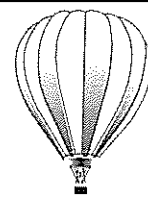


# ACCESS



## Refocusing Universities for Relevance in The New Millennium

Mary Catherine Swanson,  
AVID Founder and Director

The United States is currently experiencing the most rapidly changing demographics any nation has experienced in history. Each year nearly a million people come legally to America. Today nearly one in ten people in America was born in another country; one in five school children is from an immigrant family. This rapid shift in population has precipitated an ever increasing gap between rich and poor in this country. According to the U.S. Census Bureau, the upper seventy percent of incomes are rising while the lower thirty percent are falling. Few would argue that such a trend threatens the very fiber of the middle class which has

historically made America strong, and few would argue that a strong middle class is dependent on educating the masses to the highest levels possible.

Public elementary and secondary schools have found themselves for the past decade pummeled by public opinion decrying falling test scores, with the public's understanding being limited regarding the increasing difficulty of teaching such a diverse student population. Nevertheless, nationally the mantra is institutional responsibility for student learning, and rightfully, national and state leaders are scrambling to develop appropriate measures for student

outcomes. To fail to do so will surely hasten the public's cry for private schools that will be asked to accomplish what the public schools have struggled with for the past several decades.

Recently, public debate has intensified about the University of California's altering its admission standards to accept students who come from schools where rigorous honors courses are not offered in an attempt to align university enrollments more closely with the population of the state. Yet all acknowledge that the most effective preparation for students scoring high on SAT and ACT college entry examinations is

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## The Science of Opportunity: Gene Cota-Robles

### The ACCESS Interview

As middle schools and high schools address the issue of rigorous preparation for all students, postsecondary opportunities in mathematics and science remain a concern for many colleges and universities. Gene Cota-Robles has observed the challenge of providing both rigor and access first-hand, having taught microbiology at the Universities of California, Riverside and Santa Cruz, and at Pennsylvania State

University. Cota-Robles' broad range of academic experiences also includes roles as a special advisor to the National Science Foundation, a postdoctoral fellowship with the U.S. Public Health Service, and a term as a visiting scientist with the Uppsala Universitet in Sweden. Moreover, Cota-Robles gained an understanding of the challenges many students face while serving as vice-chancellor for academic

affairs and provost of Crown College at UC Santa Cruz, and as assistant vice-president for academic advancement, Office of the President, for the University of California. Currently, Cota-Robles serves as co-chair for The College Board's National Task Force on Minority High Achievement, and he is presently a member of the board of directors

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## Cota-Robles

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for the Institute for Educational Inquiry in Seattle, Washington.

Retired from teaching since 1991, Cota-Robles, who chaired the Department of Mexican American Studies at UC Riverside while teaching biology there, continues his active interest in diversifying the group of college students pursuing careers in science. Recently, he was interviewed by ACCESS to discuss this interest and others.

**ACCESS:** You're a biologist. What prompted your interest in high achievement for a wide range of students?

**COTA-ROBLES:** It came from many different sources, but mainly from my affiliation with the National Action Council for Minorities in Engineering. This organization was created in the mid-70's as a result of industry's interest in involving more minorities in engineering. Through NACME and other efforts like MESA, we have been fairly successful in encouraging more minority students to study engineering, but as the years passed, I noticed that very few of these students were going on to graduate school and very few were appointed to the faculty of schools of engineering. At the selective universities at which I've worked, even after years of effort, we weren't finding significant numbers of minority scientists who were considered significantly competitive to be appointed to our faculties. Another example is the National Academy of Scientists (NAS), which is a prestigious and selective organization of about 1900 members. This is a self-perpetuating organization that is extra-governmental but still has a national charter from the U.S.

Congress. Only the most highly regarded scientists are elected to the NAS. My guess is that we have only a handful of minority members who were educated in the U.S. and elected to the academy. Thus, my interest is to expand the number of American minority individuals who become highly regarded in the sciences through their achievements. I also believe that excellence should be fostered in areas other than science. This expansion can only occur if we increase the number of minority individuals who achieve highly in their academic studies.

