

TESTIMONY

Cary A. Israel

President

Collin County Community College District

U.S. House of Representatives Committee on Science and Technology

Sept. 14, 2009

Hearing: Strengthening Regional Innovation: A Perspective from Northeast Texas

First and foremost, I would like to thank Chairman Gordon, U.S. Congressman Ralph Hall and other members of the Committee on Science and Technology for hosting this hearing.

My name is Cary A. Israel, and I am President of Collin County Community College District (Collin College). I am honored to share my thoughts and those from Chairman Robert Collins and our Board of Trustees about science and technology in higher education. The faculty, students, and staff of our college very much appreciate your attention to the cause of higher education.

Conquering Challenges through Higher Education

Across the nation, community colleges are experiencing record-setting growth this fall. Collin College has been growing rapidly for more than 10 years, but this year, we witnessed a tsunami of new enrollment. Certainly some of the 18+% growth is a result of our economy; but I firmly believe it is also a sign of the power and effectiveness of local/regional assets, planning, and collaboration. Regional and local collaboration is the ideal venue to leverage resources for the benefit of the entire nation.

If we look at the economic stimulus package and proposals from the administration, we see many laudable and lofty initiatives. However, we are concerned that the plan too narrowly defines the objectives and the process, which ultimately could constrain innovation rather than encouraging it. We wholeheartedly agree that community colleges will play a key role in the nation's economic recovery, but we ask leadership from Washington to outline goals without delineating the method. For example, the administration supports a system for delivering a collegiate education online for efficiency purposes. Online courses are a staple of American higher education today, but they are not the only means to put Americans back to work.

Case in point: In 2005, Collin College launched Weekend College program, which allows students to earn an associate's degree in two years by taking classes on Friday evening, Saturday and Sunday afternoon. This is ideal for individuals who work full-time but want to re-train or re-career in new fields like engineering and the sciences. Weekend College is also an efficient way to expand capacity *without* building new facilities since campuses are usually vacant on the weekend, but the college still pays for utilities, security, etc. By adding Weekend College, we reached out to a population of students who otherwise would not be able to go to college and leveraged an asset that was not fully

utilized. Now, total enrollment in Weekend College is 2,728 this fall—up from about 2,000 last fall. Our next step is to work with one of our University pre-admission partners to offer a baccalaureate degree on the Weekend.

Collin College also created the nation's first alternative teacher certification program at a community college, to respond to the critical shortage of classroom teachers. Nearly 500 individuals have graduated from the program, and today there are 400 programs similar to ours. Last year, we were honored to be one of only 10 colleges or universities in the nation chosen for the "Encore Careers" Grant from Metropolitan Life to help re-career those from the math or science fields, who were 50 years old and above to serve as classroom teachers. More importantly, the program has also been listed as one of the top 10 alternative teacher certification programs in the nation.

All of this was accomplished through innovation at the local level, and this is the type of innovation we must encourage as we work on economic recovery. If the goal is to produce more engineers, teachers, scientists, etc., local elected and public officials in North Texas need the latitude to meet desired goals through hard work and ingenuity rather than a prescribed roadmap.

The Cutting-Edge of Science and Technology Education

"Creativity & Innovation" are among the Core Values at Collin College. We believe that advancement in science and technology begins in college classrooms and laboratories and libraries where individuals gifted with natural curiosity meet the professors who inspire them. Below are a few of our programs that have been recognized for innovation:

Convergence Technology Center, National Science Foundation

- The Convergence Technology Center is an Advanced Technology Education (ATE) Regional Center of Excellence originally funded in 2004 by a \$2.46 million dollar four-year grant from the National Science Foundation to meet the growing need for skilled specialists in the area of Convergence Technology and Home Technology Integration. After September 11, 2001 and the "dot com bust," businesses and colleges in the North Texas region collaborated on this grant to reconstruct the landscape of IT/telecommunications education for the entire country to match the then emerging need for convergence technicians. These technicians install, maintain and operate systems of voice, data, video and image across a secure network.
- As of September 1, 2009, the Center has been awarded a new grant in the amount of \$1.56 million dollars to focus on the emerging needs of Green IT convergence technicians. This grant will support modifying curriculum to include Green topics, creating updated online courses, training faculty to teach convergence and Green IT, targeting Hispanic students for recruitment into this field and mentoring at least six community colleges yearly to enable them to launch their own convergence degree and certificate programs.
- The seven partner colleges who launched convergence programs on their campuses have seen a jump in enrollment in their IT departments as a result of the new convergence offerings. Over the last year over 4,000 students were enrolled in IT courses at the seven partner colleges.

Cisco Certified Training Center

- Collin College has been designated as one of only six colleges to become a Cisco Certified Training Center in the United States, serving the eight-state Southwest region. Preston Ridge Campus in Frisco, Texas is the primary site of Cisco Training, but Cisco classes are also offered at other campuses.
- Collin College's Cyber Security program prepares/qualifies the student for the challenges faced by companies and government agencies in the areas of Cyber Security network management, system administration, technical support, hardware/software installation, and equipment repair. This program has worked with companies such as EDS, Perot Systems, and Raytheon. With an eye toward hard working professionals, three of the four classes required for certificate completion can be taken online, as well as in the classroom. Nearly 1,000 students have participated in training over the past year in these vital fields.

Research and Innovation

Collin College has asserted itself as a leader of undergraduate research. Many of our science students are gaining valuable experience with expert faculty doing research that they would not ordinarily see until graduate school. The outcome of this innovation has exhibited itself in a number of capacities.

Center for Advanced Studies in Mathematics and Natural Sciences

- The Center for Advanced Studies in Mathematics and Natural Sciences (CASMNS) is a specialized program for highly motivated and talented students majoring in mathematics or the natural sciences. The Center offers opportunities for students enrolled in select courses in biology, chemistry, mathematics, physics and geology to participate in a variety of undergraduate research activities.
- Last year, CASMNS student Helen Zhu and Chris Doumen, professor of biology, submitted the complete DNA sequence of a crawfish enzyme to the National Gene Bank. The enzyme, cytosolic manganese Superoxidase Dismutase (SOD), eliminates harmful free radicals produced when oxygen is used in cells. A local solution potentially solving worldwide problems.

Biotechnology

- Collin College's biotechnology program has been equally proactive in providing venues for undergraduates to get graduate-level experience while learning scientific and laboratory method and etiquette.
- These experiences have helped our students get positions in biological research and industrial laboratories around the nation. Research done in the biotechnology program pertains to agriculture, medicine, pharmaceuticals and other applications that impact the world.

Wide Area Network (WAN)

- All campuses and future campuses at Collin College are linked to each other and the globe via a dedicated high speed network. This has enabled us to implement a VoIP communication system throughout our District. We also provide excess bandwidth for local governments so that they do not have to run the same fiber over the same poles thereby

saving millions of dollars for taxpayers. Additionally, the system allows for coordination of emergency response protocols in the case of weather, H1N1, pandemics, etc.

Solutions in the Business World

Today's business owners – no matter how small or large – face a different challenge than they did 100, 50 or, even, 10 years ago. Small business owners are no longer limited to marketing in their immediate area. Instead, they can compete on a national and worldwide marketplace.

During the last year the Collin Small Business Development Center (SBDC) has served 852 distinctive clients: 568 pre-venture clients; 136 start-up companies under one year in business; 148 established business clients; and 157 clients that were home based. The economic impact of these companies has totaled more than \$5.6 million in increased sales and \$3.6 million in Small Business Administration loans, commercial loans and lines of credit and/or private investments.

Of the 58 sciences and technology companies that the Collin SBDC has assisted this year, 13 of them are pre-venture, 20 of them are start-up ventures and 25 are established businesses. Eight of the science-type companies have produced or are in the process of producing products and 13 of the technology companies are in the same process.

