching math in the inner city, especially in Los Angeles,” she says. Her answer was, in part, a challenge: “I think it’s important for people in an academic bubble to step outside and realize there are people who really need our help.” Dr. Salomone is answering that call. She had barely arrived in Portland when she was approached to help establish a “teaching the teachers” program in collaboration with Portland Public Schools.

When she abandoned her teaching credential a decade ago, Dr. Salomone had some regrets about losing the chance to influence young students. By teaching their teachers, she is still helping. “I never thought that my career would come full circle,” she says.

**Flynn Heiss** studies set theory and mathematical logic, looking at ideas that are consistently true or false given current assumptions. **Stephanie Salomone, PhD, Mathematics**, specialized in harmonic analysis, studying how things oscillate. **Chris Yakes, PhD, Mathematics**, completed his dissertation on the algebras of analytic functions.
Since 1975, the UCLA Academic Senate Committee on Teaching and the Office of Instructional Development have honored five graduate students each year for their distinguished performance as teaching assistants. The criteria for selection are: impact on students; scholarly approach to teaching; size, number, and diversity of classes; involvement in community linked projects, and teacher ratings.

Recipients get an honorarium of $2,500, and the Graduate Division provides a Dissertation Year Fellowship ($17,500 stipend and full fees) to those eligible awardees.

This year’s winners represent classics, Spanish & Portuguese, geography, philosophy, and psychology. As their peers have done for two decades, these excellent teachers search for innovative ways to connect with their undergraduate students and to share with them their passion for each discipline. Here are their stories.
Lorenzo Garcia

“His soft-spoken, almost gentle manner has endeared him to students, but his sharp intellect and critical mind have also earned their respect. His extraordinary passion for Classics truly sets him apart.”
—Professor Robert Gurval

Lorenzo Garcia offers a business analogy for his work as a teaching assistant: “The teacher is in a sense selling a product. I realize that the effort I put into teaching generates repeat business, so to speak.” Toward that end, Lorenzo has been honing his skills. Participating in undergraduate seminars, he learned that “clear communication lies at the heart of the educational process itself—dialogue.” Later, he logged more than 1,500 hours as a tutor, discovering that “people do not all learn in the same way, so to be a more effective teacher, I consciously try to employ multiple types of explanations in presenting new information.”

This versatility may explain why he is one of the rare TAs who are comfortable and successful teaching both GE civilization and introductory Greek and Latin courses, despite their different challenges. The professors he supports talk about “his energy and his astonishing habit of internalizing class material” as well as his mastery of “the pacing of the presentation of material [and] the relation between that material and the kinds of work required of students.”

Some of that command of presentation was developed as a high school Latin teacher. “Working with students of that age led me to view teaching as a kind of performance—a role performed before an audience that requires preparation.” He has developed a “stage persona” that gives him a high level of comfort in all the “improvisational situations” that teaching involves. And working side by side with UCLA faculty, he has “learned a great lesson about how one’s research interests can and should feed into one’s role as an educator.”

Lorenzo set out to find “a career I could love as much as my father loves his work. Growing up, my father was always an inspiration because he was—and continues to be—so passionate about the law.” In teaching and the study of classical literature, Lorenzo has found that home.

Lorenzo Garcia’s research aims to recuperate the aesthetic appreciation of Homer by exploring aspects of temporal and spatial sequence in the Iliad. He is particularly interested in the modern analogue of cinema, which weaves together pictorial image and verbal narrative.
In her first teaching job, tutoring a precocious 9-year-old in Spanish, Catherine Fountain taught him songs and verses. As an ESL teacher for Mexican and Central American migrant workers, Catherine organized field trips to local supermarkets and stores to teach practical communication skills. Then, in Buenos Aires, she taught Spanish as a second language to Chinese immigrants. In every instance, she noted the chain reaction in which teacher enthusiasm promotes student enthusiasm and the latter fosters learning.

