

PACE Happenings ...Continued from page 1

Seeking not only to provide rigor, but also relevance in education has been the goal of this educational initiative and seeking to answer the question often posed by students, "Why do I need to learn this?" The reality for most PACE students, however, is that they enjoy or at least derive deep satisfaction from learning, whether or not that learning will one day be directly needed or used in a future career. In addition, what industry sector can possibly be appropriate for the vast diversity of interests of a class of PACE students? Not every one chooses to be a doctor, lawyer, merchant, or chief. Asking every teacher of English, science, math, social science, and foreign language to have a special knowledge of industry sectors in which they have never worked often leads to superficial or artificial connections that do not succeed in fooling students into believing that they are receiving valuable vocational training. PACE simply is not vocational training: that has never been its mission or desire. Furthermore, the world is changing so rapidly in terms of technology and automation that it becomes difficult to even imagine what careers will be available to our graduates.

Instead of arbitrarily choosing a single industry sector, PACE provides at each grade level experiences that allow students to explore potential fields, guided by teachers that have genuine connections to those fields. These work-based learning experiences, often multidisciplinary in nature, begin in our 9th grade where students, in groups, all submit video entries to the national C-Span Videocam Competition. Their entries demand intertwining of curriculum between the Government/Economics and AP Environmental Science classes that all our 9th grade students take. This opportunity to research and present topics of vital interest has met with tremendous success for our students, who typically are awarded a variety of top national awards for their efforts. In the 10th grade, our Accelerated Biology students engage in laboratory activities for which the biotechnology company Amgen has provided training to our teachers and much of the necessary specialized equipment. Students learn techniques used in fields of genetic engineering such as micropipetting and gel electrophoresis wherein proteins are separated and identified. Students report that they have been awarded lab jobs later in college based upon acquired technical expertise resulting from these experiences. As students move into the junior and senior years, their ability to choose electives that cater to their individual interests increases. Genuine work-based learning occurs in multiple venues: students may learn about accounting and tax returns through the Volunteer Income Tax Assistance program where students assist lower income citizens in filing their tax returns, students participate in Model UN competitions to learn about diplomacy and international relations, and the AP Physics and Biology classes offer projects that enable continued biotechnology experiences as well as engineering opportunities, to name a few. In the senior year, students have the opportunity to join and work in biomedical research efforts at three major research centers in the Los Angeles area.

PACE has chosen to remain a broad-based academic powerhouse, populated by students of diverse interests and talents. Accommodating their needs and providing the relevant links to many different industry sectors in ways that are not artificial or arbitrary has met with enthusiastic response from our students and their parents. Most importantly, the mission of providing authentic college preparatory rigor for our students continues to focus our efforts and provide the inspiration for the innovations that will have lasting benefit to our young charges.

**Where Are They Now?
Alumni Story**

PACE graduate Vince Butsumyo, Class of 1980, recently made a very generous donation to the PACE support (and we thankfully accept such donations!). He shared his story of life after PACE. His sister was a member of the first class that went through PACE through their whole high school career (it was a 3-year high school at the time). Nancy Gray, the PACE teachers, and his fellow students all helped provide a great part of his high school experience and helped him prepare for college. Vince attended Occidental College, received an A.B. in Physics, and then went on to Caltech and received an M.S. in Electrical Engineering. After graduating from Caltech, he moved to San Diego and started working full time for a company named M/A-COM Linkabit. The founders of Linkabit moved on to start up a company named Qualcomm Incorporated, which is known for making chips that go into cellular phones, and other communications technologies as well. Vince ended up following his manager and some colleagues to join Qualcomm, and had the opportunity to see first-hand the growth of the cellular phone industry. He is still working at Qualcomm, although now working part time in order to enjoy a more balanced lifestyle. He considers the PACE program and its people as one of the early, great influences in his progression and growth.

**New! New! New! New! New!
PACE Parent Website**

Be sure to check out the
PACE Parent Support Group's new website:

www.paceparent.org

- Learn about the history of PACE & the support group
- Make your annual donation online
- Access current & past issues of the Harebrain
- Find important & relevant dates and information
- Contact board members

This website is created and maintained to support
PACE parents. If you would like to see additional
content, please let us know!
Happy reading!