Leading the Way in Healthcare

As the population in Northeast Texas has grown substantially over the past 20+ years, so has the need for healthcare facilities. Collin College is meeting the need for more nurses, respiratory therapists, surgical technicians, health information professionals, dental hygienists, EMTs, firefighters and police officers. However, we have a vision to expand to an entirely new level.

Collin College envisions being the home of a sophisticated regional hub for education and training in healthcare. We foresee a Center for Excellence in Healthcare equivalent to MD Anderson or the Mayo Clinic, for Northeast Texas. This would capitalize on the popular and award-winning programs already in place, but also take advantage of location and regional transit plans.

Intermodal Facility

- The Collin County Commissioner's Court has discussed bringing an intermodal logistics park to Eastern Collin County as a rail and trucking hub and possibly tying to airport facilities. The intermodal area would provide for truck to rail and rail to truck exchange in incoming goods from around the nation and abroad. The hub would be convenient to the impending outer loop project that is near the college's future campus in northeast Collin County.

Award-Winning Nursing Program

- Our nursing program is one of the top in state of Texas of the more than 90 programs. It was one of three recently honored for graduation and licensure success in Texas. Also, the Texas Higher Education Coordinating Board gave our nursing program an exemplary rating and this year, Dr. Nell Ard, director of nursing, was one of 21 fellows inducted into the Nurse Educator Academy from the National League of Nursing. The nursing program also hosts refresher programs for those returning to the nursing field. The nursing program has increased enrollment ever semester since 2005 and it currently admits 48 students twice a year. To put that into perspective, about 250 students apply to our nursing program each semester. The nursing program has also expanded curriculum to include a Certified Nurse

Assistant course and developed a marketable skills achievement award combining nurse aide certification, EKG tech skills and phlebotomy certification.

Healthcare Simulation Lab

- One tool that makes Collin College's healthcare programs attractive is the state-of-the-art Simulation Lab, which operates five days a week and some nights and weekends to provide students from all programs the feel of caring for and attending to a real patient in a real hospital or emergency situation. This simulation lab is becoming nationally-known as innovative and has been visited by other programs, health facilities and even a physician and nurse from Switzerland. We are assisting METI, Inc. a provider of high tech mannequins, in developing computer-driven scenarios for their cutting-edge simulation mannequins. At our faculty's suggestion, the METI company is developing interdisciplinary scenarios for use in health science programs.

Health Information Technology

- This new program currently already has more than 850 students enrolled. In the same manner that we created Weekend College and the alternative teacher certification, Collin College would like to lead the charge in providing health information technicians for our hospitals and clinics through a Health Information Institute and develop a model for the rest of the country.

Collin College has expanded but there are still many needed areas that could not be implemented due to a lack of funding, such as radiology technology, imaging, etc. Again, local issues lead to local solutions that can be replicated and adapted around the nation and world.

Recommendations and Solutions

As you know, over time our country has fallen behind in science, technology and engineering. Yet as we gaze at the competition beyond our borders, we have the power to not only turn the tide but to lead discovery, invention and innovation to new levels through collaboration.

Centralized management certainly is needed as the situation demands. However, thoughtful rapid response and creative solutions should, as appropriate, be lead at the local level. We are presently exploring a new definition of the campus of the future for our East Collin County site. We expect this to result in another leap forward for higher education in our region.

As Americans lose their jobs and fear the loss of their jobs, they—and their children—are turning to the local community college for a solid education and a new career. Community colleges contribute to the local economy by raising the standard of education in the market. We also provide public safety and healthcare personnel to serve our constituents in their times of need. Our success is inextricably tied to the community and positioned to contribute to the national recovery. As Americans persevere through an historic challenge, community colleges look forward to being a part of the solution. With vision from Washington and innovative tactics at the local level we can accomplish great things.

Thank you, Mr. Chairman.