While Catherine has learned more about teaching methodologies at UCLA, the importance of student engagement continues to influence her approach. In teaching language, this means clearing two hurdles: the “requirement syndrome” and the inhibition about “not being good at language.” Catherine gets results by conveying her own enthusiasm for the subject, by demonstrating how Spanish acquisition is relevant to other disciplinary majors, and by building students’ self-confidence.

She also strives to show that students are learning an authentic, real world language rather than one that exists only in the classroom. For example, she brings full-page weather forecasts from a Buenos Aires newspaper to class, encourages students to take e-mail on a Spanish-language site, and invites them to tune their radios and televisions to Los Angeles’ many Spanish-language stations.

Starting with a class Web site that provided links to the Web sites of Hispanic universities, Catherine has developed a series of well-structured online supplements to lower division language classes, including interactive lessons in which students can type answers on screen and check them immediately. As Teaching Assistant Coordinator, she improved the TA’s online syllabi, providing clearer and more detailed weekly plans and new administrative and pedagogical information.

She points out that “my experience as a language student has greatly contributed to my skill as a language teacher, since I have been able to see so many different personalities and styles of language instruction.” She’s learned something from each of her language teachers, she says, “and each time I teach a class I am building on what they taught me.”

Catherine Fountain is past president of the Spanish and Portuguese Graduate Students Association and is an editorial assistant for the department’s graduate student journal, Mester. With three other students, she organized a graduate student conference, Visions and Revisions: Breakthrough Moments in Hispanic and Lusophone Thought.
Sébastien Breau

“In addition to promoting authentic interaction in the classroom, Sébastien’s teaching style and strategies are also geared toward encouraging student self-empowerment. He knows how to pique the curiosity of his students and cultivate their eagerness to learn… by using innovative and thought-provoking materials.”
—Professor Stanley W. Trimble

Sébastien Breau is a proud French Canadian who loves shoveling snow in the winter. That’s what he tells his students the first day of each class, and he “always gets an interesting reception.” Sébastien’s goal is not so much self-revelation as building connections. Besides giving their name and major, students are asked to talk about a favorite pastime. He hopes the exchange will help students “feel comfortable asking questions and engaging their colleagues in discussion about the material.”

Sébastien enjoys the diversity of his subject, geography, which might include “the biological features of Malibu’s coastline, the reflectance properties of cinder cones in Death Valley, the spatial attributes of Los Angeles’ immigrant population, or the economic dynamics of the Silicon Valley.” While his own specialty is economic geography, Sébastien deliberately looks for opportunities to teach in other areas. For example, he taught himself remote sensing and image processing so that he could be a TA for one of the most technically demanding courses in the department.

Without oversimplifying, he breaks complex ideas into more manageable pieces of information, and he provides students with innovative materials to support their learning. Finding some of his students curious about the origins of data used in class, for example, he showed them how to download data from a prime source of international economic indicators and compute different statistics themselves. “I think real world applications of this kind get students more involved in the learning process itself,” Sébastien says. His classes may include PowerPoint presentations, debates, and short field trips as well as the more common discussion and review sessions.

Besides teaching geography, Sébastien understands that he is helping his students to develop critical learning and thinking skills, as well as the ability to prepare first-rate papers and presentations. His goals as a teacher are “making learning a fun experience and encouraging students to become critical, creative, and self-motivated individuals.”

Sébastien Breau’s dissertation examines the impacts of international trade on the greater Los Angeles economy. Specifically, he is interested in how international competition affects wage inequality and the relationship between a manufacturing plant’s performance and its exporting behavior.
Joseph W. Hwang

“Joe loves philosophy, but for him it has a particularly human face—philosophy comes alive for him in face-to-face interaction and particularly face-to-face interaction with his students. It’s Socratic in the best sense.”
—Professor Calvin Normore

Joseph Hwang was an undergraduate major in psychology and criminal sociology when a philosophy course on the human mind changed “the direction I would take in the future as well as the way I would come to perceive the world.” The course “drew me in instantly,” Joe says, “and I found myself in a constant state of wonder and thought, both inside and outside of class, about the mind’s metaphysical state.”