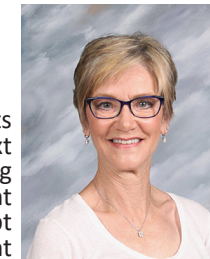
PACE Parent Support Group Board

- | | | |
|-------------------------------|-------------------|--|
| • President | Brigitte Bigham | brigitte.bigham@coldwellbanker.com |
| • Vice President | Bonnie McCarthy | bonniemccarthy5@gmail.com |
| • Secretary | Julie Owens | jowens1@its.jnj.com |
| • Treasurer | Mitra Giles | mitra.giles@pelican.com |
| • Scholarship Treas | Monica Munoz | familiamun@aol.com |
| • Harebrain Editor | Jennifer Golison | jen@golison.com |
| • Webmaster | Michelle Guterrez | mpguterrez@verizon.net |
| • Website & Online Donations | | www.paceparent.org |
| • Like & Share Us on Facebook | | Long Beach Poly PACE Parent Support |
| • Mailing Address | | PO Box 41845 Long Beach, CA 90853 |



PACE Happenings

Dr. Michelle Aberle
PACE Facilitator



Last week I received the names of the students who are being invited to join our 9th grade class next year, the PACE class of 2021. This is always an exciting moment and the culmination of an active recruitment season. We do not yet know precisely who will accept the invitation to come to Poly PACE until after the intent period where the students go online and formally submit their selection. Nonetheless, receiving the list of names from the district office comes after a long period of informational meetings, CHOICE Night activities at Poly, our tremendously successful shadowing program wherein 8th graders spend time with our current 9th graders to experience a "day in the life", and a substantial period of worry and work to take the PACE message of educational excellence to as many of our district families as possible as they choose their future high school.

I am always led at this time to reflect upon what it is that makes PACE unique and uniquely valuable. The program has existed since 1975 and is as strong as it has ever been. The quality of any program depends heavily on what happens each and every day in classrooms, and the PACE faculty ensures that what happens in a PACE classroom is undeniably superior education.

Another factor is the campus at large. Poly is a large, bustling and very energetic urban high school characterized by camaraderie and good will between diverse groups of students and between students and their teachers. This mix of energy and good will is what we commonly call "Poly pride" and is well known by any who have attended the school and most of those who have merely visited. Because of its size, Poly is able to offer its students an incredible array of activities, a hundred different clubs, a music program superior to any in the district and even to most universities, a fine drama department, an exceptional newspaper published every two weeks that permits its students investigative and writing opportunities, speech and debate, model UN, an incredible choice in Advanced Placement options (31 of the 33 currently offered by the College Board), and legendary athletic teams.

No factor is more important to PACE than the extraordinary quality of its academic program. PACE was founded upon the idea that highly motivated students would be taught by equally motivated teachers, ensuring readiness for the rigors of a university education to come. According to the students who come back from their colleges during breaks, PACE is highly successful in achieving this goal. PACE demands a great deal from its students. Taking seven advanced academic classes a year and participating in the wide range of activities typical of PACE students is not a decision to be taken without serious commitment. The results, from what I hear in the stories of the returning students, are decidedly worth the effort.

How does the mission and reality of PACE fit with the district's Linked Learning initiative, which seeks to link every program or academy, now called "pathways", to an industry sector and provide learning experiences that will serve to prepare students for jobs in that industry? Poly is now wall to wall pathways, which means that every teacher and every student is identified as belonging to one of the seven specific pathways that include PACE, CIC, PacRim, and the four pathways previously called academies.

Continued on page 4...

PACE Needs You

Brigitte Bigham, President
PACE Parent Support Group

Can you believe that we are making our way through the second semester for the 2016-2017 school year? Freshman parents are likely feeling a bit of relief, their student survived finals and the first semester! Senior parents know that high school is moving along at warp speed. However, hearing back from colleges is taking forever!!! Pat yourselves on the back parents, well done, you have set your students on a path of success, PACE has provided an educational foundation that will open many doors for your students!

Enclosed with this issue of the Harebrain is a donation envelope because PACE desperately needs your help. Budgeted expenses for the 2016-2017 fiscal year are just over \$68,000. Our fiscal year commenced on August 1, 2016 and we have received only \$18,500. As we approach AP exams, we are planning to subsidize staff for AP review sessions before and or after school. We bring in college aides, provide subs for staff, PACE classroom supplies & books, PACE teacher conferences, etc. The aforementioned expenses are not covered by the LBUSD, we rely on support by parents, alumni, family, company matches and friends to subsidize our program. Suggested donation is \$150 per student, but we will gladly accept more. Thank you for your support!

As an ongoing effort to stay in touch with our PACE parents, we created a PACE Parent Support Group website. Our website was created by one of our board members, Michelle Gutierrez (a PACE alum and parent of a junior) and Annie Clark (CIC class of 2012). We are truly grateful for the many hours spent on putting together such a fine product. Please take a look at Paceparent.org. The website contains important dates and activities, prior issues of the Harebrain, and a very simple way to donate. If you are not sure if you donated yet this school year then please see the donor list in this issue.

