

Central Piedmont Community College

Site Visit Observations

November 6-7, 2003

Introduction

Like all states, the State of North Carolina is facing economic challenges exacerbated by the rapid decline in the tobacco, furniture, and textile industries. State budget deficits translate into fewer funds for social services and for education. Community colleges, along with state-supported universities and public schools, are forced to reduce classes, delay building maintenance, and forgo salary increases.

The City of Charlotte and Mecklenburg County are affected by the State's economic challenges, but a creative alliance between Charlotte/Mecklenburg stands as a beacon for other "can-do" municipalities across the country in its dedication to quality, to community, and to making things work. And Central Piedmont Community College (CPCC) plays a central role in the Charlotte/Mecklenburg area both as a generator of resources and as a conduit for programs and solutions of importance to city and county leaders. In spite of reduced support from the State, Central Piedmont is the nexus for addressing community problems and for creating the trained workforce that will ensure the continuing quality of life established as one of the hallmarks of this region.

City of Charlotte/Mecklenburg County

There has been a long history of productive cooperation between the City of Charlotte and Mecklenburg County, in which it is located. Close to 80% of Mecklenburg County's population resides in the City of Charlotte. The relationship between the two entities is so close that the local chamber of commerce and the *Charlotte Observer*, an excellent regional newspaper, often dub this area "the Charlotte region" as the generic descriptor.

Long known as the "queen city of the south," in 2003 Charlotte has clearly earned that reputation. For the past three years the region has been recognized as number one in "pro-business" attitude by *Fortune* magazine. It is the fifth-ranked city in the nation in hosting the headquarters of Fortune 500 companies, right behind New York, Houston, Atlanta, and Chicago. The City of Charlotte is now the corporate home for seven Fortune 500 banks. The City's banking resources have surpassed the trillion-dollar mark, ranking Charlotte the second-largest banking center in the country; only New York ranks higher. Charlotte is well on the way to becoming one of the nation's largest and most attractive cities.

One of the keys to the success of the region is its diverse economy. Charlotte has 32 companies that do more than a billion dollars a year in sales. It has 687 companies that annually do \$10 million or more in sales. It has more than 400 foreign-owned companies, which gives the city a cosmopolitan feel. New business is being attracted to the Charlotte region from around the country in expanding areas of financial services, transportation and distribution services, and high-growth manufacturing. Emerging clusters championed by the Charlotte Chamber of

Commerce and that will provide opportunities for future growth include innovative technology, professional services, and travel and entertainment.

The Charlotte/Mecklenburg region has built an international reputation on accessibility, low operating costs, a pro-business attitude, and a high quality of life. A senior vice president for the Goodrich Corporation explained why his company recently relocated to Charlotte, “There is a lot of energy here that rubs off.”

That energy is expressed in dozens of major new projects and in creative efforts such as “Advantage Carolina.” The projects range from a \$230 million arena being built in Charlotte’s center city to host the Charlotte Bobcats to the Charlotte Area Transit System (CATS), a \$2.9 billion rapid transit system to be built by 2025. In a special economic outlook report created by the Wachovia Corporation that reviewed much of this expansion, Central Piedmont Community College is included for a \$51 million expansion and renovation of its downtown campus.

Created by the local chamber of commerce, Advantage Carolina was created to “unite the efforts of public, private, and non-private organizations to address issues affecting the Charlotte region.” An action agenda has been created to focus on four major areas:

- Business recruitment/job creation
- Transportation
- Education
- Urban development

The purpose of the four initiatives is to share objectives for strengthening the economy and improving the quality of life in the region. There are currently fourteen initiatives under way, each with an advisory committee of regional leaders who volunteer their time to champion and lead the projects.

Central Piedmont Community College has long been recognized by area business leaders as a key player in the continuing development of the region. The College is intricately involved with three of the flagship initiatives for Advantage Carolina:

- The Workforce Development Initiative
- IT Collaborative for Labor Supply and Retraining
- Literacy.

