

# The Ever-Evolving Landscape of America's Community Colleges

An Interview with George R. Boggs  
by Judy C. Miner, President of Foothill College



George R. Boggs is President and CEO Emeritus of the American Association of Community Colleges (AACC), where he served for more than 10 years as a leading post-secondary education advocate and spokesperson.

Dr. Boggs served as faculty member and administrator at Butte College in California and, for more than 15 years, as the Superintendent/President of Palomar College in California. Dedicated to American excellence in science, technology, engineering, and mathematics (STEM), he serves as a member of the Board on Science Education of the National Academy of Sciences and has served on several US National Science Board and Foundation panels, commissions, and committees.

Community colleges have played a crucial role as broad access institutions ever since the founding of Joliet Junior College in 1901, but have only recently emerged into the national spotlight that now shines on college completion and global competitiveness. For its Summer 2013 e-journal, SENCER has chosen to focus on various aspects of community college contributions to STEM education. George Boggs was a natural choice to interview on overarching issues, given his decades of successful experience in both policy and operations at the local and federal level. He was asked to answer three questions.

1. In 2010, you wrote an article for *Science Magazine* titled: "Growing Roles for Science Education in Community Colleges." A key challenge you discussed was the improvement of completion and transfer rates if the United States were to hire resident talent in the growing numbers of jobs in STEM. What is your assessment of progress in meeting that challenge nearly three years since your article appeared?

There is a lot of attention these days to the importance of college completion. As I pointed out in the 2010 *Science* magazine article, President Obama has challenged community colleges to increase degree and certificate completion rates by 50 percent over a ten-year period. Last year, the American Association of Community Colleges in its report, "Reclaiming the American Dream: Community Colleges and the Nation's Future," embraced President Obama's challenge with a recommendation to increase completion rates of students by 50 percent by 2020.

There is some evidence that efforts to improve degree attainment are having an effect. While I have not seen STEM-specific data, on June 12, 2013, the *New York Times* reported a rise in college degrees in general. In 1995, 24.7 percent of Americans had at least a bachelor's degree. Last year, the percentage rose to 33.5 percent. *Inside Higher Ed* reported on June 13, 2013, that college degree holders in the United States are projected to reach 48 percent of the population by 2025.

However, this is far short of Lumina Foundation's goal for 60 percent of the population to hold degrees or certificates by 2025. Moreover, the data show that young Hispanics and Native Americans are less likely to hold a degree than their older peers, and attainment rates for African-Americans are flat across age groups. Young men now lag far behind young women in degree completion.

What is most troubling is the apparent resistance to implementing improvements in STEM educational practices in colleges and universities. In the June 21, 2013, issue of the *Chronicle of Higher Education*, Paul Baskin reports that last year, both the National Research Council and the President's Council of Advisors on Science and Technology said that validated methods of improving the teaching of science and math simply have not found widespread adoption at American colleges. I was one of the lead authors of the 1997 NRC report, "Science Teaching Reconsidered," which specifically addressed STEM teaching and learning with clear models for engaging, helping, and assessing students. Since its publication, I have seen no mention of the report or its recommendations. The June 21 Baskin article points out Carl Wieman's frustration at higher education's resistance to change. When Dr. Wieman was White House Science Adviser, he proposed an annual survey of STEM teaching practices that was opposed and killed by higher education leaders who saw it as an unnecessary intrusion of government into academic matters. But why isn't higher education itself doing more to improve STEM teaching?

2. *America's community colleges appear to be viewed as an international model for workforce development as many other countries face a comparable skills gap for their own jobs in STEM fields. What are the benefits of global engagement vs. an exclusively local focus for our community colleges?*

There was a time when the United States could be comfortable knowing that it controlled the resources it needed to sustain the highest quality of life in the world, that our isolation protected our national security, and that no other nation could compete with us economically. But the world has changed. The 21st century ushered in a new era, with the highest level of global interconnectedness in human history.

Technology now allows us to view live images of events taking place virtually anywhere in the world—24 hours a day and 7 days a week. We can communicate with people

in remote parts of the world, listen to music that suits our desire, or read documents without physically holding them. Text, voice, and images can be transferred with a click on a cellular phone or a computer.