We look forward to seeing you at our next PACE Parent event on the evening of Thursday, March 23rd in the school library. We will be hosting guest speaker Dr. Patrick Kelly, MD, Child and Adolescent Psychiatry at Harbor-UCLA Medical Center, Associate Professor at the David Geffen School of Medicine at UCLA. Additional detail will be provided on our website in early March.

Reflections from PPSG Scholarship Winners 2016

Emma Skinner, UCLA

Hello from UCLA! My first quarter of school is coming to an end and I have had an amazing time already. UCLA is full of so many new opportunities for me and PACE prepared be perfectly; if anything, college is somewhat easier! I remember my days at Poly, struggling with a schedule that was usually spent from 6 a.m. to 6 p.m. full of swim practice, AP reviews, and choir rehearsal, only to come home to do a couple hours of homework. But do not despair! This makes the college life an amazing experience, and I would never take back those years in PACE. When I first started classes at UCLA, I was shocked by the change in pace of the courses; my school is on the quarter system and all the course material is fit into ten weeks. It was manageable, and once I got into the flow of things, I began to explore the many extra-curricular activities that UCLA offers. I am now a member of the Kappa Delta sorority and serving as an appointed officer. Next quarter, I plan on joining an a cappella group and helping organize UCLA's huge talent show, Spring Sing. Besides outside activities, UCLA also offers more classes than I ever could imagine, from Introduction to Zen Buddhism to the Economics of Superstars, UCLA has it all. I am currently in a GE Cluster class, one that I would encourage all incoming freshman to take. The class is for freshman only and lasts all three quarters of your first year. Not only are there multiple different Cluster topic options, the class fulfills at least six of the many required GE's. I have made four amazing friends in this class already from around the globe: Russia, Bulgaria, India, and California. UCLA's diversity is stunning and every day I learn something new about another culture. I am so happy with my decision to attend this college and I am actually excited to go back to school next quarter, a feeling I have not felt since elementary school! I would like to thank all the PACE staff, administrators, and teachers for their attention to their students and the work they have us do. It was not easy, but because of the experience, college is absolutely great!



Matthew Crane, Harvey Mudd College

Ever since I got to Mudd, I've entered a sort of time warp. Every day feels like a week, and every week feels like a day. Work comes hard and fast, but so does play. One minute I'm attempting a physics problem for the 11th time, the next I hear about an improv show or an orchestra concert and I'm off with my friends. It's amazing, given that time warp, how much I've done in the first semester, and how much I have to look forward to this semester. I've, as my calculus professor likes to say, "proved single variable calculus from scratch", made a rainbow of colors from different oxidation states of vanadium in chemistry lab, written code for a simple AI, learned special relativity, mathematically proved some of the most important theorems in voting theory, and so much more. This semester I've been accepted into a biology research lab studying how bees and ants communicate and coordinate decisions and I am applying to become a mentor, essentially a mental health and residential resource for my dorm as well as an event coordinator.



Even with all of this, I've never forgotten what I've learned from PACE. One of the most useful skills was the time management. I knew going in that Mudd was supposed to have an extremely difficult workload, but PACE allowed me to be ready to take the next step on to something even harder. I constantly find that I'm able to stay ahead, allowing me to use extra time to help my peers and attend events I couldn't otherwise. On top of that, many of the things I learned from my PACE classes persist even now. Ms. Amici's calculus classes have been instrumental to success in nearly all my math and science classes, where calculus is almost always a part in solving any problem. On the other hand, the amount of work on writing that PACE's fantastic English and history teachers had me do prepared me not only for my humanities classes but, oddly, my math classes also! To prove a theorem in math not only requires math skills, but also the ability to clearly express your steps and why any given operation works. I'm certain that I couldn't have done most of this without my background in PACE, a background which has not only allowed me to survive but excel and find a niche in this new adventure.

Antonio Moreno, Harvard University

Moving to the East Coast for the first time was a huge leap from high school, but PACE truly made the experience better. In these last three months at Harvard, I've met people from all sorts of nationalities in which one of my roommates is from Brazil, and the other is from Italy. I've had the opportunity to visit New York, Rhode Island, and Connecticut for sporting events, as well as club events. As for Massachusetts, I've acquainted myself well with the Boston area and even went to my very first baseball game to see the Boston Red Sox play the Toronto Blue Jays. Every weekend I have a team dinner with the swim club, and every Wednesday night I see debate speeches by the Institute of Politics in which on some occasions, famous politicians arrive to give speeches. However, I will say that the weather is always cold, and for the first time I saw snow fall.