The IT collaborative states: (a) “requires aggressive and comprehensive efforts to develop more IT workers for area employers who report serious shortages, (b) mandates specific IT-related training advances across the region’s education and job skill training community.” This charge to Central Piedmont from city leaders sets the stage for the creation of this CCTI project and provides an opportunity for CPCC to capitalize on its excellent resources in information technology to address regional needs.

Central Piedmont Community College

Established in 1963 with a merger of the primarily African American Mecklenburg College and the primarily white Central Industrial Education Center, Central Piedmont Community College

has been serving the Charlotte-Mecklenburg region for over 40 years. During this period the College has grown from a small institution with a dozen programs to an institution that now provides over 100 degree, diploma, and certificate programs in credit and non-credit offerings to over 70,000 students. The College has become Mecklenburg County's premier workforce development resource, and one of its mottos is "We've got the county covered."

The student population at Central Piedmont is somewhat typical of urban community colleges across the nation:

- The average age is 34.
- Ethnic minorities comprise 42% of the student population.
- 5% are international students, representing 157 countries.
- 20% are in basic skills, adult high school, GED, or ESL.
- 40% seek one-year certificates or two-year degrees.
- 40% are employed workers updating their occupational skills.
- 52% are females.

In its 2000-2002 self-study report prepared for the Southern Association of Colleges and Schools, College leaders noted serious challenges to the institution. Central Piedmont ranks 55 of the 58 North Carolina community colleges in space per student and 58 in state funding. Last year the College had to return 3% of its state and 1% of its county budget and in 2003 another 4% of its state budget. In spite of these challenges, the College continues to expand and grow through the leadership of its distinguished innovative and entrepreneurial president, Dr. P. Anthony Zeiss.

Selected by the Board of Trustees in 1992 as the college's third president, under Dr. Zeiss's leadership the College has become a multi-campus college which now includes six physical campuses. Central Piedmont also reaches thousands of students by distance learning offered through its Virtual Campus. In addition, classes are offered in over 200 public schools, churches, YMCAs, and business and industry locations. The College has become Charlotte-Mecklenburg's premier workforce-development resource.

The College's vision statement is bold and reflective of the special role the College plays in the Charlotte-Mecklenburg region: "Central Piedmont Community College intends to become the national leader in workforce development." The leaders of the College have a clear understanding of the ties between the College and the region it serves.

"We will take a vigorous leadership role in identifying and addressing the issues which are pivotal in making this vision a reality. For we recognize that our present and future are closely entwined with the health and vitality of the greater Charlotte-Mecklenburg region in achieving this vision of becoming the nation's leader in workforce development."

In 2001, the U.S. General Accounting Office selected the CPCC as one of the four outstanding colleges in workforce development in the United States, and a Ford Foundation study describes Central Piedmont as one of the two best colleges in workforce development in the U. S. In 2002, the North Carolina Community College System named President Zeiss the community college

president of the year, and the Charlotte Chamber of Commerce honored him with its Excellence in Management Award. Nationally he is recognized as one of the leading community college presidents and as the leader in workforce development. He has served as chair of the board of directors of the American Association of Community Colleges and in 2004 will serve as the president of the League for Innovation in the Community College. All these awards were capped by the announcement in 2002 that the National Alliance of Business had named Central Piedmont the Community College of the Year, the fulfillment of the College's vision.

The National Alliance of Business made this award to Central Piedmont in recognition of its creative response to the workforce and technology needs of local employers and job seekers. The College has forged many productive and innovative partnerships with business and industry, regional government agencies, educational institutions, and community stakeholders. Samples of the College's partnerships and collaborations include:

- The College is the key leader for the Regional Information Technology Consortium, a partnership with ten area community colleges, UNC Charlotte, and K-12 school systems. The purpose of the collaboration is to increase the number of highly qualified information technology workers in the 16-county region.
- Through its JumpStart program, Central Piedmont area students move through educational programs more quickly to achieve certificates, employment, better jobs, or higher pay. The program has been so successful it is replicated throughout the North Carolina Community College System.
- The CPCC Pathways to Employment program, designed as a response to welfare reform, partners the college with the Mecklenburg County Department of Social Services, community businesses, and other organizations to move participants from welfare to work. In February of 2002 President Bush visited Charlotte and cited this initiative as an exemplary program of welfare to work in the nation. In the aftermath of 9/11, the College responded immediately, and in cooperation with the Employment Security Commission, made presentations to over 500 displaced workers from more than ten companies about retraining options at CPCC. As a result of these efforts, the College has been selected to establish a forensics academy with a \$7.2 million facility.

Through these projects and many others, Central Piedmont Community College has become one of the most innovative and entrepreneurial colleges in community college history. It is not surprising that the College's Information Technology Division (ITD) was selected by the League for Innovation as a key leader in this CCTI project.

Information Technology Division

The Information Technology Division employs 36 full time and over 60 part time faculty and staff. IT classes are taught on all six campuses, and the Information Technology Services maintains over 170 computer labs for the College. Innovations at the downtown campus include a 108,000 square foot IT building which is planned to house 37 computerized classrooms and laboratories planned for opening in 2004.

The Division has become a regional, statewide, and national leader in train-the-trainer programs. The College has been named one of ten regional (North Carolina and South Carolina) Working Connections IT Faculty Development Institutes partnering with the National Workforce Center for Emerging Technologies/Educator-to-Educator Institute and the American Association of Community Colleges. Sponsors for the Institute for 2003 include Microsoft, Thompson Publishing, Prentice-Hall Publishing, McGraw-Hill Publishing, and Prosoft Training. Central Piedmont is also a key partner in the Regional Information Technology Consortium (RITC) made up of ten community colleges in North and South Carolina and led by Central Piedmont. RITC has taken the lead in developing curricula such as the Internet Technologies curriculum and the Database Management curriculum as well as online courses to support those curricula.

The College also works with the statewide, 16-school University of North Carolina system and has specific bilateral agreements with various colleges to accept CPCC's AAS networking degree. The College also participates in the North Carolina Community College System's Information Technology Curriculum Improvement Project to refine the IT curricula for the State and to align the state standards to the National Skill Standards Board skill set.

As with other cutting-edge programs in this CCTI project, Central Piedmont Community College has been particularly successful because its Information Technology Division plans for its future. The Strategic Plan for the Information Technology Division states

Effective technology plans are short term, not long term. Five-year plans are too long. Technology is changing so fast that it is almost impossible to plan what type of technology would be available for use five years from now. Even one-year plans may now be about as far ahead as effective planning for purchases of certain types of brands and equipment can take place.

In addition, the strategic plan is based upon key principles that reflect the values of the instructional computing community at Central Piedmont:

- We are student centered.
- We are customer service oriented.
- We acknowledge the importance of cooperation.
- We must remain flexible.
- Communication is vital.
- We need to practice mutual respect.
- We are committed to staff development.

In the strategic plan these values are expanded to provide direction for action by staff members. Example, in the last five years, the plan states that "effective technology plans are tied to staff development plans." This particular value provides the basic rationale for much of the work of the Division and builds a strong base for the Division as the premier trainers in the entire region.

This CCTI project, led by the Information Technology Division at Central Piedmont, is fortunate with its two key partners: The Phillip O. Berry Academy of Technology (BAT) and TechConnect sponsored by the Charlotte Chamber of Commerce.

The Phillip O. Berry Academy of Technology is the newest magnet school for the Charlotte-Mecklenburg school system. The school is a comprehensive, district-wide magnet offering a full academic curriculum, including Advanced Placement courses and more than twenty Career and Technical Education pathways that reside within five Career Academies. The Computer Science and Information Technology Career Academy will prepare graduates for continuing education and/or employment with organizations that use computers to process, manage, and communicate information. Students may follow a pathway in Computer Applications, Computer Programming, Computer Engineering Technology, Computer Network Administration (Microsoft), Computer Network Engineering (Cisco), or E-Commerce. The academies, housed in a 340,000 square-foot new facility located on 45 acres, will reach full capacity of 1600 students in grades 9 through 12 in 2004-2005. There is a business and industry advisory council for each academic pathway with career mentoring internship programs provided to help students meet career goals.