Jobs that once needed to be done in local communities can now be done anywhere on earth that is connected by technology and inexpensive modes of transport. Students in community colleges today must be prepared to compete in a global economy. Thomas Friedman describes this concept well in his speeches and writings on today's "flat world." Manufacturing and service jobs, once done in local communities, have been shifted to other countries such as China and India. Our economy is now intertwined with that of other nations, and our students will be, or perhaps already are, working in that environment.

Today, the United States has more than 20 trade agreements with other countries and regions and is a member of the World Trade Association. More than a quarter of the US domestic product is trade-related, supporting more than 12 million American jobs, including one in five of our manufacturing workers. We are the world's largest importer of merchandise and commercial services, and we are the second largest exporter of merchandise while exporting more commercial services than any other country. US companies have become international, having realized that the vast majority of the world's consumers and purchasing power lie outside our borders.

America's community colleges, now educating nearly half of all US undergraduate higher education students, have a significant role to play in preparing students to live in an increasingly global society and economy. In addition, US government officials have recognized the great potential for the nation's community colleges to promote national security and world peace by helping to educate students from developing countries and by promoting the study of foreign languages.

If community colleges are to serve their communities well, they must prepare their students for the culture in which they will live and work. The communities and workplaces in today's America are much more interdependent with those in other countries than ever before. In many cases, community colleges present the first and perhaps only opportunity for students to become globally competent. Understanding how to work with others who differ in language and culture is a necessary job skill, even for those who never intend to travel abroad or leave their local communities. Moreover, if the

United States is to remain competitive, its leaders and future leaders (many of whom will come through community colleges) will need to know and respect other cultures, understand the culture of international negotiations, and know how to cultivate partnerships across national borders.

Today's environmental problems can be addressed successfully only if we can develop cooperative and trusting relationships across the world. Automobile exhausts in the US and coal-burning power plants in China both contribute to global warming. A nuclear mishap in Russia soon spreads around the globe. Students need to learn just how interconnected we are and to understand that we must work together to protect the planet that we share.

America today is largely a country of immigrants. Approximately 25 percent of our people identify themselves as being something other than "white," and nearly 12 percent of us are foreign born. Yet many of our citizens are insular, ignorant of world geography, untrained in foreign languages, and insensitive to cultural differences. Beyond our borders, people in other countries have a distorted view of Americans, shaped by our foreign policy, our movies, our popular music, and our video games. If the emerging global society is to be a healthy one, we need American students to learn about other cultures and languages—and we need people from other countries to have a more accurate understanding of American culture and values.

- 3. You have championed the creation of business internships for community college students, as research has shown that STEM majors are more likely to persist if applied learning is an integral part of their educational experience. How might colleges best develop relationships that will result in internship opportunities?*

Students generally have little knowledge of or perhaps inaccurate perceptions of STEM careers. Popular movies and television shows often portray scientists and technicians as socially isolated individuals who work alone in laboratories with equipment instead of with other people or directly helping other people, fostering a belief that especially discourages women from wanting to enter these fields. Students need better and more accurate information about STEM careers, and they need to see

role models, people who look like them who have chosen STEM career paths.

Community college faculty and administrators should bring students as early as elementary school and continuing through middle school and high school onto campus to tour science and technology laboratories and to talk with STEM faculty and STEM students. Involving school students in college projects or discipline research can be a motivator. Arranging for tours of STEM-related businesses can give students a more accurate perception of what it means to pursue a STEM career.

Faculty and administrators can develop beneficial relationships with the employers in their communities. Often representatives from these companies are happy to serve on college advisory boards, where they have some input into how students are prepared for the jobs that will be available in the future. Business leaders are also usually open to establishing agreements that allow students to become interns in their companies. In addition to the satisfaction of contributing to the hands-on education of students, employers get the chance to view the interns in action and perhaps to employ some of them upon completion of their programs. Student interns benefit greatly from the first-hand experience they get in the application of the STEM principles they are learning in the classroom.