As a teaching assistant in philosophy, Joe strives to reproduce that “awesome and positively life-altering” experience for his students. Professors and teaching assistant colleagues say Joe’s effectiveness as a teacher depends on his ability to put difficult concepts into language students can easily understand, combining storytelling with philosophical analysis. Even in the elite cadre of Philosophy TAs, Joe is a leader. As Teaching Assistant Coordinator, he ran an effective initiation course for new TAs, and he continues to be a kind of TA oracle even after the TAC position has passed to someone else.

As Joe sees it, teaching must be both interactive and non-threatening. Early in each course, Joe gets to know his students, not just their names but also their interests and personal history. He wants them to understand that their relationship with him doesn’t depend on their intellectual capabilities. “After all, a teacher’s duty is to teach students, not necessarily to weed them out.” Once the material has been presented, Joe tells students “what I find puzzling or unclear about it.” Besides disarming students who might also be scratching their heads, this approach invites discussion. Joe finds that expressing his own enthusiastic interest in philosophy and linking particular subject matter to everyday concerns elicits a positive response in his students.

Joe says his goal is “to acquaint students with the philosophical issues and problems that have concerned people through the ages” and to develop their analytical skills “so that they are well-equipped to seek wisdom on their own.” That goal, as well as the process of achieving it, “brings me great joy,” he says.

Joseph Hwang’s dissertation will examine Descartes’ theory of sensation—a dualism of mind and body—and ways that it reflects and breaks away from late scholastic thinking. Joe helped found a venue where bands play to promote positive messages among young people, and he volunteered at a center for sexually abused children.
Adam Fingerhut

“Adam’s ability to lead a discussion in a classroom filled with 200 students is nothing short of remarkable. He hoists himself on top of a desk, crosses his legs, and immerses himself in the inquiry… To him, undergraduates are colleagues; they are engaged in learning together.”
—Professor Ann Peplau

In an age when “we make heroes out of spelling bee winners and gods out of Jeopardy champions,” Adam Fingerhut hopes that his students will learn not only to memorize but to think. “I want them to go home and share new insights over lunch with their friends. I want them to call their parents, not to ask for money, but to tell them about their new discoveries,” he says.

To achieve his goal, Adam has developed an array of strategies, starting with asking students in discussion sections to answer a short non-threatening question “so that they can hear their voice and see that they won’t pass out from embarrassment.” In one psychology class, he asked students to e-mail questions and thoughts to guide discussion; in another he asked them to go out in the community and try to elicit help—for example, by dropping a stack of papers—and record what happened next. He added a post-viewing discussion to the filmed documentaries in one class and assembled a panel of lesbian, gay, and bisexual students to supplement the readings in another.

He’s also had some ideas for improving the preparation of his colleague TAs, and he worked enthusiastically with a committee to transform TA training into teacher training—communicating not just the logistics of the TA position but also a rich array of teaching strategies. He is a mentor to undergraduates who work as his research assistants, helping them to understand findings and develop their own hypotheses.

As Adam sees it, “to truly engage in the learning process, one must ask questions and seek an array of opinions, and then consciously choose an answer or a perspective.” This is best done in a dialogue, he says. “While there is certainly something to be gained from sitting alone in a room curled up with a book, the best learning occurs when one emerges from the room… [to] share what has been discovered and discuss possible interpretations with other people.”

Adam Fingerhut is a member of the UCLA Lesbian, Gay, Bisexual and Transgender Center Advisory Committee. He came to UCLA with experience as a worker in an afterschool education program for children and as assistant director of undergraduate admissions at Stanford University.
Roberto Oregel and Mirasol Riojas took different approaches in forging a connection with Professor Chon Noriega, a noted authority in Chicano cinema and experimental filmmaking. Roberto signed up for Professor Noriega’s graduate seminar in experimental film and took the opportunity to make a good impression. For an assigned presentation on a video artist, Roberto brought in a couple of cameras and asked his classmates to go out on the campus and film a two-minute journal entry on the subject of their choice. The resulting tapes were shown as an example of the video diary style of avant garde director Jonas Mekas.
“Their work was amazing,” Professor Noriega says, “synthesizing the critical literature with all the films they had seen that quarter. Needless to say, Roberto is a great teacher in his own right.” Also needless to say, Roberto had a new mentor.