The Phillip O. Berry website is www.cms.k12.nc.us/allschools/berryacadtech/.

The second key partner of Central Piedmont's Division of Technology is TechConnect. TechConnect is a co-curricular program for Charlotte/Mecklenburg high school students sponsored and supported by Advantage Carolina in conjunction with the Charlotte Chamber of Commerce. The primary purpose of the TechConnect program is to generate technology interest within the high school community including students and teachers. The primary program is offered through mini courses taught by professional experts on a volunteer basis from area business and industry and includes hands-on experiences through internships and mentorships for students.

The program has been enormously successful and in 2002 received the ExploreNet SmartTech Partner of the Year Award and in 2003 the Blue Diamond Award—regional awards for excellence. One thousand dollar scholarships have been created by local business and industry for high school students and \$7,500 scholarships have been created for students transferring to Central Piedmont Community College. TechConnect, only established in 2000, has already expanded to eleven of the fifteen Charlotte-Mecklenburg high school districts, one middle school (eighth grade,) and currently includes over 350 participating students.

The Information Technology Division of Central Piedmont, the Berry Academy, and TechConnect are all excellent and quality programs created in the local pro-business, "can do" environment of the Charlotte-Mecklenburg region. In their individual capacity each of these partners is a leader and a key resource for the region. When they partner with each other in this CCTI project, they provide a formidable base for success in regional and national leadership.

The CCTI Partnership at Central Piedmont Community College

Central Piedmont and the Charlotte-Mecklenburg Schools have worked together for many years through programs such as Tech Prep, College Experience, and Dual Enrollment. This partnership is confirmed annually when counselors from the Charlotte-Mecklenburg Schools join staff on the campus of Central Piedmont to review new enrollment requirements and curricula available to high school students. Staff have worked with area high schools to encourage students to take Central Piedmont's placement test in the spring preceding enrollment at the College. When the Phillip O. Berry Academy of Technology was created by the Charlotte-Mecklenburg Schools, Central Piedmont became an immediate partner to provide training for the BAT instructors in Information Technology.

Central Piedmont has also been an active partner with the Charlotte Chamber of Commerce since the College opened in 1963. The College has participated with the Chamber in many programs including the development of Advantage Carolina which sponsors TechConnect. Before this CCTI partnership emerged, the College had already established a working relationship with TechConnect and provides scholarships specifically to TechConnect students who plan to transfer to Central Piedmont.

The three partners have launched an ambitious plan to improve the opportunities for students to make transitions from the BAT Academy to Central Piedmont's Information Technology Division.

To reduce the need for remediation, Berry Academy will provide extended day tutoring programs for students enrolled in the Computer Science and Information Technology Academy (CSITA) deficient in reading, mathematics, and computer literacy as measured by the North Carolina State Competency Tests. In addition, the College will provide Berry Academy teachers with student test data and provide professional development to help students improve their success rates. Will BAT students be willing to attend an extra six hours a week, including two hours on Saturday mornings, for extended day tutorials? To what extent does the proposed summer "Cyber Camp" overlap with the extended day tutoring? How does reteaching for mastery learning differ from the tutorial sessions? Can BAT teachers give 90 minutes a week for staff development? What is the instructional plan that will help teachers use the data to "reteach for mastery learning"?