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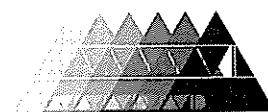
**ACCESS:** In your role as vice-president for academic advancement in the University of California system, you had an opportunity to observe how a university system could cooperate with K-12 education to improve student achievement. What positive results did you observe? Pitfalls?

**COTA-ROBLES:** From the Office of the President, we started trying to expand an ongoing program called the California Writing Project, which had been started at UC Berkeley in the 70s. This became our role model, so to speak. We saw that its approach, to try to help high school teachers become more effective at preparing students for the university, was working well, so we expanded the program to include a mathematics project and a science project. We wanted to connect the education focused on meeting the UC entrance requirements with teacher

development. A key part of the teacher development was the summer experience for teachers at the University in carefully structured settings.

The University had long recognized that the traditional sequence of English courses in high school did not automatically prepare students well for university work. In fact, the Subject A exam (writing placement) highlights this problem. As far back as the 40's and 50's, one-third of our entering freshmen had to take remedial writing courses before entering regular courses at the University. With the Writing Project, we saw improved results on the Subject A exam, so we created a Math Project and a Science Project. We also tried to foster education research in which K-12 teachers were involved. One way we did this was by offering research grants to university faculty, who designed a project in which a K-12 subject area teacher was an active member. The main problem or pitfall we experienced was with our subject matter people at the university level. For

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### The Mission of AVID

The mission of AVID is to ensure that all students, and most especially students in the middle capable of completing a college preparatory path:

- will succeed in the most rigorous curriculum,
- will enter mainstream activities of the school,
- will increase their enrollment in four-year colleges, and
- will become educated and responsible participants and leaders in a democratic society.

## Cota-Robles

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example, a professor of biology might be on the cutting edge of research, but that wouldn't necessarily put this professor on the cutting edge of teaching. Thus, the research design did not always include meaningful roles for contributions by K-12 teachers.

**ACCESS:** When and how did you become aware of AVID, and what do you like about the program?

**COTA-ROBLES:** While at the Office of the President in about 1989, I saw an announcement of an AVID event in San Diego, so I called up AVID and asked for an invitation to attend the AVID event (in a sense, I invited myself). I was able to hear some researchers speak about the program. Then, when Mary Catherine received the Charles A. Dana Award in 1991, I became more aware of the program and its approach, and I made sure I became part of AVID's network. What I like in AVID is that teachers take an active role in fostering the development of students who would not ordinarily have academic success. I for one feel guilty about pushing high achievement because to some this is seen as an elitist approach. A lot of us feel guilty about pushing high achievement but we'll not get it if we don't generate some successes through approaches such as those generated by AVID.

**ACCESS:** As co-chair of the College Board's Task Force on Minority Student Achievement, what did you and your committee members see as key barriers to high achievement for all students, and what are some strategies for addressing those barriers?

**COTA-ROBLES:** One of our most important discoveries was that institutions of higher educa-

tion aren't overly creative about making efforts to insure the success of their minority students. For example, a recent book documents that while selective institutions enroll and educate promising African-American students, these students do not achieve at the same level as other students. I am convinced that such under-performance is not the result of genetic differences. Why don't universities insure that all top students that they admit perform at a high level in college? There are a few programs at the university level, such as Uri Treisman's Emerging Scholars program that do this. The Biology Undergraduate Scholars Program at UC Davis is another example of a program which yields high academic achievement from minority students.

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*Success in science comes only with a strong preparation and a strong interest. A strong preparation includes having an absolutely successful background in math.*

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At the K-12 level, the most important supports we discovered focused on supplemental education. We looked at Korea Town in the Los Angeles area, for example. There we found hundreds of supplemental programs available. These are supported by the community since in the Asian community there is a long history of making supplemental education available. Essentially, many Korean American youngsters have access to a parallel education system. We believe that many underrepresented minority students need access to a similar web of supplementary education.

**ACCESS:** What were some signs of progress in high achieve-

ment that the Task Force has discovered?