Mirasol took a route that was more economical in terms of time. Having come to UCLA in part for the chance to work with Professor Noriega, Mirasol sent an e-mail requesting an interview as soon as she arrived last fall. “When we met,” he says, “I was so impressed with her initiative that I hired her on the spot to work as my own graduate student researcher.”

“When we met, I was so impressed with her initiative that I hired her on the spot to work as my own graduate student researcher.”

In just a few months, Mirasol has done research on Chicano filmmaker Efraín Gutiérrez, laws involving undocumented minors, and the impact of the Comprehensive Employment and Training Act (CETA) on minority participation in the arts.

Although Roberto met his mentor through a course he took, Professor Noriega warns that “if you limit your contact with faculty to the classroom, the faculty will have a much more narrow experience of your intellectual pursuits and professional goals.” He suggests that students follow Mirasol’s approach. “You would be surprised at how few students seek out faculty working in their areas of interest,” he says. “Too many PhD students wait until the last minute to meet with faculty about serving on their dissertation committees, when they could have met with these same faculty a year or two earlier on purely intellectual grounds and benefited from that relationship during their coursework.”

Professor Noriega is director of the Chicano Studies Research Center (CSRC), one of the dozen research-focused centers and institutes at UCLA that offer job opportunities and mentoring. At the CSRC, for example, about a hundred students are employed each year, many of them working on faculty research projects. Besides financial support, participating students “get hands-on experience with research and publication,” Professor Noriega says. Students get to see faculty “in action outside the classroom,” and their jobs are often defined “in ways that give students credit or authorship for the work they do.”

Mirasol’s CETA report, for example, is being published as part of CSRC’s brief/report series, and last year, two students wrote and edited the first book in the newest series of the CSRC press, The Chicano Archive. “We are always looking for graduate students to match up with special collections,” Professor Noriega says, on topics from the arts to politics to demographics and community-based organizations.

Roberto’s connection with Professor Noriega led to an opportunity to develop a film project on Casa Libre, which is linked to the CSRC by a community partnership grant. The work has provided valuable experience—and it may turn into his thesis project.

Professor Noriega is a mentor of considerable experience and expertise. At any one time, he may be chairing as many as 10 dissertation committees. He also works with students in the Graduate Division-sponsored summer research mentorship program and other independent studies and internships, and his department (Film, Television, and Digital Media) assigns four to six students to each faculty member.

“My main advice to students looking for mentors is to seek out several faculty members, get to know them, and see what develops,” he says. “Your mentor cannot be all things to you. We all have our limits.” The connection needs to work for both students and faculty. Professor Noriega, for example, makes sure he has “something to offer in terms of the student’s intellectual or professional development,” he says.

He keeps his eye out for “ambitious and curious students who are not afraid to try something new or out of their depth. Graduate school is a great time to explore new interests and test one’s limits,” he says. “As a mentor, I’m there as a safety net.”

TIPS FOR SUCCESS

START EARLY:
Don’t wait until you’re assembling a dissertation committee to make contacts with faculty who share your interests.

BE ASSERTIVE:
Instead of meeting professors only through your coursework, make direct contacts with faculty.

CAST A WIDE NET:
Build a network of mentoring faculty—each will offer something different, and with many contacts, you’re more likely to find someone to serve as your principal adviser.

OFFER TO WORK:
UCLA has dozens of centers and institutes devoted to research, many of them interdisciplinary. These organizations offer opportunities to meet faculty, to learn to do research under an experienced professor, and even to get your work published.