Having mentioned all that, I will say that Harvard is still academically rigorous and competitive. However, I believe that any PACE student will have an edge at any college they decide to go to, and I am thankful for PACE in preparing me for college. The biggest transition when it came to academics was time management, and I cannot stress enough how important it is to balance your workload. There's a saying at Harvard that goes: "Work Hard, Play Hard" which means that as long as you stay on top of your work, college will be an amazing time full of opportunities.

Coming into Harvard I thought I would be struggling academically, but in reality the way to succeed here is by the amount of work you put into it. As of now I have enjoyed my time in Cambridge and I have done well in all of classes because of how PACE pre-exposed me to the heavy workload. The only big difference in grades comes from the heavy weighting of tests and finals, but I think PACE manages to prepare students for just that. In fact, at Harvard most of my homework can be regarded as "mini quizzes," but the students in Pace have already been exposed to that through classes such as AP US History, European History, English Literature, and more. My best advice for the PACE class of 2017 is don't be afraid to apply anywhere!



Rudy Peterson, Cornell University

I came from California, away from the drought, looking forward to rain and snow, only to be inundated instead with urgent cries admonishing all the fresh faces to save water because of the terrible-horrible big bad drought that had truncated rainfall since March, MARCH, and only as late as mid-November once again allowed ice crystals to gently carpet everything in sight. Of everything so far, it was this "drought" that I was the most prepared for. I came to college with a confidence that all I had learned from PACE would be enough to ensure success. After a few months here, I am coming to understand that the reality is much more enormous and intricate than my naiveté would accept. For instance, after learning under the PACE teachers, who will guide you and usher you to a deep and nuanced mastery of the material, I now feel isolated. Despite office hours and the sincerest intentions of professors, the material in college is too complex for someone else to help you, you must be able to learn things and acquire skills on your own. I could have exposed myself to more in high school, tried to exert my intellect more, and overall just better taken advantage of what PACE had to offer. Now I curse my complacency! I am both intimidated and inspired by the music prodigies, the physics whizzes, and the expert faculty. It is an amazing place, but you are jettisoned into a bigger pond, an ocean! Only after walking between the innumerable stacks of volumes, engaging in conversation with comrades, and spending hours trying to understand gyroscopic precession and relativity paradoxes do I begin to realize the enormity of college. Do you want to major in "x?" Good luck with that. This may come as hackneyed, but seriously, the subject that you concentrate on in college should be the one that excites and ideally elevates your soul. Why? Apart from all the life/existential stuff, if you are going to work hard with little sleep and try to give the impression of sanity, it better be for something you really like. Don't get me wrong, college is an opportunity that opens more opportunities, but, as I am now discovering, it is not something to take lightly. I look to PACE with gratitude and nostalgia, and to the future with hope and resolve.



Thank You to Our Recent Donors!

Super Jackrabbit Donors \$500 & Up

Vince Butsumyo Patrick & Julia Gough The Houston Family
Dr. & Mrs. Kosal Kom Ms. Janet Moore Roger & Selinda Neal John Taing

Donors

Eugenia Adler Janet Arima Deborah Avila
Jamie Avina Jeff & Brigitte Bigham Eric & Dana Brounstein
Holland Brown Glenn & Melanie Brossus Thuy Bui
Paula & Kent Busse Jon & Tracy Chaffee Muon & Bandal Chansy
Jeffrey Cliffe T. Cooper Curt & Susan Coutin
The Covarrubias Family Scott Cummings Sheri Douds
The Fuson Family Tina Gardetto Li & Ted Garland
Jonny & Mitra Giles Mark & Jennifer Golison Michele Grubbs
Peter & Michelle Gutierrez Shaunna Hardesty Maureen Jensen
The Jun Family Brad Gibson & Grace Kaito Jan Kellogg
Greg & Staci Kennebeck The Koyal Family Steve, Nancy & Dana Levy
Laura Lewis Robert & Celines Luna Quoc K. Mai & Lien Chan
Andrea Matiauda Chip & Lisa McCarthy Justin & Bonnie McCarthy
Sherry McCoy Elizabeth Millan The Moses Family
Noah Neal Doanh Nguyen The Nottonson Family
Linda & Mark Olson The Oshrin Family Jeff & Julie Owens
Alka & Rocky Patel Lee & Natalie Peterson Robert D. Pickell, Jr.
Chuck & Diane Posner Mr. & Mrs. Puckett Mr. & Mrs. Quach
Elaine Sam Don & Christie Scales Nathan Scott
Randy & Shelley Skinner Lars & Madeleine Soderberg
Dr. & Mrs. Tae Song The Spak Family Julie Tilsner
Mr. & Mrs. Bog Tyler Kevin & Kimberly Van Lant
Sarah VanWagner Kristina White William White
Cliff & Beth Widmark John & Mary Ann Woodward

Corporate Matching

Boeing Northrup Capital Group SoCal Gas Company