**COTA-ROBLES:** We have seen a number of signs of progress. One encouraging finding is that the federal government's National Assessment of Educational Progress testing program indicates that over the past 30 years there has been a substantial increase in the percentage of non-Asian minority students who are well above average achievers at the elementary level and a modest increase in the number of very high achievers.

Nonetheless, progress has tailed off in the 90's. And whether measured by high school or standardized test scores, African Americans, Latinos, and Native Americans continue to have a very limited presence among the very top college-bound high school seniors. For example, in California, only about 5% of the 8,600 students who scored over 1300 on the SAT were from underrepresented groups.

A different kind of positive sign comes from the Task Force's review of the school reform evaluation literature. The number of proven strategies for raising minority students' achievement is growing, which should be beneficial down the road.

**ACCESS:** How do you see AVID contributing to high achievement nationally?

**COTA-ROBLES:** I see AVID's role as an important one nationally, but AVID must expand beyond making sure that more minority students succeed in K-12 education. Increasing the numbers of students succeeding in their secondary school studies as well as increasing the number of non-Asian minority students demonstrating high academic

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achievement must remain part of AVID's mission. AVID should continue to embrace high academic achievement. I am sure that AVID teachers, parents, and students will acknowledge that having only 15 non-Asian minorities among the 871 students who scored the highest possible on the SAT is just not acceptable. I am certain that AVID will accept this challenger and that it will help California and other states make a great deal of progress in the coming years.

**ACCESS:** What do you see happening in the next ten years as far as college admissions for a diverse group of students?

**COTA-ROBLES:** First of all, as far as the admissions process itself, more and more students are refusing to identify themselves as ethnic minorities. In 1997, 2,000 students marked 'unknown' on their ethnicity. In 1998, that number grew to 8,000. This represents American ambivalence about how to deal with Affirmative Action and Anti-Affirmative Action.

In California, we're not going to see an increase in the diversity of our students in the UC system, except at UC Santa Cruz and UC Riverside. These campuses are seen as having a lesser reputation than the others. Overall, it's the reputation of the schools in the system and the competition among students for the top schools that will influence diversity in the student body of California's public colleges.

I suspect that we will see more and more interest among minority students in entering the K-12 teaching force. So the anti-affirmative action movement might have its own backlash, encouraging more minority students to go into teaching. Thus those who do

not want minority students taking the top spots in public colleges are going to find that their young children will be taught more and more by minority teachers in the public schools.

**ACCESS:** What future directions should AVID take to increase high achievement?

**COTA-ROBLES:** One step I think AVID should take is to initiate its own honor society. Honor societies have become less significant in high schools and colleges recently. It would be good for AVID to start something like an AVID Honor Society to recognize high achievement. Also, it would be good for AVID to build some bridges of understanding with college faculty who teach introductory courses. You have to break down those barriers between high school faculty and college faculty, particularly those barriers that exist in the introductory courses. Instead of arguing about GPA and points for the AP exam, as was done recently in California, why not develop a better understanding among university faculty about the teaching in K-12. True acceptance of AP by college faculty might be an avenue to pursue.

**ACCESS:** You have been very focused on achievement for minority students in science. What progress do you see in this area? What needs to change at both the university and K-12 level in order for more positive results?

**COTA-ROBLES:** Success in science comes only with a strong preparation and a strong interest. A strong preparation includes having an absolutely successful background in math. As my friend Phil Daro says "Math should be a pump not a filter". Math can be a pump if students are taught well and if they are challenged and supported throughout their K-12 years.

Math is a gatekeeper for science but also for many other areas of study. This is where interest comes in. I am convinced that many people would succeed in K-12 science if the science courses they were taught in K-12 were taught well and in ways that truly engage the students. In addition, since so few minority students have family members or friends who are scientists, it is important that students have teachers and mentors who encourage the students to achieve in a difficult area of study. Recently, several minority science organizations have been mounting major mentoring efforts that will interest more students to pursue science careers. Among these is an organization I helped found, the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS).

The thing that I see that needs to change at both levels is work towards improving the quality and inclusiveness of teaching. What good does it do to prepare a student effectively at the K12 level if these students are weeded out at the college level. College faculty have to expand their effectiveness in teaching all students. We need to reward good teaching in a way that will draw the strongest possible individuals into the teaching profession.