IF AT FIRST YOU DON’T SUCCEED:
Don’t get discouraged; the mentor relationship has to work for both professor and student, so it may take some time to find the right match.
THE AUDIENCE FOR THE FIRST ROBERTO Sierra Oregel productions was his family: Armed with a “really bulky camera”—a VHS recorder—he would “create these little stories and film them,” using relatives for cast and crew. One time, he turned his sister’s living room into a Tijuana bar, where “the main character ends up getting butchered—there was all this ketchup.” Playing the lead, Roberto’s brother “faked it really well—it was so much fun.”

At the time, Roberto was 14, and the goal was to amuse his family as the party wound down after dinner, he says: “I saw the camera as a play toy.” These days, Roberto’s camera is the tool of his profession, and his audience is considerably larger. Showtime broadcast his documentary film, “Dominance and Terror: A Discussion by Noam Chomsky.”
Also, Roberto’s goals have grown beyond pure entertainment. At the moment, he’s developing a DVD project about Casa Libre, a nonprofit providing a home for undocumented teenagers whose flight from abuse brought them to Los Angeles. The idea is “to give a face to these kids,” Roberto says. “These aren’t your normal illegals—these kids are refugees who are leaving harsh circumstances.”

The DVD will include a 20-minute film describing Casa Libre, a menu of short vignettes about the young people who live there, and a discussion of legal issues involving unaccompanied undocumented minors. Reconfigured into a more traditional documentary, the same subject may become Roberto’s thesis project for his MFA from the School of Theater, Film, and Television.

But Roberto’s participation has gone beyond filmmaking, says Professor Chon Noriega, director of the Chicano Studies Research Center, which has a community partnership grant to work with Casa Libre. “He brings to this project a deep sense of humanity,” Professor Noriega says, proposing and then implementing field trips to UCLA and the Museum of Contemporary Art, music and poetry workshops, and an architectural tour of downtown Los Angeles.

Roberto’s first project in film school—a two-minute film called “Racing Thoughts”—was a response to the events of September 11: Juxtaposing a businessman (John Morgan) trying to escape from a smoky office with snatches of childhood scenes, sometimes shown on a bank of television screens. “His mind is racing to find a comforting thought to hold onto as he’s seeing his life slip away,” Roberto says.

In 2003, Showtime offered financial support and a showcase for films about war. Roberto wrote to Noam Chomsky, a noted professor of linguistics at MIT whose terrain is American politics, and asked him to do interviews for a short film. Chomsky said yes “almost instantaneously.”

However, “trying to do a film on an intellectual and his ideas” was a challenge, Roberto concedes. His adviser, Professor Marina Goldovskaya, says problems with the soundtrack were so serious that she “didn’t know how he would get out of this.” Roberto’s solution was to cut Chomsky’s monologue on terrorism and American foreign policy into a soundtrack of music and play it against a kaleidoscopic succession of images that bounce from the Boston campus to American military actions and back.

The finished product was an excellent film, Professor Goldovskaya says: “Sometimes Roberto makes things that are impossible to make.” Roberto seems less surprised by the outcome. In the midst of these challenges, he told Professor Goldovskaya: “You have to have two things to be an artist, to be a filmmaker: You have to have the will, and you have to have the faith. I have those two things.”

He also has gifts of persuasion and a knack for finding good mentors. Consider the circumstances of his conversion from amateur filmmaker to fledgling professional, which took place across the UCLA campus from the film school while Roberto was working toward a master’s degree in Latin American history. Instead of writing a paper for his class with Associate Professor of Spanish and Portuguese John Skirius, Roberto proposed doing a visual project on Chicano artwork.

“I hopped in my car and started photographing all these beautiful murals throughout Los Angeles,” Roberto says. “Along the way, I started meeting all these great artists in the community.” While a still camera was OK for murals, interviewing artists called for something more sophisticated, and Roberto soon equipped himself with one of the first Hi 8 video cameras.

That first documentary focused on the interplay between murals and graffiti, particularly in places like the Estrada Courts. Besides serving as a report for Professor Skirius’s course, the film was shown in various venues around Los Angeles, and Roberto’s film career was launched.