To increase enrollment persistence, this project is designed to make students aware of program opportunities and requirements in IT at Central Piedmont, introduce potential BAT students planning to attend Central Piedmont to the College and to the IT Division, provide support for the first semester of enrollment for BAT students, and use the existing dual enrollment programs. Many of the activities to achieve this outcome are promulgated on the assumption that increased awareness of programs and opportunities lead to increased enrollment and persistence. To what extent does research indicate that this is true? As part of the summer bridge program to introduce BAT students to Central Piedmont's IT Division, a pretest to determine if students' current level of IT literacy is

planned. How will this pretest be used and when? For the students who enroll at Central Piedmont, College staff plan to interview them at mid-term to determine their progress and their needs. Is mid-term too late? What happens to students who need guidance and support before mid-term? The Charlotte-Mecklenburg School System only allows twelfth graders to participate in dual enrollment courses. The Berry Academy currently enrolls only up through the eleventh grade. How will this situation affect the implementation of this activity and its measurement as a factor in increasing enrollment and persistence?

To improve academic skill achievement, Central Piedmont Community College and its partners propose that the Berry Academy will provide instructional strategies based on learning-centered practices in two groups of such strategies, use formative academic and employability assessments to alert students to academic skill deficits, engage BAT students with a TechConnect club, and raise the level of BAT faculty preparation for certification classes through staff development at CPCC's IT Academy. For the learning-centered instructional strategies, why are teachers being organized into interdisciplinary teams for professional development? Which specific strategies (learning communities, classroom assessment techniques, project-based learning, service learning, and problem-based learning) will be selected for implementation by BAT teachers? Which of the learning centered instructional strategies work best? Why have the instructional strategies been broken down into two different groups? In the activity in which BAT instructors will use formative academic and employability assessment to alert students to academic or skill deficiency, four different assessments "and other assessments" are included. Can students and staff actually tolerate four different assessments? Can the result from these various assessments be reasonably addressed? On this array of formative assessment, can teachers generate "proscriptive instructional approaches"? And can they do it for individual students?

While the TechConnect club and the continuing staff development for BAT faculty through Central Piedmont's IT Academy seem reasonable, these activities may prove to be project overkill when added to the variety of activities planned to improve academic and skill achievement. With this many strategies, how will project leaders know which strategies create which results? Is there a plan to measure the effectiveness of each strategy?

To increase the number of postsecondary degrees and certificates, the programs of study between the Berry Academy and Central Piedmont's degree and certificate ladder programs will be aligned. At the same time these programs of study will be designed to ensure that students are qualified to earn recognized IT certifications while still in high school. Can all of this alignment be accomplished as proposed by December of 2003? Most of this phase of the project seems to fall on the Berry Academy faculty and staff. Are they up to this challenge? Do they have time to devote to these activities? Will project resources support the BAT efforts?

To improve entry into employment and further education, College curricula will be aligned with the needs of industry, and students will be provided opportunities to meet

and work with selected employers. Central Piedmont and its partners already provide excellent opportunities for students to learn about careers in the information technology field and to participate in internships and mentorships. The challenge in achieving the goal of improving entry into employment and further education relates to the complexity of aligning CPCC curriculum with industry standards. Curricular alignment in information technology faces numerous challenges:

- There are many overlapping agencies at the state and local school and local college that have to be involved in curricular alignment.
- Some high school technology academies are so advanced that community college programs are too elementary to attract the potential students.
- Many areas of IT specialization are reflected in hundreds of certifications that make curricular alignment very difficult.
- There is currently an emerging emphasis on communications in information technology that will increase the scope of the need for curricular alignment.
- How align the curriculum with industry standards needed for specialists in information technology with the curriculum needed for basic computer literacy for all citizens?
- The rapidity of change in the field of information technology makes curricular alignment almost obsolete the day it is completed.

These key challenges for creating programs and curricula in which students successfully transition from high schools to community colleges make working in the area of information technology particularly exasperating for faculty and staff. If any college and its partners can address these issues with quality and success, it will certainly be projects like this one that bring together the formidable resources and quality leaders represented in the Information Technology Division of Central Piedmont, the Berry Academy of the Charlotte-Mecklenburg Schools, and the TechConnect program of Charlotte's Chamber of Commerce.