**ACCESS:** How will universities need to change generally in order to improve their retention and graduation rates for an increasingly diverse student population?

**COTA-ROBLES:** I don't think you have to lower standards but we need to be more focused on teaching and find ways to reward good teaching. When I was a university professor, we were ad-

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## Pulitzer Prize-Winning Author to Write AVID's Story

Jonathan Freedman, renowned journalist, editorial writer, and author of the 1993 book, *From Cradle to Grave: The Human Face of Poverty in America*, is undertaking a book project to capture the story of AVID. The book will be released in conjunction with AVID's 20th Anniversary Celebration in the Summer of 2000.

Currently, Freedman is conducting research on AVID throughout the world, interviewing students, parents, and educators about the impact the program has on students' aspirations, achievement, and ability to overcome obstacles.

"I am very excited to be writing a book about AVID," said Freedman, whose working title for the book is *An AVID Defense of Public Education*. "My commitment to the program began when I worked as a writing mentor in the San Diego schools. I noticed that AVID was transforming the lives of students, and I wanted to tell their story—and that of AVID founder and director Mary Catherine Swanson—to the world. Today,

with so many parents worrying about their children's safety and educational progress, AVID provides a sense of belonging and a clear path of challenging work, support, and achievement."

Jonathan Freedman grew up in Denver, Colorado, where he attended the public schools. He was graduated cum laude, phi beta kappa, from Columbia University in 1972, where he won the senior writing prize. Mr. Freedman traveled overland through Latin America, and was hired as foreign correspondent by the Associated Press in Rio de Janeiro, Brazil.

From 1981-90, Freedman served as an editorial writer for the San Diego Union, where he undertook a six-year series of editorials advocating immigration reform. This series was instrumental in the passage of landmark Immigration Reform law in 1996, and his editorials in support of legalization—"amnesty"—for undocumented families were quoted in the floor debate in the

House of Representatives. The resulting amnesty law enabled more than 2 million undocumented individuals to legalize their status in the United States. For his editorials on this subject, Mr. Freedman was awarded the 1987 Pulitzer Prize for Distinguished Editorial Writing.

Mr. Freedman's columns and editorials have appeared in *The New York Times*, *Los Angeles Times*, *Washington Post*, *Chicago Tribune*, and other major publications. In 1990, a series of columns on child welfare issues brought the attention of the National Commission on Children. Mr. Freedman expanded his articles into a non-fiction book, *From Cradle to Grave: The Human Face of Poverty in America* (Atheneum Publishers, New York, 1993).

Recently, Mr. Freedman has focused on hope in education. In 1997-98, he created the "Hope Mentoring Project," working with 700 children, ages 10 to 18, in six inner city schools. He inspired students to write personal essays, connecting difficult moments in their lives to hopes and dreams. His series, "Hard Hope," focusing on the students, was published in the *San Diego Union Tribune*. For his work with children, Mr. Freedman was honored as one of 40 American Heroes in a special "Hero Nation" issue of *Esquire Magazine*. He recently was named a "Peacemaker of the Year" by the San Diego Mediation Society.

*AVID educators who have stories of how the AVID Program has transformed a student's or teacher's life are welcome to share the information with Mr. Freedman via email at [jffreedman@worldnet.att.net](mailto:jffreedman@worldnet.att.net).*

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vanced according to a system that included three areas—teaching, research, and university/community service. The reality is that we generally rated each other fairly highly as teachers. The problem is that not only is it hard to criticize the teaching of your colleagues, but when you come down to rating the three components we used, teaching is the hardest to evaluate. Evaluation of research is easier. If I'm doing

work on DNA metabolism, you can send my study to Sweden and Geneva and get scientific feedback on it. Evaluation of service is not easy but it can be quantified in ways that teaching can not be easily quantified. We have to encourage universities to become more discriminating in their evaluations and more generous in their rewards for teaching.

*Gene Cota-Robles will be a fellow panelist with Mary Catherine Swanson, at the "In Praise of Education" conference, in Bellevue, Washington, June 17-21.*