The next step was taken when he met Latino performance artist and painter Gronk and persuaded him to do a video interview, which lasted through the night until “we pretty much ran out of tape” about 6 a.m. Although the original topic was Gronk’s trajectory as an artist, the subtext for Roberto was a history of East Los Angeles.

Concerned about gang influence, Roberto’s parents had moved the family out of Los Angeles to the small town of Reedley, near Fresno, just as Roberto was beginning to explore the city on his own. Later, Roberto “realized that I was growing up in East LA at a crucial moment in time,” and Gronk helped him to fill in the years he had missed along with the cultural context of the growing Latino art community. Gronk also became his mentor—and neighbor, advising Roberto of an available studio in a downtown building populated by artists like himself.

Those artists became Roberto’s collaborators as, master’s degree in hand, he took a job teaching at the 20th Street Elementary School, where “I saw myself” in the Latino and Mexican youngsters struggling in poverty. With his neighbors, Roberto engaged the youngsters in projects like the Latino Nutcracker he produced one Christmas. His filmmaking took second place to his teaching until a colleague at the school asked what he was doing teaching when he had this other talent.

UCLA’s film school was exactly what he wanted: “You get your hands dirty in all aspects of film,” he says. Now just a quarter or two away from getting his degree, Roberto is starting to feel “the pressure of what’s going to happen.” For now, he wants “to do the best job I can do” with the Casa Libre project, while keeping an eye open “for the next step, the next opportunity,” he says. “You work with faith, hoping that something else comes your way.”
NOT LONG BEFORE MIRASOL Riojas left San Antonio for UCLA’s School of Theater, Film, and Television, she talked to a friend who had done an interview with Efraín Gutiérrez, a fellow Texan who produced the first feature-length Chicano film: *Please, Don’t Bury Me Alive*. So, she says, “his name was fresh on my mind” when she was asked to compile a bibliography on Gutiérrez as part of her work for the Chicano Studies Research Center.

As someone with a particular interest in Tejano film-making, Mirasol couldn’t have picked a better time to arrive at UCLA. The Chicano Studies Research Center has launched a multi-year collabo-
relatively much unaccompanied illegal minors and on cul-
tors: Chon A. Noriega—“he’s an independent "expert," he had access to mainstream American culture, and "Tejanos are even lower on the ladder," she says. "I’m very proud of my culture and my Tejano roots. Considering how large the group is and the richness of its culture, Tejanos’ contributions aren’t recognized by the mainstream nearly as much as they deserve.”

Mirasol was drawn to UCLA by two factors: the richness of the UCLA Film Archive, which she’s now helping to enlarge, and the opportunity to study with CSRC Director Chon A. Noriega—"he's the Chicano film expert," she says. She is now working as his graduate student researcher, handling a variety of research projects including developing information on laws related to unaccompanied illegal minors and on cultural outlays related to the Comprehensive Employment and Training Act programs of the 1970s and ’80s.

In the same period when the National Endowment of the Arts was getting under way, CETA spent hundreds of millions of dollars on jobs programs for artists, many of them women and minorities. “Mirasol’s report taught me a lot about CETA, presenting a different perspective than the anecdotal one that circulates within the arts sector,” Professor Noriega says.

If Mirasol has recently been moving toward her goals with lightning speed, it took her several years of exploration to settle on her direction. Her postsecondary career began at Cornell University, where she was a fine arts major until “I realized there was no real work,” she says. “I wasn’t quite so hip on the idea of having this unstable future. I want to be able to sustain myself.”

Given that personal experience with the potential conflict between personal goals and America’s work culture—“it’s suffocating a lot of the creativity people have”—Mirasol began to look at things in “a more complex way.” That examination took her to Stanford University, where she completed an undergraduate degree in feminist studies, looking at “the interlocking systems of oppression—race and class and gender”—that influence how women of color contribute to art, film, and literature.

After college, she took several jobs in social services around the Bay Area before she realized she wasn’t “working on my own art any more—I had become one of the working drones.” That assessment led her into graduate studies at the New York University Film School. While she was there, she worked for Nielsen Media Research. Nielsen’s clients have a “huge interest in the Hispanic market because it’s an exploding population,” she says. However, in part because workers may sacrifice accuracy in the interest of getting their job done efficiently, Latinos remain underrepresented and misrepresented in the ratings that form the basis of programming decisions, she explains.

Back in San Antonio, Mirasol did film programming and festivals for the Esperanza Peace and Justice Center. While she enjoyed her work, she decided that she needed more education to achieve her long-term goals. Eventually, she hopes to join with others in “creating an organization, a space, for people to build community and be empowered in terms of culture,” she says. “Having those letters behind your name helps you when you’re trying to get funding.”

Following the example of her parents—a social worker and an engineer who returned to San Antonio to create jobs and do environmental work in his hometown—Mirasol believes her work should serve a social purpose. “It makes me happy to be part of my community,” she says, “and to work for its improvement.”

First, however, she has to complete her course work and write her dissertation. She’s still undecided about a topic—“there’s so much unexplored territory in Chicano film,” she says, “not just critical analysis but issues of preservation and distribution. There’s so much work to be done.”

The first wave of Chicano filmmaking grew out of the Civil Rights Movement and conceptualized film as a tool of social change. “Activists were picking up cameras and saying, let’s document our situation and bring attention to our struggle and our culture,” Mirasol says. Over the years since then, Chicano film has, in many ways, “been stripped of a lot of the political content.”

Mirasol looks at Chicano film not only as a tool for social change but also as “a way to empower your community and as a creative outlet for personal satisfaction. All those different levels need to be validated.”

For the time being, Mirasol’s own creative outlet remains on hold. Her easel and her box of paints came to Los Angeles with her, but they remain in a corner for now. She’s been far too busy—with her studies, her work at the Chicano Studies Research Center, and an extra assignment working on a resource guide for the National Association of Latino Independent Producers. “I’ve been here just a little more than a quarter,” she says, “but what a quarter! I already have things to write home about.”
Graduate Student
Accomplishments

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APPLIED LINGUISTICS & TESL


ARCHAEOLOGY


ART


ART HISTORY


ASIAN LANGUAGES & CULTURES


BIOMEDICAL ENGINEERING

Siamak Ardekani: (First author) “Geometric distortion correction of high-resolution 3 T diffusion tensor brain images.” Published in Magnetic Resonance in Medicine, vol. 54, pp. 1163-1171, November, 2005.
Andrew O. Fung: (First author) “Fluorescent Detection of Oral Pathogens by a Solid-Phase Immunosay on PDMS.” Presented at the 27th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Shanghai, China, September, 2005.


CHEMICAL & BIOMOLECULAR ENGINEERING


CLASSES


COMUNITY HEALTH SCIENCES


COMPARATIVE LITERATURE


Susannah Rodriguez Drissi: (First author) “The Quest for Body and Voice in Assia Djebar’s Vaste est la prison.” Published in CLCWeb: Comparative Literature and Culture, vol. 7:3, September, 2005.

COMPUTER SCIENCE


EARTH & SPACE SCIENCES


ECOLOGY & EVOLUTIONARY BIOLOGY


EDUCATION


Alireza Mehrnia: (Co-author) “A modified phase error detector for frequency tracking in SISO/MIMO OFDM systems.” Presented at the IEEE Vehicular Technology Conference (VTC Fall 2005), Dallas, TX, September, 2005.


ENGLISH


ENVIRONMENTAL HEALTH


EPIDEMIOLOGY


ETHNOMUSICOLOGY


Melissa Morales: “Music and Healing Among the Shipibo Indians of the Upper Peruvian Amazon.” Presented at the 4th Hawaii International Conference on Arts and Humanities, Honolulu, HI, January, 2006.

FILM, TV, & DIGITAL MEDIA

Raul Cardenas: (Director) “CALAVERITA.” Toluca, Mexico, August, 2005.


FOLKLORE AND MYTHOLOGY


FRENCH & FRANCOPHONE STUDIES


GEOGRAPHY


GERMANIC LANGUAGES


HEALTH SERVICES


HISTORY


**Mark Smith:** (Book) “When Stones Could Speak: A Collection of Architectural Thoughts.” Published October 2005


**HUMAN GENETICS**

**Gary Chen:** (First author) “Quantitative trait locus analysis of nonverbal communication in autism spectrum disorder.” Published in Molecular Psychiatry of Nature, September, 2005.


**INFORMATION STUDIES**


**LINGUISTICS**


**MATERIAL SCIENCE & ENGINEERING**


**MICROBIOLOGY, IMMUNOLOGY, & MOLECULAR GENETICS**


**Kevin J. Williams:** (First author) “A c-Rel subdomain responsible for enhanced DNA-binding affinity and selective gene activation.” Published in Genes & Development, vol. 19, pp. 2138, September, 2005.

**MOLECULAR & MEDICAL PHARMACOLOGY**

**Fei He:** (Co-author) “Coupling of cell migration with neurogenesis by pronuclear bHLH factors.” Forthcoming in the Proceedings of the National Academy of Sciences.
MOLECULAR, CELLULAR, & DEVELOPMENTAL BIOLOGY

MUSIC

NURSING


PHILOSOPHY

POLITICAL SCIENCE


PSYCHOLOGY
Joanna J. Arch: (First author) “Mechanisms of Mindfulness: Emotion Regulation Following a Focused Breathing Induction.” Published in Behaviour Research and Therapy.


Leonardo Fernandino: (First author) “Increasing Hemispheric Independence: Bilateral Presentation in Lexical Decision.” Poster presented at TENNET XVI - Theoretical and Experimental Neuropsychology, Montreal, Canada, June, 2005.


Planning to File a Thesis or Dissertation next Quarter?

Make sure you know the rules.

Staff from the University Archives and the UCLA Graduate Division present information on University regulations governing manuscript preparation and completion of degree requirements. Students who plan to file a thesis or dissertation during the quarter are encouraged to attend.

All meetings are in the West Electronic Classroom, Room 23167 Young Research Library

Master’s Thesis:
Thursday, April 13, 2006 - 10:00 a.m.
Friday, April 14, 2006 - 10:00 a.m.
Saturday, April 15, 2006 - 10:00 a.m.

Doctoral Dissertation:
Thursday, April 13, 2006 - 11:00 a.m.
Friday, April 14, 2006 - 11:00 a.m.
Saturday, April 15, 2006 - 11:00 a.m.

Winter 2006 GRADUATE QUARTERLY 29


**Matthew J. Hayes:** (First author) “Metacognitive sophistication about desirable difficulty: Implications for acquisition of complex materials.” Poster presented at the Annual Meeting of the Psychonomic Society, Toronto, Canada, November, 2005.


**Claudia L. Kernan:** (First author) “Becoming a Team: Individualism, Collectivism, Ethnicity, and Group Socialization in Los Angeles Girls’ Basketball.” Published in *Ethos*, vol. 33, pp. 542-566, December, 2005.


**David A. Langer:** (Co-presenter) “Addressing Practitioners’ Concerns about Empirically-Based Treatments: Manuals and the Therapeutic Alliance.” Presented at the Association for Behavioral and Cognitive Therapies, Washington, D.C., November, 2005.


**Natallia Maisel:** (First author) “Supportive behaviors in good times and in bad.” Poster presented at the Society for Personality and Social Psychology, Palm Springs, CA, January, 2006.


PUBLIC HEALTH


SOCIAL WELFARE


SOCIOLOGY


Hee Young (Kate) Choi: “Mexican Migration and Union Formation Patterns in Sending Communities.” Presented at the Annual Meeting of the Population Association of America (PAA), Los Angeles, CA, March, 2006.


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